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THE
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AND
MEDICAL COMMUNICATIONS
OF THE
CONNECTICUT MEDICAL SOCIETY.

Second Series, Volume IV;

BEING NUMBERS I—IV, FOR 1872—1875.



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NOTICE.

The Connecticut Medical Society takes no responsibility for the opinions expressed by authors of papers in its Proceedings.

ERRATA.

Part II, page lxiv, line 13, instead of G. M. Peepie, read G. M. Teeple.

Part I, page 343, line 6, for Respiration, read Resolution.

Page 370, line 18, for Erytherma, read Erythema.

MEDICAL COMMUNICATIONS.

ARTICLE I.

ON SOME OF THE CAUSES OF DISEASE.

Being the Annual Address delivered before the Convention, May 23, 1872,

By the President of the Society,

GURDON W. RUSSELL, M.D., OF HARTFORD.

THE study of the cause of disease is exceedingly interesting, and to him who desires to become well qualified is an important part of our art. It is not proposed, at this time, to enter upon an examination of the various theories, which, through long ages, have vexed our profession; but rather to bring together a few suggestions and observations of a practical character, with which we become familiar as we are brought in contact with disease. I shall attempt no definition of what constitutes disease itself, for it is not here necessary, and you are all able to recognize it at once; but shall confine my remarks to the great cause of diseased action, the opposite to that of healthy action, when every part of the system performs its true functions, and is subjected to no disturbance. Nor shall I venture to discuss the particular substance which may be primarily affected, whether the solids or fluids, for these have caused contentions enough already; only observing that formerly these enquiries were more general than now, and that probably the practitioner of former days was better posted upon the various theories and doctrines which have prevailed from the earliest times than those of the present. The practice of those early men was often better than their theory, for they were close observers of symptoms—of symptoms in general, or as a whole; and consequently were not led astray by clinging too tenaciously to one idea or method of observation, or the special symptoms of dis-

ease developed by it; and here they had the advantage of the specialist, whose range of vision is too often narrowed, and who may lose sight of the fact that if one member suffer all the members suffer with it.

It is not meant to be understood by these remarks that the study of special diseases is not to be commended; but only, that the effect of disease upon the general system should not be overlooked. Too many and too great discoveries have been made by earnest investigators in particular directions to warrant such an assertion. All honor is due to those noble men whose close inquiries into the nature of disease have developed such accurate pathology, that the particular part or organ affected is now recognized with comparative ease. If the nosology has been increased, and disease has become subdivided, it has also enabled us to prescribe with more accuracy, and with consequent benefit.

I need only to allude to the more precise notions concerning diseases of the chest, that we now possess, over the ancients; and also the various diseases of the kidney, the eye, the uterus, and other organs.

As has been remarked, the old practitioners were close observers, and brought to their investigation of disease as acute mental powers as any of our day. As they were not as conversant with pathology, they were more inclined to theorize than we are. But they used the agencies in the treatment of disease with great power, and understood probably the use of certain articles of the *materia medica* as well as we do now. Whilst a larger number were often at one time administered, yet in important cases the very efficient agents were prescribed with a knowledge and power of which we might be proud.

To go no further back than a century ago in our own State, it may be doubted whether we now use a few important remedies any better than they did. As to opium, and calomel, and antimony, and certain vegetable alteratives and narcotics, it may be questioned if we use them as well. The chemists are furnishing us with so many new remedies, so concentrated in their form, and so pleasant to the taste, that the old ones are likely to be neglected, and some of them forgotten. How many of the younger men are well acquainted with the Sanguinaria, or Actea, or Conium, or Stramonium, and yet these articles are of great value, and possess properties which ought not to be overlooked. The new recommendation of the Ergot in certain nervous diseases, is, I think,

only an old idea revived, and is probably only an example of what will happen to other articles.

Any consideration of this subject which left out of view the effect of mental excitement, or excessive cerebral action, in producing disease, would be only partial. At this time the various agencies which are unduly stimulating the brain, are probably more active than ever before. Unfortunately these are not wholly composed of the results of pure mental cultivation; but also of the ignoble passions and excitements which are engendered in the great struggle of life. It may be fairly doubted whether the steady but judicious action of the brain usually leads to disease in itself. The old age reached by many active literary men disproves this. There is no reason to suppose that mental culture, steadily but regularly pursued, is an injury in itself, any more than is bodily exercise, regularly pursued. Whilst one is a gentle stimulus to the muscles directly, and to the different secretory organs generally, the other furnishes proper action to the brain, which is only healthy. As intermitting, or long continued labor of the body, is productive of fatigue and consequent exhaustion, so in like manner does the brain suffer from unusual or excessive mental action. No mere machine can be driven to its utmost capacity irregularly, or continuously, without soon giving evidence of weakness. It is in the nature of things that a break must occur somewhere. The engine on the railroad wears long, if only run at a moderate speed; it is the fast trains which soon wear out. Scott was able to write rapidly and safely when he was writing for a reputation; but when he was writing to pay debts also, the strain was too severe.

Whilst the steady but gentle pursuits of literary life are not detrimental to health, yet sometimes the habits which literary men fall into are injurious. The very sedentary life, and late hours, derange the digestive organs, and the general health suffers as a consequence. But when proper bodily exercise is conjoined with it, and the natural affections are brought into action by mingling with men, there are no more healthy lives to be found, and probably none where there is greater enjoyment. The stolid laborer, who worked steadily through the week, and at church "fell asleep and thought of nothing," passed an animal existence merely, and so fell short of the full duty of man. His enjoyments were those of the body only, or those which pertain to a dull existence. He might be a very good workman, and a very good

neighbor; as far as the world judges of these matters, he might be called a good man. Because he commits no crime, he is well spoken of; because he offers no opinions, he is considered very judicious; because he never wants anything which another wants, he is considered very amiable. He may live long perhaps, but this very sluggishness of the mind, inasmuch as it does not fulfill the indications for which a brain was given, does not preserve a proper balance and develop a proper action of all the organs of the body.

But if this man, and all who live like him, are liable to disease from want of activity, how greatly is the danger increased by those ardent minds for whom the hours are always too short, and for whom time spent in sleep, or recreation, is nearly lost. These are the uneasy mortals, who are bound to compensate in activity for their sluggish brethren. Their vocation is labor, and in the various pursuits of life they develop it to its fullest extent. For some years they accomplish an immense amount of business; but a check soon comes, and from actual over-brain work, results exhaustion, or organic disease, or acute disease, perhaps from undue exposure, which otherwise might have been harmless.

We say that some men are endowed with more and greater faculties by nature. This is only saying that their brain is larger, or its convolutions more finely developed. It is unquestionably true. One starts in life with more advantages than the other; but sometimes the second, by diligent cultivation, is able to overtake and outrun the first. The professional burglar who states that some persons enter upon existence with life and property, and that others only enter it with life, expresses an illustrative idea in a homely manner. As he only has life, it is his business to render this capital available, and so he seeks the property of his neighbor who started with him. By diligent study, by persevering industry, one may overtake him whose natural endowments were far superior; the misfortune which follows it is this, that the inordinate exertion brings its own punishment. Disease is as sure to follow this great mental strain as does conviction upon the confirmed robber.

In this connection it would be profitable to enquire, how much of this inordinate exertion in our people is due to the very circumstances of our location, the dryness of our air, the great range from heat to cold—all these acting as stimulants to our nervous system; and also the great strife to become rich, the abundance of money, and the ease with which it is acquired and lost, the con-

tention of politics, and the ambition for place, with our modes of dress, and too close confinement within doors. These would furnish subjects for lengthy discussion, and the investigation would show that some of them are peculiar to our country. A portion of these only will be considered.

The records of our insane asylums show how many break down from this overwork. The causes of derangement specified in the various reports are perhaps in the main correct; but in most cases the causes are dependent upon ill health, the result of too great mental or bodily exertion, or suffering. The inordinate effect of great religious excitement is too often the result of bodily disease. When this occurs, it is easy to see how the mind may be directed to one of a dozen of subjects; but because it is directed to one of these, it does not necessarily follow that this one was the special cause of the insanity. It is almost an accident sometimes that the mind takes this particular direction. The very religious person may become the most irreligious in his ravings; the most modest woman may become the most indecent. Does not the same thing occasionally occur in the sane mind, one not perfectly balanced? It takes a direction for good, and all its promptings are in this direction; every object is pursued with enthusiasm, and with a persistency which will not be restrained. As the motives are claimed to be good, all the actions must be good also. These people act more from impulse than from reason, and as a consequence are frequently changing; but change is delightful and brings nothing of discouragement.

How easy, if a slightly different line had been taken, would it have been to become wicked. The first step would have led to a second which was worse, and in a short time the man becomes a criminal by accident. A free and easy manner, a generous course of life, a love for excitement, and little solid reflection, and it is easy for the actions to become very good, or very bad. There is probably the same lack of balance in both of these persons, neither from the heart, or from reflection, means in reality much of anything. If insanity fall upon such as these, it is reputed as having been caused by the particular disordered ideas prevailing for the moment. These, it must be remembered, however, are changeable, and the true cause is to be looked for either in some bodily disorder, or in the particular intellectual development of the individual.

It might seem unbecoming to call in question the causes of insanity, as specified by those in charge of the insane; but inasmuch

as the disorder is now supposed to be generally dependent upon physical disease, the general practitioner should be able to judge with correctness of the results of such disease. He is accustomed to watch for certain results of diseased action, and if he observes carefully, his conclusions should be correct; the mental disturbance is one of those results, not always the cause. It is not to be denied that, insanity having occurred, certain manifestations may be made, or practices result, entirely foreign to the original ones, but those may be accidental only.

In this connection, permit me to allude to a subject which the Governor has introduced into his Message, viz: "to the propriety of allowing medical expert testimony as to sanity in our criminal courts." The matter commends itself to my judgment as doubtless it does to yours, and there is no good reason why we should not request the Legislature to act upon it. Not only does justice to the alleged criminal, but justice to the public, demand that, when the plea of insanity is made, it should be carefully investigated, by those who are competent for this special purpose. Sufficient time should be taken, and precautions exercised, so that whatever opinion is formed, it should be honest and impartial. It is not becoming to an expert, at any time, to appear to be an advocate. The absurdity of an ordinary jury of men attempting to decide whether insanity exist, or does not exist, must be apparent enough. It is difficult often for the best men to decide at once, or without careful deliberation.

It may seem to be heretical to question the assertion that masturbation is so frequently the cause of disordered mental action as is reported. It perhaps may not be judicious to question it; but possibly the practice of the habit to excess is quite as often the result of insanity as the actual cause. The inordinate practice is the result often of close confinement, of want of activity, of steady application. It is easy to understand then how convicts, insane people, school boys, or others in like circumstances, may resort to it. We have often seen how young men are tortured by the powers of the imagination, though the practice does not at present exist. The boyish habit has given way to the sober reflection of the man. The occasional emission, however, overwhelms him with horror; he is in despair, because he has heard of its dreadful result. Harpies have prayed upon him and encouraged his fatal delusions; the loss of the seminal fluid is pronounced to be dangerous, and he fully believes it; he is ashamed, overwhelmed, distracted. What more pitiable object; who more deserving of compassion? How

his countenance brightens, and his heart is lightened, at the words of hope which you give him; he may yet be a man; he is a man. When you correct his disordered thoughts, and assure him that he yet has hope, and show him that these 'occasional discharges are not so detrimental as he supposes, then you begin the cure.

Let us look at the matter in the light of common sense, and observe how it is practically. How often do healthy men procure an emission in one way or another, and no serious results follow. These may follow, and do; but how often they do not; and then consider that the occasional emission will take place spontaneously, if it is not procured; the organs relieve themselves in this way. Man cannot always control his evil thoughts when awake; how much less when in the unconscious hours of sleep.

I have no fears that what is here said will be misunderstood by you, gentlemen, because you will look at the matter comprehensively and will find it difficult to understand how the occasional loss of this secretion should produce such profound results as have been claimed. It may not be fair, perhaps, to compare the secretions of different organs, or to claim that their action is always alike. There is a larger amount of nervous energy expended in some of them than in others; but it has seemed to me that very erroneous ideas were prevailing in the minds of some persons, perhaps even in our own profession. You, gentlemen, I think are not prejudiced: it is only those with a little knowledge who are dogmatical.

An old Priapus, who was nearer seventy years of age than sixty, once told me, that he had not failed to procure a seminal emission daily for many years. He had been twice married, but had been in good health until within a short period. Whether his last and fatal illness had any connection with this custom I know not, but it had lasted for a long time without serious results. Perhaps this instance may be classed with those remarkable ones where alcoholic stimulants have been used, and opium and tobacco also freely, till the persons have reached nearly a hundred years of age. They may be called exceptions to a rule, which declares that any pernicious habit, long continued, brings its own penalty, in a shortened life, or the prolonged sufferings of age.

"The unruly wills and passions of sinful men" cause so much of disease, that they should not be overlooked. Whether these consist in merely sensual indulgence, sins against the body, or in the strifes and ambitions of men, they are certainly important. The sudden haste to be rich leads all alike, in all occupations, to

such undue exertion, such an expenditure of nervous energy, that it soon prostrates the system. The seeming necessities of men, rather than their judgment, often control their actions. While most assent to well established hygienic rules, yet but few comparatively follow them. Either the occasion demands or seems to demand great exertion, and the opportunity is not to be lost. In our own profession we often labor unduly, and confine ourselves closely for years without change or cessation. The natural fatigue and anxiety consequent upon such years of labor, is sure to wear upon the nervous system and leave its fatal results. Just as one who daily reads upon several subjects is able to read longer and remember better, because the brain is relieved by the change; so is the physician better able to discharge his duties, to live longer and happier, and to avoid development of disease, who devotes a part of his time to recreation in travel or to reading and occasional occupation in matters outside of his profession. Your own observation will doubtless suggest at this moment many examples where good and valuable men have gone down to their graves too early, and whose lives might have been prolonged by a more just and perfect observance of the rules of health.

If in enumerating some of the causes of disease I should pass over that bane of northern nations, the excessive use of alcoholic stimulants, injustice would be done to the subject. It is not proposed to discuss this at length, for you are doubtless of one mind that the immoderate and continuous use of ardent spirits tends to destroy the health. Where the occasional use is indulged in there becomes more of doubt and men are not fully agreed; and there is not full agreement also as to the continuous use of wine and malt liquors. The statement that the inhabitants of cold regions need the use of alcohol is rather the statement of the fact, that Northern nations do use it and use it excessively, than that it is absolutely necessary. Perhaps the fact that the inhabitants of warmer climes do use mild wines freely has by a sort of contrast, or fancied law of compensation, given countenance to the opinion that a stronger stimulant is needed as we advance to the north. But there is much of delusion in this manner of reasoning, and it is by no means positive that distilled liquors are any more absolutely needed for the one than for the other. If either will be used, the milder one is surely to be preferred, both because it produces less of intoxication, and consequent distress, and less of disease in itself.

This is no apology for the use of wine, for disease enough ensue from its excessive use.

The very general introduction of the milder fermented liquors within the last quarter of a century, has in it something of hope, for a partial cure of our great national sin. He who would use alcohol, if he did not use these, is certainly better by the change; and yet, I fancy that the excessive and continuous use of even lager beer is laying the foundation of disease beyond what most physicians and the public generally imagine. My experience with a large Life Insurance Company has led me to think that our mortality is unduly increased by free drinkers of lager beer. It seems to develop fatty degeneration in certain regions, in the heart, and the liver especially, and thus be productive of more serious injury than is frequently supposed.

I have no extravagant notions as to the use of stimulants in moderation by most persons; but certain men cannot use them and be safe. The resolution is so weak that it gives way upon the first temptation, and one step being taken in the wrong direction all is lost. You might as well apply a match to a train of gunpowder and expect the fire to proceed no further than an inch, as to expect these persons to taste and go no further. An analysis of these cases would be curious and perhaps instructive. Does it indeed depend upon a brain diseased, and should then men be treated as insane people? They are often so amiable and so energetic when temperate, that this idea might not be popular; but certain persons of them, who are habitually intemperate, an expense to the State, and a grief to their friends; and those also who, unable to restrain a sudden impulse which comes upon them like lightning and are liable to drunkenness at intervals, may justly be restrained; and this restraint should be long enough to overcome the fierce desire for stimulants. The short confinement of habitual drunkards, whether in asylums or in prisons, probably does more harm than good. A few weeks only enables them to recuperate and start again upon the usual debauch. It is very much like short confinements for crime; it neither eradicates the unnatural desire, nor is long enough to perfect a reformation.

I have no sympathy with the senseless cry against the proper use of alcoholic stimulants in disease; and have little confidence in the wild assertion that physicians make many drunkards. It cannot with truth be applied to the judicious physician, who gives the remedy carefully, and directs it to be discontinued when the reason for its use does not exist. The blame for this habit is often laid

at our doors, when it should fall upon him only who uses it; the excuse suits his wicked purpose. I cannot recall, nor can any of my professional acquaintance with whom I have conversed, any well authenticated instance of habitual drunkenness, which can be traced to the use of alcohol in disease, by the advice of a well qualified and judicious physician. I am thus particular in making this statement, because I have heard of such loose directions being given by some, who are styled physicians, that almost any fatal habit might be predicted.

I should be inclined to say more on the use of tobacco in producing disease, had not one of my predecessors in office treated so fully upon the subject. So powerful an agent should produce profound effects, if seriously indulged in; and some cannot indulge in it moderately even without injury. But the mass of mankind do use it, and if its use is not excessive, probably without injury, or serious injury. What is your experience, gentlemen? You are accustomed to investigate the cause and cure of disease; do you often find that the gentle use of tobacco either produces disease generally, or tends to develop it? The use is so common that cases enough have come under your observation to enable you to form an opinion. That the weed is nasty, and its use disgusting, we have often enough heard; and it might be difficult to give a satisfactory reason why civilized and savage alike employ it. But men love it and its use is increasing; there may be something of benefit in it. Whenever it does do injury it should be abandoned; this is easy to be recommended, but not easy to be practiced; like the habitual use of alcoholic stimulants, it is hard to be overcome.

But in no respect are its effects like to those produced by alcohol, nor are its results to be compared with these for a moment. It neither makes a beast of man, nor produces its wretched results. I have no apology to make for its use: let us look at the matter as investigators anxious for the truth, and then see if there is any necessary relation in the two articles. The user of the one is often the user of the other; but because he uses alcohol, does he necessarily, as a consequence, use tobacco; or because he uses tobacco, does he necessarily and as a consequence use alcohol? These things are often stated, and stated as positive facts; most commonly, I think, by those enthusiasts who with much of theory have but little of fact to guide them.

Particularly is this true of some of our clerical brethren, who undoubtedly are honest in their belief; but who can best judge in

this matter. Inasmuch as the physician, from his education, and the very nature of his profession, is accustomed to investigate disease, its cause and its effect upon the body, and the relation which symptoms have to each other, he should be the better judge. I am very well aware that some learned men among us have been its strongest opponents; perhaps they were more learned than wise; and what after all is the opinion of the profession as a body? the decided majority, I think, give no countenance to the extravagant opinions concerning its moderate use in most cases.

It is no disrespect to the clergy to question their opinions in this matter: God forbid that we should interfere in any manner with what concerns their priestly functions; but when they step outside of these, and proclaim that the use of alcohol and tobacco are alike reprehensible, the use of the one leading to the use of the other, producing the same injurious effects, developing the like diseases, entailing the same miseries, and are to be classed alike, and the consumers judged alike, they are making assertions which are not warranted by facts and which I am sure you will not sustain. It is time that this connection of these two articles should be stopped; enough can be said against both of them, without including them in the same anathema.

It will be proper here to say a word concerning the use of opium. It is a lamentable fact that its use is greatly on the increase among all classes of persons, and among both sexes. What effect it has in producing disease, aside from a debauched condition of mind and body, is not well ascertained. Remember that the moral questions connected with the use of stimulants and narcotics do not come within the scope of this address, for I wish only to consider how much they tend to the production of disease. Probably the use of opium does not tend to the development of absolute disease in any organ. Its habitual use in large doses does not produce constipation generally; but its chief effect seems to be upon the nervous system, brightening the intellect for the moment only to dull it subsequently; giving rise to pleasurable emotions for a time, to be followed by unpleasant reaction, like all excessive indulgences. But unquestionably it does debauch the mind, more than the use of tobacco possibly can, and possibly as much as alcohol really does.

Whilst opium is largely used in the cure of disease, yet this affords but a small part of its consumption. No one can tell so well what becomes of it, or who are its largest purchasers, as the druggists themselves; and to one who has not made the proper

enquiries, it would be astonishing to learn who were the largest consumers, and the very ingenious methods resorted to, to obtain it without suspicion.

Civilization brings with it a great increase of happiness, but it also brings with it an increased aptitude to disease, due mostly to the very artificial lives which are led. The houses we build, the occupations we follow, the food we eat; our habits, our luxuries, and our vices, all have their full share in this development. But it is easy to see that disease need not necessarily be the usual sequence of civilization, for as a rule we are better fed and better clothed than were the ancients; yes, even better than were our forefathers in this country less than a century ago. However much we may praise them, we certainly have improved upon their meager fare, truly called simple, and their scant clothing, nor do we equal them in their gross pleasures, or their revolting crimes. But refinement brings with it its own train of evils, and we suffer from its pleasures as well as from its necessary occupations.

The non-compliance with proper hygienic rules in ventilation and drainage is the cause of unnecessary disease and unnumbered mortalities. It is not to be expected that the State should be more careful of individuals than individuals are careful of themselves, and hence perhaps the failure of proper laws, or the non-recognition of their necessity, from the absence of which so great evils come. The extensive and efficient sewerage of large towns, the compulsory ventilation of buildings, especially when large bodies of men are brought together, and a proper supervision of articles of food, would do much in lessening the mortality of cities. Their enforcement in all manufacturing establishments would be of like service, and would benefit in a large degree numerous small towns and villages.

Doubtless you can bring to mind many inveterate cases of fever developed in your country towns, upon the mountain tops or sides—where the air is always supposed to be pure—where the cause was imperfect drainage, and the consequent pollution of the water used in drinking or cooking. These causes are so unnecessary and the evil so remediable, that there seems to be no reason for the occurrence. All this mortality is a positive loss to the State, and is the more unpardonable because it might have been mostly prevented.

It is proper to allude here to the subject of vaccination, because it has been so much neglected of late years. It is so general a preventive of small pox, that it is difficult to perceive why it is

not universally resorted to. The foolish objections which have been raised against it by some, that disease is often communicated by vaccination, has no foundation in truth, and is only the result of the weakest prejudices. It is, I think, well established that this rarely happens, and that most of those diseases supposed to be communicated by the vaccine virus, are not often, and cannot generally be, communicated in this manner. The scourges most feared are scrofula, and that general popular term for all skin diseases, "salt rheum," and syphilis; just as if scrofula, or that depraved habit of body which accompanies it, could be communicated by the pure lymph. Exactly what is meant by salt rheum is not fully known, though much talked about; but as to syphilis, it is supposed to be fully understood, though the forms of it are not often mentioned.

It is possible that unpleasant results may occasionally follow the operation of vaccination; but this is due probably to the use of lymph not perfectly pure, taken at an improper time, or mixed with dried pus, or blood, in the crust. It is conceivable in such a case, that certain sores or eruptions, entirely independent of and foreign to the vaccine disease, might be produced, though they would not be of a serious or lasting character.

I think it is now pretty well established that the danger of syphilitic infection, or of any local or general disease, from this source is very little, or none at all, even if the lymph were taken from persons affected with the syphilis itself. Of course no one would use, or ever should use, any lymph obtained from other than the healthiest subjects, because by so doing whatever of danger there may be is as much as possible avoided, and because it enables the physician to speak with positiveness and with authority.

The great increase of small pox within a few years illustrates the neglect of vaccination. Probably it was never more prevalent within the last half century than now, and doubtless it will continue to increase for years to come, until the public recognize how general a preventive vaccination may be, and by proper legislation bring every one regularly under its influence. It is time that the most erroneous views, the most arrant nonsense, and the caprice of individuals should be stopped. When the liberty of one is superior to the liberty of the many, then may these men be listened to.

And having said thus much concerning the views and conduct of others, let me add a word concerning ourselves.

Vaccination is regarded as a very simple act by the public, quickly and easily performed; this is true. But it is an important

act, and should be carefully watched, through its several stages of progress, until the process is completed; and then to make all sure, the subject should be revaccinated, and if this test is safely passed the patient may be regarded as fully protected; that is, as fully protected as vaccination can make him. That it at all times and after the lapse of years gives perfect immunity, is claiming too much for it; but it so generally and so greatly protects, that it should be made compulsory.

Now it is to be feared that the operation is sometimes carelessly done, and that the subject is never afterward seen by us. The compensation is so small, and this is usually so grudgingly paid, that but little encouragement is given to a very faithful and conscientious performance of it. When it comes to be regarded as a serious and important matter, and a proper remuneration is afforded for it, and it is made compulsory upon all, then will there be less of small pox—in all probability we shall be nearly free from it.

As one of the results of civilization we find that of continued mental application. The very healthy and very strong can usually bear this without injury, just as they can much of physical labor; but it is the weak and those constitutionally feeble who suffer. Especially are those injured who while young are forced into long hours of study, not unfrequently upon subjects far beyond their reach. While some children learn easily, yet others develop slowly, and it may take years of time to grasp fully that which some acquired readily, and often forget quickly.

It is my decided opinion that too much mental application is required of our children. Not seldom has it come under my notice to observe cases where decided injury has been done by too great requirements in study, enforcing hours of application out of school, a large part of which ought to be devoted to amusement and bodily exercise. The tender and impressionable nervous system of the young can poorly bear this stimulation, and if it is continued and the body is feeble, only the wreck of a child remains. As if to make this matter doubly worse, it would seem as if still more was required of girls, and as they are naturally more studious and learn more readily—that is, recite more fluently—than boys, they are pressed on to further studies. Boys will neglect their books, and will usually get some time for play; but the young girl, just developing into womanhood, and with a beginning faint idea of her future in life, is more ambitious, and suffers herself to be led on by the encouragement of her teachers and the desires of

her friends. The very multitude of studies is overwhelming, and as she endeavors to succeed in all, she not unfrequently either breaks down, or lives with a brain and nervous system sensitive to the faintest impressions the remainder of her life. Whatever of injury I have seen from this enforced application and premature development of children, has fallen more upon girls than upon boys; and I have seen, and doubtless so have all of you, too many sad and unfortunate cases.

Among the serious causes which tend to the production of disease may be mentioned that of criminal abortion. This is now so extensively practiced that it deserves our attentive consideration. Putting aside the moral view of the question, it would seem as if the physical injuries which follow would deter from its practice; but as the fear of punishment seldom deters from the commission of crime, so are the baneful results of this practice seldom seriously considered. But how serious these are none know better than ourselves, in the invalidism or confirmed ill health which are pretty sure to follow. These ensue often enough when abortion occurs accidentally, but more surely when it is produced artificially. The blame of this is generally laid upon those who induce it, and they are deserving of the severest censure; but in reality it should fall mostly upon those who desire it. Without doubt it is sometimes submitted to with no proper conception of the injury liable to follow, but generally those who wish it only consider the relief to be obtained from their burden. In this respect the women are as unreasonable as insane persons, and no considerations of morality or health seem to restrain them. It is most singular that beings whose impulses are so generous and noble can ever be influenced to such conduct. If these instances were confined to the ignorant and degraded alone, it would be more explicable; but as the intelligent, the religious and the refined are alike the victims, no such explanation can be made. All our arguments, appeals and explanations are generally of no avail, and it comes to this, that when woman has fully set her mind upon it, "she will, and that's the end on't." If one agent or method fails, another is tried, until if possible she is successful.

And there are so many who notoriously induce abortion, when desired, that she does not often fail. When the desire for it exists, the means are generally found.

As a matter of professional record, I am happy to state that in my opinion few of the regular faculty lend themselves to this wickedness. I cannot, among my acquaintances, recollect one,

who has anything of professional honor, who practices, or has the reputation of practicing it; and I have no intention of quietly submitting to the opprobrium which is often cast upon us, and do protest most solemnly that, to my knowledge and belief, the charge is not true. The wickedness of the act must rest primarily upon those who desire it, as much also as upon those infamous persons who produce it. Legislation avails but little, and a reform is to be looked for only by a correction of the enormity of the evil in the minds of the women themselves.

It is possible that these statements may appear to be unjust to some; and to none more so than to the very women complained of; but they are true—I assert it positively—they are true; and it is a shame to this gentle sex, to whom we owe so much, that such grounds of complaint should be suffered to exist.

I come now to a short consideration of the subject of prostitution. The evils which follow it are so great, and the diseases so general and so serious, that we may be pardoned for alluding to it. As it has prevailed in all ages, and in all probability will continue to prevail so long as the passions of men are unrestrained, any suggestions which will meliorate its evils, and restrain its diseases, are worthy of consideration. The system of licensing, and frequent examination, which prevails in some countries, is supposed to be beneficial in its operation, and to a certain extent doubtless is so. It shocks our moral sense, I admit, when the State undertakes to find safeguards, or protection, for those who infringe laws, human and divine; and it may appear that the State lends encouragement for the infraction of the very laws which it has enacted. But so serious are the results of prostitution, extending often through many generations, falling upon innocent persons who thus truly bear the sins of their fathers, that true benevolence, together with a desire to lessen the causes of disease, would seem to justify some supervision. The mere moralist will assert that this will give encouragement to vice and to sin; and by lessening its dangers, will only increase the crime. But the fear of contagion probably seldom deters, just as the expectation of apprehension is seldom considered by the criminal. The habitual inebriate persists in his intoxication, although he has passed through several attacks of *delirium tremens*, and fully understands his danger. The usual frequenter of brothels is subject to repeated attacks of gonorrhœa, or syphilis, and yet he subjects himself to exposure again and again. The uncontrolled passions of men, whether of sensual indulgence, or hate, or revenge, carry them beyond all

control by reason, or restraint by fear. The suffering of years is as nothing in comparison with the gratification of the moment, and so neither the laws which God has proclaimed, or man has enacted, are allowed a serious thought.

It is no part of my plan to give to the subjects which have been brought to your consideration any other than a strictly professional one; but I may be pardoned for a few further observations.

As a large part of the expenses of the State come from infraction of the laws which the State has wisely made, and as it is subjected to constant supervision and care to guard its subjects against the passions and wickedness of men, why should those who are never a trouble to it, always obey its laws, are good citizens, faithfully performing all their obligations, why should these be severely taxed, to minister to the evil natures of men, or to support them in their sinfulness. Is it not better that they should be made to sustain themselves, and that their very sins should contribute to the execution of the laws which they break. This principle is acknowledged in the excessive tax upon spirits and tobacco above other articles; a little extension of it would be no great injustice.

So many become prostitutes by accident, as it were, with no great moral depravity at the commencement, that whatever promises a healthy condition of body, gives encouragement also to a return to a healthy condition of mind. When this results, the original evil is lessened, or removed, and the individual is no longer a burden, but a help to the community.

This subject has been approached with considerable hesitation and doubt; but it came naturally before me in considering the causes of disease; and though all may not agree with me in opinion, yet we can discuss it in a spirit of charity and tolerance for diverse views. With us it is a medical question, not a question of morals; it is a consideration of the cause of disease, and its prevention; a matter which belongs peculiarly to us, and from a proper consideration of it, no fear of public opinion, or the opinion of others less qualified to judge, should deter us for a moment. Our rights and our duties belong to us; with the independence of educated men we propose to discuss, and will discuss, all subjects on which we are better informed, which come within our special province. Neither the uncertain wisdom of the world, or the arrogance of fanatical pretenders, should ever deter us from the fearless investigation of any matter within the scope of our profession, or the honest enunciation of its results. When the fear of popular clamor,

or the clamor of individuals, is allowed to cramp the investigations of science, then may these investigations be truly termed the "results of science falsely so called."

In this free enunciation of my thoughts in this address, I am talking to my brethren, to gentlemen of my own profession, and have no fear that they will either misunderstand or misinterpret my motives. The links which bind us together are strong; our thoughts and our interests are alike and in common. It is a noble profession. For my own part I am not ashamed of it; nay, I rejoice in it, and desire to bear witness of my great respect and affection for it; and thank the Lord to be counted as one of its members. Of all ranks and pursuits of men, I will not say that they are better, but they are as honest, as faithful, as laborious, as conscientious, intelligent, peaceful, and forgiving, as any of their fellows.

When this subject was first selected as the theme for this address, it was my intention to have spoken fully upon the effect of light, and air, and water, and upon certain articles of food, and of certain occupations, in inducing disease. And also to have entered upon an investigation of contagion—what is it; in what does it consist? in what respect does the contagion of Variola differ from that of Scarlatina, of Rubeola, or of Pertussis? and does this contagion ever arise spontaneously, or is it generated *de novo*? These are not merely idle investigations without practical value, but are important, and worthy of our serious consideration. And the influence of miasm also in producing disease is equally important. It is of special interest to us in this State, since it is extending where it was never before known, or not known to have existed for many years. Commencing in the State of New York, on the shores of Long Island Sound, it has crept along its coast to the east, nearly, or quite, to Rhode Island, and has reached up our valleys to the north for many miles. Like a fungus throwing out its spores, it finds an acceptable location in the natural water courses from the north. It is not reasonable to suppose that it will now instantly stop in its progress, and it may become a common disease within our limits.

There were other points of a strictly medical character, also, which I wished to discuss; but you have been detained too long, and the length of this address must be my apology for not introducing them.

Allow me to say, that without study we can never be fully qualified for our profession. By study I do not mean merely that

acquaintance with disease which one obtains from the reading of books; but that other and important part which comes from observation and reflection, the digestion of our own thoughts, and the assimilation of those of others. Nor does it become us to receive the statements, or opinions, of men implicitly, for so many are prejudiced, and so many are formed hastily, that they need to be tried in the crucible of close observation. In all our investigations we need the controlling influence of common sense, which values false theories and extravagancies alike.

In conclusion, permit me to say that the Connecticut Medical Society is worthy of the support of the medical men of the State. It is a matter of regret that so large a number of our practitioners are not connected with it. The personal and professional advantages which come from association are so many, and so great, that all would find their advantage in it. The action of mind upon mind leads to further development; and the acquaintance of men tends to the removal of jealousies, or unjust suspicions.

ARTICLE II.

REPORT OF THE COMMITTEE
ON MATTERS OF PROFESSIONAL INTEREST.

BY H. A. CARRINGTON, M.D., CHAIRMAN.

YOUR Committee has but a very brief report to offer. Though considerable effort was made to draw the attention of the profession to the plan and objects of this Committee, it has so far met with but a limited and somewhat feeble response. Though this is to be regretted, I would not be understood as finding fault with the physicians of the State, because they have taken so little apparent interest in this matter ; for I doubt not that in part, at least, this is due to not fairly comprehending the scope and purpose of the Committee ; and something more, perhaps, to the natural difficulty of inaugurating and putting into fair working order any new machinery in a purely voluntary society. This Committee is new to our society, and as yet its object, doubtless, has not been well understood ; but we hope and believe that as this is more fully comprehended it will be better appreciated, and yield much more abundant results. A few words, then, as to the design of this Committee, so far as we understand it, may not be improper here. In the words of the by-law instituting it, it was made the duty of this Committee to report on the progress of medical science, particularly in our own State, and, in short, on whatever influences may concern the health of the citizens of the State—(a clause which, you will observe, is very broad and comprehensive)—and as no one person could be supposed sufficiently well informed to cover this extensive field, it was made the duty of each association represented in this society to appoint from its own body some one to act as a reporter, who should furnish to his committee all the information he could gather, relative to these subjects, within the limits of his district. Such a report would include general statements as to the health of the district repre-

sented, and particular reports of special cases ; reports of the prevailing forms of disease, and of the epidemics, if any such have occurred. This Committee would also be the proper medium through which all papers read at various county meetings should come before the parent society, as well as all volunteer papers, whose authors may desire a hearing before us.

We all acknowledge theoretically, certainly, if not practically, that our profession does bear other relations to the public than those fulfilled at the bedside ; that our duties neither begin nor end in our clinical ministrations, important as they may be to the individual ; and those relations are alluded to in the summary of the by-law already quoted, to wit, " whatever influences may concern the health of the citizens of Connecticut." Now these relations can never be met so long as we confine ourselves only to efforts for the cure or alleviation of the present ailments of our clients ; nor can we even place medicine upon its true basis, as a liberal science, or a humanitarian study, by such labors, however necessary they may be. We must broaden our views of the field which our profession really covers ; we must remember that we are not merely the healers of the people, but their teachers as well, and, by our constant endeavors, strive to correct the deep-seated misapprehensions of the public concerning their relations to us, and ours to them.

It may often seem a hopeless, as it is a thankless, task to attempt this work ; but only as it is done and well done, can we hope to correct and enlighten public sentiment. To educate our clients to the true vocation of the physician, to enlighten them as to the extent and powers of medicine—strictly so called—to show them how much they may properly expect relief from remedies, to do this work is not to lessen their confidence in us, as their counsellors, but, to the extent to which it is done, to destroy superstition and ignorance—those abundant and perennial sources of all quackery. But this is work which we must do in our personal or individual spheres, as we come in intimate contact with our patients, and at such times especially as they are, by the stress of their necessities, compelled to rely upon our judgment and skill for relief from suffering. In these hours of confidential intercourse we may easily, naturally, and effectually assume and discharge our functions of teacher, as well as perform those of healer.

It is a part of our duty—a duty owing not less to the profession than to the public—to study with all possible care the hygienic or

anti-hygienic conditions existing in the communities in which we live ; and to make this study useful to others as well as ourselves, our individual observations should be submitted to the test furnished by a comparison of them with the observations of others. To illustrate my meaning :—Our State is very rapidly filling up with manufacturing towns and villages ; our cities growing in size and increasing in density of population ; the habits of even the very rural districts are changing from the quiet and repose of agricultural life to a state of restless activity ; the current of life is fast setting toward the centers of population, whether small or great ; and the village, the town, and the city are being swollen at the expense of the country ; railroads are penetrating every section of the State ; and go where we will one can hardly escape the sound of the shrill cry of the locomotive, as it goes hurrying on its way, drawing hundreds and thousands of our citizens to and from their homes, with a rapidity that but a few years since would have seemed a marvel of necromancy. These are but samples of the great—the revolutionary—changes going on in our society, and these changes are working out, not only in the direction of modified habits—they are influences affecting the health of our citizens, and as such are to be studied and reported upon.

Enough has been said, perhaps, on this subject, and we pass to the subject-matter proper of this report.

The year which has elapsed since our last meeting has been one marked in some respects in its meteorological character—a summer drought, succeeded by an early and prolonged winter of almost unexampled severity. Generally through the State, I believe, the fall of snow was very light. The late spring came upon us out of the heart of winter, with but few of the vicissitudes of weather which we usually experience.

So far as your Committee are informed, there has been no epidemic of importance in any part of the State ; and we believe that the health of the people has been quite as good as usual, the ordinary diseases only prevailing.

To this remark one exception should be made, and that is in reference to the prevalence of malarial diseases in certain sections of the State, and the advance of these diseases into other sections hitherto free from them. Dr. Henry Bronson has prepared a very careful and valuable paper on the history of intermittent fever, as it has occurred in the city and vicinity of New Haven, and which

will be presented to this Convention. Your Committee may be allowed to say that if physicians through the State would give some care to the collection and preservation of data concerning this (or any other) disease making its appearance in their vicinity for the first time, they would greatly assist the future medical historian.

From three counties only have reports, and these very brief, been received. How generally the county associations have appointed reporters we do not know; it is to be hoped, however, that it has been done in them all. Your Committee may be allowed, perhaps, to urge upon all who have been so appointed that they will be ready to magnify their office; and to be earnest and persistent in their efforts to obtain the information we seek from all the physicians of their districts. The reports are from Hartford, Litchfield, and New Haven. Also one from Dr. Hubbard, of Clinton, giving a general statement of diseases prevailing in that town; and also some remarks upon one feature of his treatment, viz., the non-use of alcoholic stimulants. And we may say in passing that we hope this communication may draw out others who have a like or contrary experience to relate.

From Hartford County we have a report of two cases of interest—one of Hydrops ovarii, and another of unilateral, congenital dislocation of the lower jaw. These reports and cases will appear as an appendix to this the first annual report of the Committee on Matters of Professional Interest. Let us hope that this feeble beginning may not be followed by an equally feeble existence.

Respectfully,

H. A. CARRINGTON.

REPORT FROM HARTFORD COUNTY.

The health of the county, during the early part of the year, has been quite satisfactory.

These later months, the winter and spring, have given us more sickness—pneumonia has prevailed very extensively, particularly among children. With them, considering the number and severity of the cases, the fatality has been light. But, among the adults, even the robust as well as the weaker, the mortality has been great, often unexpected and early in the disease. Somewhat before mid-winter, there began to appear here and there, and finally in large numbers, cases of sickness that grouped in their

course the prominent symptoms of a genuinely malarial epidemic. The stomach seemed to receive the stress and burden of the malady, although the other abdominal organs by no means escaped scot-free,—nor the lungs, nor the brain. I do not learn that there was any mortality, or, if any, but small.

There have been, during the year, several cases of cerebro-spinal meningitis; I cannot ascertain how many. These cases have usually run a course of twenty days at least, and with a deceptive look of convalescence, but generally terminating fatally. In a report made to this meeting in 1863, attention was called to the apparent circumstance that this disease, in its epidemics, had usually or always prevailed coincidently with zymotic diseases. This coincidence is again noticeable and worthy of consideration in the present wide-spread zymotic influence, and the equally wide-spread meningial epidemic. In this period of great and almost unprecedented mortality throughout the country from small pox, attention should be directed to the fortunate escape of this community from the ravages of this fearful scourge; and especially should emphasis be given to the legitimate inference that this marked exemption is directly due to thoroughness of vaccination—nor, in this connection, should the universal testimony of our physicians be omitted, viz., that in its purity and completeness, the course of the vaccine disease, during these past months, has been unexampled in their experience.

Maternity has been attended with more than its usual perils. I offer two cases of interest; the first presented by Dr. M. Storrs, the other appearing in my own practice. (See accompanying paper by Dr. Storrs.)

Congenital unilateral dislocation of the right lower jaw.

A male child, and in other directions well developed, moribund at birth.

A very unusual and striking distortion of the countenance. The affected side of the face half or three quarters of an inch shorter than its opposite. Both the muscular and osseous structures about the articulations extensively deficient. The lower jaw markedly inclined to the left, and closing obliquely to the upper jaw, and about a quarter of an inch behind it. The motion of the jaw opening and closing was free. Directly under maxillary of the dislocated side there was a depression in the tissues of the neck, whose center fell close behind the trachea. This part of the malformation seemed to render the act of swallowing difficult, if not impossible.

The child soon fell into convulsions, which continued at intervals for forty-eight hours, terminating in its death. The occipital bones were much disturbed during the process of birth. Did the convulsions start these? A post mortem was not obtained.

L. S. WILCOX.

Hydrops Ovarii.—Mrs. W., aged 76, residing in the country, died of old age and exhaustion from a large abdominal tumor. It began its growth 20 years before death, and had gradually come to this large size.

It is somewhat remarkable that it had always been considered and was so diagnosed by the physician in attendance as some solid tumor, and not a “dropsy” or cystic growth. I was invited to make a post mortem in order to remove the tumor, that it might be forwarded to some college museum.

I regret that I have not on hand the measurements of the body. Suffice it to say that Mrs. W. was rather less than the medium size, and at the time of death much emaciated, which fact made the tumor more conspicuous.

Perceiving that we had fluctuations, the autopsy was begun by an evacuation of the fluid through a large canula. 135 lbs. of dark straw-colored fluid was withdrawn. Section of the abdomen revealed a single large sac of the right side, of considerable thickness, about one-third of an inch on the average. This sac, when separated at the pedicle, weighed 5 lbs. The body of the person, after this removal, weighed just 70 lbs. The cyst, with its contents, weighed just twice as much as the body.

This great growth had produced wonderful effects upon all the internal viscera. Before the long and constant pressure from beneath the stomach, liver, lungs, and heart had retired to the upper part of the thorax, which was also much changed in shape, the movable ribs below rising to a position horizontal to the more fixed ones above.

This case claims a special interest from the unprecedented size of the multilocular cyst. And I believe there is but a single instance on record of the quantity of fluid found in any multilocular or multiple cyst exceeding this amount; none where the relative weight of the tumor to that of the body was so great.

M. STORRS, M.D.

HARTFORD, *April 25th*, 1872.

REPORT FROM NEW HAVEN COUNTY.

I regret that I am able to make only a general and imperfect report, no materials for it having reached me from any of the physicians of the county, except the loose and necessarily indefinite *oral* statements made in reply to personal inquiry.

So far as I have been able to gather, there has been, during the year past, nothing unusual, either in amount or character, of the diseases prevailing throughout the country, with the one exception of intermittent fever; and in relation to this I shall not enter into any details, the whole subject having been so thoroughly and ably treated by Dr. Bronson, in his paper, which will be submitted to the society. I may only say here that the testimony of physicians, in reference to this epidemic, corroborates what has been often observed in other diseases, that it has impressed its own type more or less distinctly upon all, or nearly all, other diseases.

In this city many physicians have spoken of the unusual frequency of diphtheria during the spring of this year, but not of a specially severe type.

Small-pox has also occurred with rather more than its average frequency, but not at all as an epidemic. And here we may add a statement, according with that made by Dr. Wilcox in his report, viz., "That the testimony of physicians in Hartford was to the effect that in its purity and completeness the course of the vaccine disease during these past months has been unexampled;" this has also been the observation of physicians in this city. Without any statistics on the subject, it may be stated, as the general impression of those physicians I have met, that re-vaccination has been more than usually successful.

H. A. CARRINGTON,
Reporter.

REPORT FROM MIDDLESEX COUNTY.

"I would say that for the last five years of my practice there has been no fatal epidemic in Clinton. Influenzas (or acute and sub-acute bronchitis), phthisis, a few cases of croup, pneumonia, or pleuro-pneumonia, a large number of diphtherites, and a larger number of sub-acute or chronic rheumatism, a few cases of typhoid and bilious fever, dysentery, cholera infantum, have been our most common diseases, and generally very manageable. For

three and a half years I lost no case in town from any acute disease. Two or three cases of diphtheria terminated fatally by croup. Since I am not aware that my treatment in diseases mentioned differs essentially from my professional brethren, perhaps I ought to say that for many years I have used very little alcohol internally. From 1829 to 1844 I used it pretty freely in most of asthenic diseases, supposing it indispensable to safe practice. Since then I have used very little, comparatively. In an epidemic typhoid fever, of 1865, extending over a period of four months, I do not believe I used two quarts, and most of this by the advice of consulting physicians. I am confident that my patients have generally received little or no good from its use. In typhoid fever I have certainly succeeded as well without it, having lost but two cases in 1865 (one from intestinal hemorrhage, and the other from a gangrenous ulcer). Formerly I administered it in some cases of indigestion. I believe more drunkards have been made by its use *in dyspepsia* than diseases cured.

“Respectfully yours,

“D. H. HUBBARD.”

REPORT FROM LITCHFIELD COUNTY.

I regret being obliged to inform your Committee that, as reporter for Litchfield County during the past year, I have very little to communicate, except that in various ways, when opportunity offered, I have brought the subject before individual members, and endeavored to arouse them to some concerted action.

I will add that one year ago a committee of three was chosen (of whom I was one) to revise the by-laws of the Association, so that they might conform to those of the society. In the “order of business” for the stated and quarterly meetings (in which special subjects are discussed, and each member expected to report some interesting case), we secured a clause calling upon all members for *reports* from their respective sections (upon the subjects mentioned in your circular), for the benefit of the *reporter*.

The by-laws, as revised, were adopted at the annual meeting, on the 18th instant, and ordered printed, and a much more determined interest was manifested in view of “making the meetings more instructive and interesting to all.

At the annual meeting, in 1871, the association adopted a fee table (a copy of which I will enclose herewith), which was signed by all but *four* of its members. It has only recently been printed

and distributed, and there is a feeling that it will prove an additional stimulus, so far as it goes, in keeping the members united and alive to the good cause.

At the quarterly meeting, held at Winstead, in June last, Drs. Phelps and Hanchett, of Wolcottville, and Drs. Welch and Bidwell, of Winstead, spoke of the prevalence of scarlet fever in the region of the Naugatuck valley, and I have since heard indirectly that it has prevailed quite extensively at Thomaston, in the same valley; but I could not learn that there was anything unusual in its character or in the treatment required.

At the quarterly meeting, in January, at New Milford, special reference was made to *vaccination*, and the members advised to call the attention of the public generally to the subject. I learn that in most of the towns a very satisfactory action and result has thus been accomplished.

At the meeting no papers were read except the usual annual address of the President, which referred more particularly to matters of local interest, and was not deemed by him worthy of presentation to your committee.

Pneumonia has been quite prevalent in this and adjoining towns during the past two or three months, attended with symptoms of great prostration, requiring tonics and support at an early stage. We think the peculiarities of the weather and unusual changeableness of temperature has been the immediate cause.

This being the *first working* year of the new organization, you can doubtless recognize the difficulties and embarrassments arising to prevent a thorough record of medical information, and, especially in a county like ours, in which many of the towns are isolated and inconvenient of access; and this may be the reason why several of the members have not attended any of the meetings.

Respectfully yours,

WILLIAM PORTER, M.D.

ARTICLE III.

HISTORY OF
INTERMITTENT FEVER IN THE NEW HAVEN REGION,
WITH AN ATTEMPT TO DISTINGUISH KNOWN FROM
UNKNOWN CAUSES.

BY HENRY BRONSON, M.D.

AROUND New Haven bay and extending twelve miles inland from Long Island sound, having a width of "about four miles" at its southern part and "seven miles" at its northern limit, lies the "New Haven Region," so called by Prof. Dana*. It is bounded on the east by the sandstone and trap ridges of East Haven and North Haven, on the west by the "eastern portion of Woodbridge plateau" and the Orange hills, and on the north by the Mt. Carmel range, eight hundred feet high in some places, the whole embracing New Haven, East Haven, North Haven, the greater part of Hamden and portions of Woodbridge and Orange. Toward the western boundary, coming down from the north half way to the sound, is the West rock trap range, four or five hundred feet in height, terminating precipitously at Westville. Further east, some three or four miles distant, runs the parallel but much lower Quinipiac sandstone ridge, dividing the waters of the Quinipiac and Mill rivers, and ending one mile and a half from the City Hall in the bold, nearly isolated peak (trap) called East rock, three hundred and eighty feet in elevation. A little north of a line stretching from West to East rocks, interruptedly connecting the two, are two short trap ridges, Pine rock one third of a mile from West rock, and Mill rock nearly a mile farther east. The latter is adjacent to East rock, Mill river flowing between them.

These ridges and the manner of their arrangement are prominent

* See his "Geology of the New Haven Region" in the Transactions of the Connecticut Academy of Arts and Sciences, Vol. II, Part I, to which I am much indebted.

and striking features in the landscape of the New Haven region. According to Prof. Dana, they have determined the topography of the adjoining territory, and directed the course of the waters which flow into the bay. On the eastern margin of this region is the broad valley of the Quinnipiac. The river which gives the name, flowing generally in a southwesterly direction, is sluggish and crooked, and only four feet above the sea level at the village of North Haven, seven miles from its mouth. As a consequence the tide, which rises six feet in the harbor, flows up the valley nine miles, covering more or less completely every day a large tract of low meadow—a tract more than a mile wide toward Fair Haven and the sea and narrower above. The salt grass growing on the southern end of these natural meadows is cut at low water, stacked on raised platforms, and carried away in the winter when the ground is frozen. Pile driving at the Air Line railroad-crossing proved the yielding mud in some places to be forty feet deep. The small streams which flow toward the Quinnipiac on either side have no improved mill-sites of importance, and consequently no considerable mill-ponds of suspected salubrity.

From one third of a mile to more than a mile west of the Quinnipiac, just west of the ridge of that name, is a smaller stream, taking its rise on the hills of Cheshire, called Mill river. Near its mouth, within the city limits, there are many acres of salt meadow and "blue mud" which the ebbing tide leaves bare; but beyond the reach of salt water at Whitneyville, two miles from the harbor, it is, when unobstructed, a bright lively stream with clean margins, having a fall of about ninety feet in six miles, and a minimum flow at the point named of twelve million gallons daily. But within these six miles the water has been dammed, and ponds formed in several places (six in all) for manufacturing and other purposes. The facts connected with these changes will be noticed in another place.

Still farther west, in the middle of the New Haven region, and occupying a considerable portion of it, is the Hamden plain, a continuation of the plain on which the city of New Haven stands. Considered as a whole, it is a sandy, nearly level tract of little elevation stretching from the harbor far to the northward. West of the center of this plain, lying partly in New Haven but mostly in Hamden, occupying a depression which Prof. Dana thinks was produced by glacier-action, twenty feet below the surrounding level, are the Beaver ponds, so called, or Beaver meadows. The

irregular tract thus designated, which is a mile and a half long from north to south, and nearly a quarter-of a mile wide toward its southern end, is now more properly a swamp or morass, through which a small stream, fed by never-failing springs, meanders sluggishly. To a casual visitor, it seems to a large extent a tremulous, spongy, reeking mass of peaty matter supporting a thick growth of rushes, mosses, arrow heads and long coarse grass, with bushes here and there. There are many pools of clear water, but these have been made by excavations for peat or muck. Near by in the direction of the city are several basin-like hollows, which were formerly more numerous and deeper than now, and which are rarely or never dry, their arrangement suggesting the thought that the stream from the "ponds" once found its way into the harbor through West creek. The water level, which is scarcely affected by the severest drought, was formerly twenty-four feet above mean tide; but about sixty years ago some imperfect efforts at drainage lowered it two feet, thereby exposing a large extent of surface which was before covered, and spoiling in this quarter the good skating facilities which the boys had enjoyed in winter.* From the western side of the basin, near its broadest part, there issues a sparkling, crystal stream (Beaver pond brook), having size and fall enough to drive a water wheel and the machinery of a factory. At the road-crossing it is famous among horses for its unrivalled potable qualities.

Again proceeding west, we come to West river, on the western margin of the city. It is smaller than Mill river, and in connection with its branches drains the western part of the New Haven region, including the hills of Woodbridge and Bethany and both slopes of the West rock range. It runs in a southerly direction, emptying by a broad estuary midway down the harbor on its west side. Formerly the tide flowed up to the Whalley avenue bridge, three miles from its mouth; but in 1769 (says Dr. Dwight, in his "Statistical Account of New Haven") a dike and tide-gate were constructed at the crossing of the Milford road, which excluded the sea water from the meadows above, the latter containing about one hundred and twenty acres, "nearly the whole of it salt marsh." As the result "the salt grass soon died and was

* See Dwight's Statistics, p. 20, and Dana, p. 107. "The deepening of the outlet" and the falling of the water made the name *Beaver ponds* no longer appropriate. The addition of less than two feet to the present level would apparently make the old designation again suitable.

succeeded first by white grass as it is here called, and afterward, on about half of the tract, by spear grass and clover." According to Prof. Dana (page 93), these meadows are now a foot and a half lower than those below the dike, owing to the drying and consequent shrinkage or sinking of the ground. By reason of this shrinkage and the imperfection of the tide-gates, the salt water is now not wholly excluded. The banks which confine the stream are here low and often inundated. South of the tide-gates are extensive salt meadows and mud flats, which are alternately covered and laid bare by the waters of the bay. Higher up, at the village of Westville, near West rock, the descent of the stream is considerable. Between Whalley avenue bridge and a point one mile and a half above or north west, as the crow flies, the fall is seventy two and a half feet. All the tributaries of West river except Beaver pond brook are mountain streams furnishing only the purest water.

On the west side of West river near its mouth lies West Haven, now a district of Orange. Most of it is low and sandy like the New Haven plain, of which it is an extension. Near the sea-shore and on the margin of the river, here much expanded, there are large tracts of salt meadow and tide mud. Toward the north the ground is high and the soil clayey and often wet, sometimes swampy. On the western border flows a mill-stream called Cove river, which comes from the hills in the northerly part of the town of Orange. Near its mouth it has a wide margin of salt marsh which extends northward nearly a mile.

From the deck of a steamer coming up the bay, the ground on which the city of New Haven is built seems low and flat, though that portion of it which lies to the left or west of Church street appears more elevated. There is a gradual ascent from the water's edge till an altitude is attained near the College buildings of forty feet, which is slightly increased farther north. East of State street the slope is scarcely sufficient for good drainage. Close to this street, on the easterly side, extending from the head of Long Wharf nearly to Elm street, there was formerly a small stream, called East creek or "the creek." Though supplied by springs, it became a nuisance in the midst of the population—"a common receptacle of dead cats and dogs and many other animals"—an offence to the eye and the nostrils. In 1794 the channel had "been so filled and raised for the purpose of building necessaries, hog-pens, tan-houses, stables" &c., that "the tide usually ebbed and flowed only about one-third of its length." In that memorable year the yellow fever

prevailed in a malignant form. The deposits in this creek which were not washed away by the usual rains (the season was extraordinarily dry) corrupted the air, and were supposed to have been active in spreading if not breeding the disease.*

The old Farmington canal with several locks and a basin (the latter covering an acre or more) between the "City Burying Ground" and Cherry street followed the course of West creek. It was finished at the New Haven end about 1828. The deep cut of the New York and New Haven and the New Haven and Northampton railroads took the place of the canal in 1848.

Toward the western side of the city, west of Meadow and George streets, there is a ravine, and a water course called West creek. The latter in early times took its rise from springs above York street discharging its waters into the bay, west of Long wharf. It had a low, swampy margin, and toward its upper end there was at a recent period a small pond with growing willows. More than a century ago, so tradition affirms, sea-going vessels entered its mouth with the tide and discharged their cargoes at Whiting street, while boats ascended to York street. According to the same authority, the vessels, which bore hither the first company of planters in 1638, entered the creek and lay south-west of George street. † A few years before the war of the Revolution the salt water was shut out by a tide-gate at Water street, while the upper part of the channel has been filled up for highways, building sites, &c.—With the slight exceptions named, the tract of land on which the city is built has always been free from fresh-water marshes and pools of standing water. The soil, like that of the Hamden plain, is warm, dry, sandy and porous. In the harbor, however, on the going out of the tide, there is left a large expanse of ooze and mire, called blue mud, from twenty to forty feet deep which extends in broad sheets far up the streams which pour into it.

That my subject might be better understood, I have made these brief remarks on the topography of the New Haven region. To a large extent, it will be observed, this region is a sandy plain with a warm, light soil, and a stinted allowance of organic matter. As a consequence it is naturally somewhat infertile, but with the aid of manure, frequent rains and good husbandry, yields abundant crops. The region is usually considered healthy by

* I have obtained many of these facts from an Account of the Yellow fever in New Haven in 1794, in manuscript, by Dr. John Barker.

† Kingsley's Historical Discourse.

those who inhabit it, but the bills of mortality show that as a whole it is less so than the average for the State. However this may be, it has often been visited by sore sickness, while fever and ague has prevailed, at least occasionally, from the time of its first settlement. The Rev. John Davenport, the first minister of New Haven, in his letters to Gov. Winthrop, the younger (who was a physician), often alludes to the distressing maladies which were rife, and asks advice. In one printed in the Appendix to the Historical Discourses of Rev. Dr. Bacon, dated August fourth, 1658, he speaks of "this sickly time, when many are afflictively exercised with gripings, vomitings, fluxes, *agues and fevers*, though more moderately in this town by the mercy of God, than at Norwalk and Fairfield * * * Brother Alsop is come from the Dutch with a purpose to have gone to the Bay before this time; but the afflicting hand of the Lord hath stayed him by great illness, accompanied by giddiness in his head, and much sleepiness and burning. It comes by fits every other day." At the end he adds in a post-script: "My wife desires a word or two of advice from you, what is best to be done for those gripings, and *agues and fevers*; but she is loath to be troublesome," &c. Again he writes, Aug. 5th, 1659: * "We want your presence here exceedingly. Many among us are sorely visited and distressed and some distracted, in the paroxism of their disease, for a time which taketh them in their heads with extreme pain, as sister Beumont, brother Miles and his son; his daughter also hath been near unto death." And still again, Aug. 1st, 1660, he writes: † "We have much sickness among us both in the farms and town. * * Some whole families and sundry particular persons. Some have great pain in their heads and stomachs, some violent evacuations upward and downward, some burning," &c.

The Rev. William Hubbard, in his work entitled "A General History of New England from the Discovery to 1680," gives a brief but interesting account of "the first planting of New Haven" colony, which then embraced New Haven, Guilford, Milford, Stamford, Branford and Southold on Long Island. Speaking of the discouragements which the people met with in the several plantations he says:

"They have been at several seasons sorely afflicted with diseases, especially fevers, which have proved mortal to many. All that southerly part of the sea coast having, as more propinquity to Vir-

* Mass. Hist. Coll., Vol. VII, 4th Series, p. 503.

† Ibid, p. 516.

ginia in situation, so a participation with it in its climatical diseases commonly there called the seasoning, which is 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 it is not annual, as in Virginia, there being sundry years when there is nothing considerable of it, nor ordinarily so 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 has 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; so that the considerate inhabitants have seen cause to conclude, that though there might be something in the climate, yet a Divine Hand hath overruled, that so suitable acknowledgements of his greatness and sovereignty might be drawn from those that are unwilling to learn lessons of that importance. At one time or other every plantation, within less than these forty years, hath had its term of heavy mortality, and some twice or thrice over; and though somewhat hath been thought to be in the situation of the plantations, that some of them have not been so well seated for brisk and wholesome air, either for want of judgement in the planters, or overlooking that in comparison of other inconveniences, yet therein (not denying the ordinary interest of second causes) things have been carried above such sentiments; while some plantations, reported more healthy, have been turned, as it were, into graves, and others, reputed for sickly, have had a long and pleasant vacation. This disease, wherever it comes, is attended with great prostration of spirits, and sometimes, in the hot fit, with strange stupefaction of the brain. Strengthening the body with cordials, and gentle conducticious aiding of nature, hath been found better than sudden and violent means by purgation or otherwise; and bloodletting, though much used in Europe for fevers, especially in the hotter 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. Setting aside the effects of this disease, those places have been generally very healthy, and, that notwithstanding, have been all along, and are

to this day, in a very increasing way, growing numerous, overstocked and ready to look out for new plantations almost everywhere.”*

It is evident that the diseases of which the more obvious appearances are depicted by Mr. Davenport and Mr. Hubbard were not always simple intermittent, but often some more complex and remittent form of fever—a form produced probably by a greater concentration of the usual endemic influences. But as fever and ague (“ague and fever,” or “agues and fevers,” in the language of that day) is mentioned by name, it is more than probable that that disease in its proper character contributed largely to make the sickly seasons mentioned.

Dr. O. W. Holmes, in his valuable Prize Dissertation on the Intermittent Fever of New England, has introduced a map on which he has starred the places in which that disease had prevailed at the date of his essay, say in 1836. In Massachusetts he has thus marked several towns on the Connecticut and Housatonic rivers, and in Connecticut, New Milford, Litchfield, Greenwich, Pomfret and New Haven. He might have included in the number Norwalk, Fairfield, New London and probably many other places. There is a tradition in Norwalk that the fever visited that place at the close of the Revolutionary war, and remained two years.

I have no direct evidence that Intermittent fever prevailed in New Haven and its vicinity for the half century and more which followed Hubbard’s history, but it is fair to presume that it did. Dr. Eneas Munson, sen., (b. 1734, d. in 1826,) who practiced Medicine in New Haven nearly seventy years, used to say that the disease had always prevailed in New Haven, at least occasionally. Said he, in a letter printed in Dr. Webster’s Collection of Papers on Bilious Fevers, published in 1796: “We have often seen continual endemial fevers, intermittent and remittent bilious fevers originating from the putrid gases of animals and vegetables commixed, as from draining of ponds and stagnant waters,” &c. The late Prof. Eli Ives, (whose practice and that of his father, Levi Ives, covered a period of nearly a century,) who was a student of Dr. Munson, and had unusual opportunities to become familiar with the traditions on this subject, was accustomed to remark in his medical lectures that Intermittent fever had been common

* Second edition (1848), pp. 324, 5.

in New Haven from a very early period—that it had found a congenial home here, and might be expected to return at intervals. Prof. Thomas Hubbard (in a letter printed by Dr. Holmes) quotes him as saying: “Intermittents have prevailed in New Haven and its vicinity from time immemorial, as I learn from one [Dr. Munson] who practiced Medicine for more than seventy years. A few cases have occurred since the year 1800, but I have not seen a case originating in this vicinity for twenty-five years.” This was in 1835 or 1836, probably. In June, 1854, Dr. Ives is recorded by the Clerk of the New Haven Medical Association as remarking, after some case had been reported, “that until within a short period, five or six years, he had not heard of a case originating in this vicinity for about forty years. Mr. Beriah Bradley, of this city, aged ninety-five, whose remarkable memory enables him to recall and describe with distinctness events which occurred as long ago as 1783, (as I have documentary evidence to prove,) and who has known New Haven intimately since it was a village of 4000 inhabitants, says he never heard of fever and ague in this neighborhood till recently. It must be mentioned however that Dr. Knight in February, 1831, and Dr. Charles Hooker in September, 1837, each reported an indigenous case to our city Association, both occurring in New Haven.

About 1828 Intermittent fever appeared on the Sound in Fairfield county. If I am correct, it came from the southwest, passed the New York border, moved up the coast, visiting Norwalk, Westport, Fairfield and other places, and did not stop till it reached the Housatonic river which it could not cross. In Norwalk, says Chief Justice Butler, who practiced Medicine there in early life, it first appeared in 1829, taking the place of a bilious remittent fever. It became very common, more than half the population suffering from it in 1830 and 1831. The valleys were most sickly, but the hills in the neighborhood were not exempt. The disease disappeared in 1832, the first year of the epidemic cholera in this country.

At a meeting of the New Haven Medical Association, October twenty-first, 1850, Dr. Daggett reported a case of domestic origin which, according to his present recollection, was in the vicinity of Beaver ponds. Others were mentioned by Drs. Jewett and C. Hooker, and one by Dr. L. Ives which he thinks was in High street. On the second day of June following, (1851,) Dr. C. Hooker called attention to a regular tertian, home produced, which

he had met with in Morocco street which runs along the low ground by West creek. It was cured by quinine. Similar cases had been met with by other members. No other appears on the record till August twenty-third, 1852, when Dr. Daggett reported one in Ashmun street, in the northern part of the city, which followed continued fever, and yielded promptly to quinine. Another occurred in a child a year old in Wall street, which was mentioned by Dr. Knight, October fourth. At a meeting held in February of the next year (1853), Dr. C. Hooker observed that one half of his recent fever-patients (twenty-two out of forty-four) had had severe and irregular chills occurring at different stages. At a later period, instances of periodical head-ache controlled by quinine or Fowler's solution were related. Still later, at meetings held in August, September and October, several cases of fever and ague, often irregular in form, were presented. On one occasion it was remarked that the disease was becoming common; on another, that as many as twenty persons (probably) had had it during the season. Dr. Hooker was confident there had been a change of constitution or diathesis; that phthisis within the last four years had diminished in frequency as much as one fourth, and that quinine was now an effectual remedy in certain febrile states which it used to aggravate. He gave it in the first stage of typhoid fever say three grains ounce in three hours, contending that it relieved headache, reduced the frequency of the pulse, moistened the skin and tongue, and shortened the course of the disease or broke it up at the outset. His opinions were as usual supported by a victorious array of facts drawn from his large practice. On visiting Litchfield he found that the physicians there were pursuing the same plan of treatment, and that typhoid fever under their management did not run more than from eight to twelve days. He afterward affirmed that his own patients, when seen in the first forty-eight hours, were not sick "many days." In our Monday evening meetings,* those of us who heard him will never forget the earnestness and confidence with which his views were presented. These views, assented to and in fact adopted by several members of the Association, were advocated by him, resolutely and persistently, till his death in 1863. In April, 1858, and subsequently, he told us how he cured pneumonia with calomel and quinine; in 1859, how he managed the comatose forms of fever by scruple

* This paper was first read (by appointment) to the N. H. Med. Association, May, 1872.

doses of quinine, and in 1860 how laryngitis was managed by "twenty-four grains in twenty-four hours" of the same medicine—the success of this unaccustomed practice and the unwonted "tolerance" on the part of the system of the great remedy for the malarious diatheses, so called, proving as he thought the prevalence of this diatheses. Nor did he forget his favorite theme—the new constitution and the changes which it made necessary in our management of the sick—in his daily intercourse and casual conversation.

Cases of Intermitting fever, originating here and there in New Haven and its vicinity, continued to be reported to the Association in 1854 and afterward ; but as the disease ceased to be new, members were not so careful to mention all that they saw. I can find none on the record book after June, 1856, till July, 1864, though several cases are known to have occurred, most of them before 1860, when diphtheria appeared. In the winter of 1857-8 Dr. Tyler and others saw in different parts of the city "a form of remittent fever," with intense febrile symptoms, which was arrested by quinine. During the years which immediately followed, the remarkable power which quinine exercised over the progress of several diseases in which it had previously been hurtful or useless was proved in the practice of some of our most distinguished physicians.

On Cove river in West Haven, a mile and a half from the sea, on high ground, where there had previously been a pond or reservoir of diminutive size, a dam was built and a saw-mill erected in 1860. Thus a large tract of land, probably fifty acres, not before covered, was inundated, mostly with shallow water. The usual amount of vegetable matter found growing and decaying on swamp, pasture and wood land was buried by the flood. The trees which stood on the ground were not disturbed, but were subsequently removed when the pond was frozen, the stumps being left to rot in the water. The trunks when cut were so decayed that the axe sunk to the helve, while the cleft, says the axeman, emitted a sickening odor. Around and near the mill and further down the stream there is much wet and swampy land ; but with the exception named there has been no considerable recent change in the topography of that neighborhood or of West Haven.

The first case of Intermittent fever in the south part of the New Haven region—the first I mean of the current annual endemic—occurred in the person of Smith B. French, who attended the

saw-mill just referred to, and lived close by the pond. After the water had been let off, exposing to the sun much decaying vegetable matter, he commenced to make repairs in the pit and about the flume. While thus occupied in August, 1863, in a season of drought, he was seized with a fit of the ague. He had been at the South several years before and knew the disease, but had not had it. According to his statement, his was the first case in that quarter and the only one in that year. The next season which was unusually dry with much smoky air in August, his family had the complaint, but he does not think the mill-pond had anything to do with the attacks. From this point apparently the disease spread among the scattered farm-houses in all directions, westerly, northerly, easterly to the central village, and southerly down the river to the sea-coast. One of the earliest of the families affected was that of A. J. Downs, living at an elevation of (say) eighty feet above the level of the pond, and half a mile distant, in a southerly direction. His house is not quite as near as one or two others. It is estimated that there were as many as seventy cases in the summer and fall of 1864, all within a mile or a mile and a half of the mill-pond.

In the following year (1865) which was also quite dry, the fever became still more general. Those who had before escaped had it now, and those who had suffered before suffered again. It appeared at the house of F. Meloy, half a mile west of the pond and one hundred feet or so above it; spread along the New York railroad and Milford turnpike, and afflicted a group of families west of Savin-rock near the sea-shore. The people however who live on the low plain in the extreme eastern part of West Haven, south and east of the horse rail-road, and along West river north of the road named, the tract being more than two-thirds surrounded with salt water, a large proportion of it salt marsh, and penetrated almost to its centre by a broad morass, salt toward the sea and fresh inland, almost wholly escaped and are to this day exempt. The district named is more than a mile from the pond, the suspected source of mischief. To this source the good people who live in the sickly quarter usually refer the malady. As the disease began in the house nearest the mill; as the successive occupants of that house (Mr. French left in 1864) have continued to suffer to the present time; and as those in the neighborhood have been siezed more frequently than those more distant, the popular opinion has a plausible foundation.

Since 1865 the fever and ague has returned each year to its accustomed seats in West Haven. According to Dr. Aimes it was very common in 1866, but afterward till 1870 the cases were becoming fewer. During this period the water in the pond was much reduced during the dry months of summer, and many acres which had been flooded in the winter and spring were exposed to the solar rays; but the disease did not thrive. Its languor was so great that not even the severe and protracted drought of 1869 could reanimate it. But in 1870 there was a change. That year will be long remembered for its almost unparalleled drought. The streams were greatly diminished or entirely disappeared; water wheels ceased to turn; trees in many cases lost their foliage and vegetation was burned up. The saw-mill pond was nearly dry, and its bed to a large extent thoroughly baked. Under these circumstances the fever was greatly strengthened in its old abodes, and somewhat extended in its limits; but it did not reach the maximum intensity of earlier years. In 1871, which was in no way remarkable for its meteorology, though dry for short periods in May and August, there was another change. In the vicinity of the mill, on the lower ground east and easterly, and on the heights above it was never more rife. Exclaimed disparagingly the before named and oft-afflicted Mr. Downs, as the chill was creeping over him: "It is worse than ever." On the Milford turnpike it was more extended than at any time before. Eastward in the direction of the city, it reached Allingtown, where it had prevailed to a limited extent two or three years. About three-fourths of a mile south and south-easterly of the point where the turnpike crosses the north and south road, there were several cases in different families. Near by there happens to be a winter ice pond of several acres, the water of which is let off after the ice is gathered. Only a rich, wet, sometimes boggy meadow remains yielding a heavy crop of grass. The site of this pond was the southern limit of the fever in this quarter. The central village of West Haven suffered but little.

Ever since Intermittent fever broke out in West Haven, there has been but little other sickness there, and scarcely any which did not wear the livery of the reigning endemic. For most of the time indeed the physicians called it healthy, while the mortality in the whole town was below the average. The deaths in Orange,*

* In 1870, according to the U. S. census, Orange had a population of 2,634, and West Haven, which includes most of the ague territory, 1,852.

in the seven years ending with 1863, were 244, and in the seven years ending with 1870, 247. In the meantime the population was increasing at the rate of thirty per centum in ten years. Since the malarious era began, phthisis is thought to have been less prevalent than usual, but those ill of this disease have not always escaped the ruling fever.

In the spring of 1860 the "New Haven Water Co." began, and in December, 1861, completed, their works for supplying New Haven with water from Mill river. They constructed a dam thirty feet high, with water wheels, forcing pumps, &c., at Whitneyville, two miles N.N.E. of the public square, on a site which had long been improved, the new dam taking the place of an old one eight feet high. In this way a deep, narrow pond, two miles long, called Lake Whitney, was formed, the water flowing back and submerging two mill privileges higher up the stream. Owing to the generally steep banks, not much new ground or ground not covered by the three old ponds was flooded. In all however there were several acres mostly at the upper end of the lake and at the mouth of Pine-marsh creek (a small stream with low marshy and peaty margins coming from the south-west and south, two miles long) up which the water flowed many rods. The stumps, roots, grass, turf and vegetable debris on the land thus newly covered were not removed.

On the twenty-eighth day of August, 1863, Dr. Swift of Hamden was called to see Mrs. James McCabe, an Irish woman, living close by the water at the mouth of Pine-marsh creek. She was down with Intermittent which proved obstinate, and had not recently been from home. Her case was the first unequivocal one at Lake Whitney. But I should mention that one day earlier Dr. Stillman, of North Haven, visited Gilbert Benham, living near the "Plains Church," in Hamden, three-fourth of a mile west of the lake. The Doctor considered it an irregular but clear case of fever and ague. A child in the same house sickened soon after having symptoms of the same disease in a masked form. Benham himself had been west three years before. On the twenty-seventh of the following month Dr. Stillman first prescribed for Enos Dickerman, one-third of a mile easterly of the lake. He had the fever in a decided form lasting five months, and had not been from home. These were all the known cases in that neighborhood in that year.

Though the season of 1863 was very dry, the middle and later months of 1864 were still drier, and the water in Lake Whitney

was much reduced. Fever and ague again appeared in the families it had visited the year before, and showed itself somewhat generally among the farmers on both sides of the lake. The drought returned in 1865, and proved to be "one of the most remarkable experienced for many years." With it came a notable increase of the fever, but up to that time I do not find that it extended beyond the neighborhood of the lake. The three years which followed (1866-7-8) were wet, and the water flowed over the dam nearly the whole time. Mr. Whitney, whose contract permitted him to use the water till it fell one foot below the lip of the dam, had no occasion to stop his works or employ steam during the whole period. Through these years the malady prevailed, but only to a moderate extent and not more than in several other places. As early as 1867, (a very few scattered cases occurred in 1866,) it extended up the river to Augurville, Centerville, Ives' station and Mt. Carmel, situated respectively three-fourths of a mile, two miles, three miles and four miles from the north end of the lake as it then was. West of the most distant point named, Mrs. David Hubbell, living on high ground, was seized as early as February tenth. The places mentioned are all manufacturing villages, and each is equipped with a mill-pond, sometimes with two. These ponds have long existed in nearly their present condition except one, the largest, half a mile south of Mt. Carmel. It has an area of say forty acres with a large proportion of shallow water. There are also margins of several acres of low water near Ives' station and at Augurville, particularly the latter. Though the ponds named were full in 1867 and '68, in dry seasons they are necessarily drawn down, each working day, while the mills are running, but fill up at night when the gates are shut. Thus a large but inconstant margin of reeking vegetable matter is in the latter part of every week-day exposed to a summer sun. Beside this diurnal ebb and flow, the waters are occasionally drawn off more completely in the dryest part of the year for repairs.

The summer of 1869 was drier than any known for many years, the usual rains having been withheld till late in autumn. The water in Lake Whitney fell four feet below the top of the dam, and many acres were laid bare near the upper end. Fever and ague at nearly every point in the valley was more frequent and extended than it had been in any previous year. Up the river it did not stop till it had passed through the gap at Mt. Carmel and half a mile beyond.

In the course of this year the New Haven Water Co., desiring to increase the power of their pumps, raised their dam four feet and eight inches. The work was completed in September, 1869, the capacity of the lake increased 59,000,000 gallons, and its whole area augmented to one hundred and thirty acres. This done the water set back up the valley nearly two and a half miles, spreading out above and below Pine-marsh creek, covering deeply the places which were before shallow, and submerging a wide margin outside the previous shore line. In addition to this the valley of the creek including the broad tract called Pine-marsh swamp, abounding as it did in peat bogs, coarse grass, roots, decaying leaves and standing bushes, was inundated more or less completely for more than a mile, and to the extent probably of fifty acres. By contract with the previous owners of the land, the small stream at its exit from the swamp proper was so dammed as to keep the water at the uniform level of the lake when full, and at an average depth of say one foot. As but little shed water flows into the valley to increase the supply derived from springs, this level is not much affected by rains.

In 1870 the drought, the combined result of intense and prolonged heat and deficient rain, the deficiency (too weak a word) lasting from May till late in February following, was almost without precedent. The fall months were very mild, and winter did not set in till the seventh of December. The water in the lake, notwithstanding the dam had been raised nearly five feet, sunk early, falling to a lower point than before known, in the whole about nine feet. Consequently much ground up the lake and along the creek, recently flooded but now bare or scantily covered, amounting in all, if the swamp be included, to eighty acres or more, was exposed for many weeks to the terrific rays of the sun. Thus tempted the fever returned to all its old haunts around the lake, the swamp and the creek, the last reduced almost to a thread, and showed increased vigor everywhere. It had the previous year appeared on high ground east of the river, but it now planted itself not on the slopes alone but on the highest part of the Quinnipiac ridge at the house of D. W. Shares, three-fourths of a mile east of Augurville, and one hundred and fifty feet say above the river. One morning late in August Mr. S. noticed that the fog which often hung over the valley and the low land adjacent was creeping up the hill, appeared under the apple-trees and finally reached his dwelling. On observing it, he remarked to a by-

stander that they should now all have the "shakes." His prediction proved true, for in two or three days some of his own family sickened. Out of fifteen persons living in his house and two others close by, all hitherto exempt from the disease, only one escaped.

At Whitneyville, a little manufacturing village ensconced between the hills below the dam, seemingly inaccessible to malaria, so called, the disease, with a slight exception in 1868, did not appear till 1869, when it was quite common; but in 1870 it siezed those who had escaped the previous year and invaded nearly every house. In a neighborhood of twenty-five or thirty families seventy-one cases are said to have occurred.

The year 1870 was memorable in the villages of the valley above Lake Whitney. "Everybody has the shakes this year," was the usual answer to a question regarding the fever.* Of the sixty-five persons working in the factory of William A. Ives & Co., at Augurville, all but two were the subjects of it either in this year or that which preceded. Many acres of land recently submerged were laid bare at the upper end of the pond, but Mr. Ives thinks the complaint was not as common in 1870 as in 1869. This if true may have been owing to partial acclimation. Further up the stream below and above the "gap" the disease took a wider range, traveled further and swept cleaner than it had ever done before. To add to the troubles of a stricken population, the New Haven Water Co. bought the water in the large pond or reservoir just below Mt. Carmel, and about the first of August drew it off as completely as possible to eke out the supply for the suffering city. To this movement the good people near by attributed their increased sickness. I examined the spot in the autumn following while the drought still continued. I found a dam about twelve feet high which had been built some twenty years before, and a pond covering (as before stated) some forty acres as a reserve for the

* A large proportion of the facts embodied in this paper have been obtained from non-professional sources. Of late years a majority of those sick with ague have not taken medical advice but gone, armed with some well-known formula, directly to the drug-store. Hence the people, sometimes the apothecaries, have had much information of which the physicians were not in possession. To get at the truth however some adroitness has often been necessary. As a general rule men having residences or building lots for sale are, on the ague question, not above deception. In such cases (which may usually be known by the reluctant answers or too flat denials given) it has been necessary to bolt into the houses and inquire of the woman and children, who are not skilled in the tricks of the speculators.

mills lower down. A diminutive stream flowed in the old channel, while here and there was a pool of clean water a few inches deep. Scattered over the bed of the exhausted reservoir, in its deeper as well as in shallower portions, were the stumps of defunct trees and bushes, leaves and other vegetable matters, but not much mud. In the immediate vicinity on the west side were many hollows or basins, usually small, some of which were quite dry, others nearly so, into which the water flowed as the pond filled. Along the abandoned ditch below the dam, owing to the irregular surface, there were here and there considerable bodies of standing water. Though these facts are too interesting to be passed over, I cannot find that the fever prevailed more in this neighborhood than in several other places. The inhabitants were indeed sorely afflicted. There was no secure retreat anywhere in Hamden. Certain groups of families living on their farms on high ground in the northwestern section of the town, above and below the Mt. Carmel range, escaped partially, perhaps wholly, but these instances were rare. Out of a population of a little over three thousand (3028) in the whole town, it was said by competent judges that two thousand were borne down by the scourge in 1870.

There was but little rain in May, 1871, particularly its last half, and the hay crop was cut short. The last week was hot. June and July were wet, with much dull, cloudy weather. August was perhaps hotter than the average and somewhat dry, but the season as a whole was in no way exceptional. Fever and ague started off with great spirit as early as February, about the time the copious rains due several months before began to fall. In March, April and May it was more rife than it had ever been before in those months. It spread through the valley, around the lake and ponds, up the slopes and over the hills, covering all the ground it had ever occupied. Not content with its old dominion, it sought new conquests. It vexed the families above the Mt. Carmel range where unvisited soil was most abundant, and extended up Mill river and the New Haven and Northampton railroad as far as Cheshire and the south part of Southington. In the former place it appeared first in 1870 near low and swampy ground along the old canal in the vicinity of the railroad depot. Afterward, says Dr. Driggs, scattered cases were met with in all parts of the town, "on mountain and in valley, in wet and dry localities," the whole number equalling at this date (May, 1872) say seventy-five.

To quiet the excitement of the Hamden people and to prevent hostile legislation, the New Haven Water Company agreed to clear up their flooded lands, burn the surface rubbish, and then keep at least thirty-four feet of water in the pond. In pursuance of this agreement they drew down the water, and when the ground was sufficiently dry, in August, 1871, set about forty men to work cutting the bushes at Pine swamp, and on a tract of about twenty acres near the head of the lake. The men were occupied some four weeks cutting and burning, during which time about half of the party slept on the ground near their work. Of the whole number only one had the fever before the job was completed, but I have heard of two or three others who had it afterward.

As the disease began earlier than usual on Mill river, it gave signs of abating earlier in contrast with its behavior in 1870. In July and August, notwithstanding so much had been done at Pine swamp and the upper end of the lake to inflame and diffuse it, its decline in all directions was apparent. In the fall months, though the disease frequently started up afresh and for a season became very rife in certain quarters, it was on the whole less common in the Mill river valley and the places adjacent than in the year previous.

The borders of Beaver ponds, one mile at the south end from the College square, and more than a mile southwest of Pine swamp, the latter surrounded on its west, south and southeast side by pine woods, &c., are not inviting. The dwellings nearest are of an inferior kind, and not always cleanly. On the western side the night soil and dead horses of the city are (or recently were) deposited. On the same side near the south end is a slaughter house, the blood and refuse from which were for nine years, or till July, 1869, turned into the stream. It is now used for pork-packing, the waste being promptly removed and "utilized." A little way down the brook issuing from the west side of the marsh, and running southwesterly to West river, there used to be a tripe and bone factory which was complained of in legal form for corrupting the water; but the evil was corrected or greatly mitigated several years ago. Still further down, perhaps sixty rods from the marsh, there is a mill-pond of ancient date containing some six acres, and a grist mill. The water is often drawn off in the summer for repairs, &c., draining a boggy, grassy and bushy tract at its upper end, and laying bare several acres of mud and mould lower down, from which there springs a rank growth of weeds to be buried when the pond is filled.

About twenty years ago Jesse Potter and two children living in a shanty standing close to the swamp, on the west side, had Intermittent fever, believed to be indigenous. I can find no other case till March twenty-first, 1865, when Dr. Dibble met with the disease in a child in a house next south of Potter's. In the same season it spread all around the ponds on both sides, extended east to the Hamden road, south to Whalley avenue, and west and southwest down the brook. In the wet season which followed (1866) it was still more prevalent, especially on the Hamden plain road below and above the "Plains church," so called. Says Dr. Swift of Centerville: "It visited every house [twenty-three on the map *] between the church and Russell Leek's, a mile and a half north, and was hardly less general for a mile in the other direction." It should however be mentioned that the road named at its northern end is much nearer to Augurville, Mill river and Lake Whitney (to say nothing of Pine marsh, only eighty rods from the high-way) than to Beaver ponds. The sickness returned in each succeeding year; but in the vicinity of the ponds and in the northwestern section of the city the cases became fewer each season, It was less prevalent during the severe drought of 1869 than in the wet years which preceded. In 1870 however it returned with more than its original strength. It was not only more concentrated in its early seats, but its power of locomotion was greatly increased. It extended eastward across the Northampton railroad to Sachem's ridge, and from the New Haven Burying Ground at the south to Mill rock, smiting with few exceptions the whole population. A group of huts near the terminus of the Centerville horse railroad, inhabited by Germans and called New Hamburg, was invaded for the first time. In their midst is a small deep basin which contained three or four square rods of shallow water supplied by a spring. On the Hamden road the fever took its usual course north till it met the advancing malady from Mill river. Further west above Pine rock, around the upper end of Beaver swamp, and up Wilmot brook and its branches, all clean, crystal streams, it spread among the scattered farm-houses, some of them on high ground two hundred feet or more above the level of the swamp. On the western side of this region, on the declivity of West rock range, two hundred and fifty feet above tide-water, is Wintergreen lake formed by

* In the preparation of this paper I have made much use of the "Atlas of New Haven County," published in 1868, particularly when estimating distances and directions.

a dam constructed eight years ago for the collection of brook and shed water for city purposes. At the bottom of this lake, containing sixty acres, were buried the usual vegetable substances found growing and decaying on swamp, meadow and wood-land, but as the water has never been drawn off for use they have not been exposed to the sun. Agues have appeared half a mile north, but not in the house nearest the pond.

The disease in the Beaver pond neighborhood in 1871 exhibited nothing new. It appeared in all its old abodes, but in most instances was not quite as common as in the previous year. It did not extend much its boundaries outside the city limits, for the ground had before been well occupied. It could not climb the West rock or Mt. Carmel range, perhaps because there were no inhabited houses to be used as stepping-stones.

Intermittent fever in Hamden has sometimes proved obstinate, but as a common thing it has yielded to the customary treatment. Often it has assumed the remittent form; instances of "dumb ague," so called, have been frequent, relapses numerous and complications not unusual; but the sickness has not been of a kind to give the doctors much extra employment, or to increase the rate of mortality. During the six years in which the endemic has been rampant, closing with 1870, two hundred and thirty-one died in the town, while in the preceding six years two hundred and fifty-four died, the population in the mean time increasing eleven per cent. in ten years. The mortality in 1870, though considerably above the average for the ague period, was but one in seventy, while for the whole State it was one in sixty and a half.

West river at the foot of West rock at Westville, two miles northwest of the public square, is a rapid stream falling seventy-two and a half feet in a mile and a half. Within this distance there are five dams connected with manufacturies, but the ponds formed, owing in part to high banks, are not extensive, nor the surface exposed when they are drawn down large. I visited them frequently in 1870, and found but little stagnant water or decaying organic matter. At the eastern end of the valley, but on the stream which comes down on the east side of the rock emptying into West river, is Blake's factory and a small but apparently inoffensive pond of two or three acres. No important topographical changes within a recent period have been made in the valley under consideration. The water of the river and of all its tributaries is naturally pure and wholesome.

In April, 1854, Dr. Levi Ives reported to the N. H. Medical Association an indigenous case of Intermittent in Westville. In the summer of 1861, Dr. C. A. Gallagher, of New Haven, states that he had a case between the rock and the river which returned the following season. Another occurred in April, 1864, but the disease did not attract much attention till the summer of 1865, the year of its first appearance at Beaver swamp two-thirds of a mile east of Blake's (a wooded hill lying between), or more than that by the brook which connects the two. The first as well as the subsequent cases were around the factories. It returned with each succeeding year, and was particularly rife in 1867. According to Dr. Barker of Westville, it visited fifty-one out of the fifty-eight houses nearest Blake's mill in that year, exclusive of a few that were invaded soon after the count was made. In the years which followed, including the dry season of 1869, it gradually abated as though about to retire, taking the course it did at Beaver ponds and West Haven; but in 1870 it returned with its energies recruited. Nearly all the families living below the bluff or terrace (some forty feet above the bed of the river) were more or less affected. Sundry persons residing on the plain above were attacked, but these were generally (Dr. Barker thinks always) workmen and others who spent the day in and about the factories. Up the river north of the village there were no indigenous cases, though the pond of the Pond Lilly Paper company there situated has in a dry time a larger and more suspicious margin than any of those further down the stream.

In 1871 the disease, as in other quarters, commenced earlier than in the previous year, and in the beginning, when all the mill ponds were full, was more generally prevalent than ever before. For the first time it extended around and above the Pond Lilly Paper mill, and up the valley a mile beyond. Indeed in a few instances it reached the high hills of Woodbridge.* In certain houses near the pond all or nearly all the inmates were seized. In the village it spread over the terrace plain, and appeared among the scattered dwellings far south between the western hills

* In most instances the roads which connect the farms and more distant population with the city pass through the "infected districts," so that persons having daily business or frequent intercourse with the city are liable to contract the disease on the way, especially when, as is often the fact, they return home in the evening. In attempting to account for the malady in new or unusual and unsuspected localities, this fact will not of course be forgotten.

and the river; but as in the preceding year most if not all the sufferers (a few residing nearest the river excepted) had made occasional if not daily visits to the mills and valley. The frequency with which the several members of a family, in a previously healthy neighborhood, have sickened one after another when once the complaint was introduced, often suggested to Dr. Barker the old idea of contagion. It must be admitted that authority is opposed to this idea, but I do not think the question yet settled. If I mistake not it will again come up for decision—come up when opinion swings round, and the profession gets weary of current theories of ague-genesis.

During the prevalence of Intermittent fever in Westville, Dr. B. informs me, there has been little of the ordinary forms of fever—no old-fashioned typhus and dysentery. The incessant yawning, and the large flabby tongue bearing the impressions of the teeth, so characteristic of ague, have been present in every case of sickness. So complete has been the sway of the ruling endemic that phthisis has been measurably suppressed, the new cases being rare. At the same time, the rate of mortality from all diseases has not apparently been increased.

In November, 1857, Dr. Tyler, of New Haven, was called to prescribe for indigenous Intermittent in a son of E. Dickerman, on the Derby turnpike, sixty rods or more west of West river, and say forty feet above it. So far as I know no other case occurred among the sparse population in that quarter at that period. Three-fourths of a mile further west, on the same road, two and a half miles from the public square, are the reservoirs of the Fair Haven Water Co., designed to store water (shed chiefly) for the supply of Fair Haven and the city. Of these there are three containing respectively twelve, twenty-two and twenty-three acres, constructed in 1862, 1863 and 1869. The oldest and lowest is one hundred and thirty-five feet, the others one hundred and seventy-five feet, above tide level. Unless when occasionally drawn down for repairs, no water has been taken from them except in small quantity in 1870, '71 and '72. Connected with the smaller pond is a considerable tract of bog and swamp which is uncovered in dry seasons like 1869 and '70. All contain stumps and roots, vegetable deposits and the wash of the surface several hundred acres, mostly woodland, in extent. Near these ponds fever and ague appeared in 1865, and has returned every season since. Leaving out of the account a returned soldier who had the disease

at the South, the first cases occurred in the fall of the year named, one in the house at the toll-gate which stands a few rods from the shallow portion of the smaller lake; another at the house of Mr. Hale, sixty rods east of the lake near an old saw-mill pond; another in the person of Mr. Warner, sixty rods northeast of the latter point, not far from an ice-pond. In the next season (1866) other members of the same families were attacked. So were some of the inmates of the other dwellings (two in number) nearest the lake, not to mention one case at Mr. Bronson's, half a mile distant. In 1867 and afterward the complaint extended to all the houses (not numerous) in the neighborhood. It moved north half a mile from the turnpike on the Edgewood road, east to West river, and south and southwest wherever there were inhabitants, high ground offering no security. It also appeared at the solitary residence of H. B. Leet, at the Oak street crossing, near the small stream which flows from the reservoirs, nearly a mile distant, to West river. There is here an artificial ice pond seven or eight years old, partially dry in the summer. Out of a family of seven persons six were attacked. The first case however was that of a child who attended the school at Allingtown, on which fact Mr. Leet lays stress.

The nearest houses on the Derby road west of the reservoirs are two-thirds of a mile distant. They are three in number, occupying elevated ground. In the immediate vicinity is a swamp, several acres of which were drained in 1870 and the soil prepared for cranberries. In 1871 fever and ague appeared for the first time in all these dwellings. In one however the sufferer had been in North Haven, but did not spend the night there. In another standing on an eminence and inhabited by colored people, five persons were attacked. South and southerly from this point on the way to the central village and "Tyler City," the cases were numerous, some of them on very high ground.

In the valley of the Quinnipiac, on each side of the river, stretching southward nearly two miles from the village of North Haven, are many brick-yards connected with which are numerous shallow basins made by the removal of the clay and afterward abandoned. The yards on the west side are about one mile east of Mill river, the Quinnipiac ridge, some sixty feet above Lake Whitney at the south and three times as high at the north, lying between. The clay-pits referred to are usually flowed by the tide, are rarely or never dry, and contain little or no vegetable matter living or dead.

Not far below the village bridge, on the west side, between the river road and the Hartford railroad are two or three acres of standing water and low wet land which the tide, owing to the railroad embankment, does not reach.

Around and near the upper brick-yards, west of the Quinnipiac, the early cases of fever and ague occurred. Dr. Lord thinks he met with two instances in 1866, but Dr. Stillman did not see or hear of the disease till August and September, 1867, when several persons came under his care, mostly between the bridge and the house of Alfred Doolittle (himself a sufferer) two-thirds of a mile below. One patient worked in a yard east of the river near the railroad depot. Two lived on the highest ground (in that quarter) of the Quinnipiac ridge, half way to Centerville. Probably the whole number of cases in the town in that year did not exceed a dozen. They were more frequent in 1868 and still more so in 1869. In 1870 the disease spread up and down the valley on both sides of the river. Below the bridge on the road to New Haven, it extended five miles, calling with perhaps one exception at every door, and shaking the hands of nearly all the inmates. Those living up the slope and on the ridge west were almost equally affected. On the east side of the river the malady was not as general; still it was very common on the valley road leading south, particularly toward the East Haven line. It was rife too about the bridge at both ends, and on the road running east, most of the families suffering. On the high ground in the northern and eastern parts of the town it was rarely seen; but up the river three miles above the bridge, just over the line in Wallingford, where there is a manufacturing village called Quinnipiac, with a small pond always full and seemingly harmless, a few cases occurred. Further up the valley and the railroad one or two persons, perhaps more, sickened, and in the southwestern part of Meriden, the next town north, in the manufacturing village of Hanover (South Meriden), "a large proportion of the population" suffered. Here, on the Quinnipiac, is a pond of ample dimensions, much of it caused by raising the dam in 1868, and flowing new land which was laid bare in 1870. There was a sprinkling too on Farm river over the North Branford boundary, in Northford, five miles easterly of North Haven centre,—four cases certainly, two near the factory of Malthby, Fowler & Co., where there is a large mill-pond which has recently taken the place of a small one, and two three miles below, the latter attended by Dr. Lord.

In 1771 the disease in North Haven as in other quarters started early and threatened to surpass itself. It took possession of all its old haunts, persecuting as before the brickmakers and farmers on both sides of the river, and sweeping the Quinnipiac ridge from Whitney peak to Mt. Carmel. As in 1870 those living on high ground east of the river suffered but little. On Farm river in Northford it again appeared. So it did in Quinnipiac village, its severity here being much increased. Above this point in Wallingford there were a very few cases, and in the old town centre, on the hill, where it had not before appeared, a much greater number. In the whole township, Dr. Harrison thinks there may have been one hundred instances in 1871. Over the line in Meriden, in the village of Hanover, the fever (intermittent with remittent proclivities) returned. It appeared too, writes Dr. Churchill, in the more central part of the town near the railroad, where flows sluggishly a small uncleanly stream. In truth, in the summer and fall of 1871, the disease was frequent "in almost every section of the town." Happening in New Britain ten miles further north, at the close of the season, I found the malady had been there, scattered cases, apparently independent of local causes, having occurred all over the town.

Wherever Intermittent fever has appeared, reached its culminating point for the season and then begun to decline, it has often kindled up afresh becoming for a time very prevalent, and then again subsided; and this movement has been repeated at intervals till late autumn or early winter without any known cause or causes. This alternate activity and quiescence—this perpetual ebbing and flowing—attracted the particular notice of the physicians of North Haven and Hamden in 1871.

During the four years' prevalence of ague in North Haven, ending with 1870, the deaths were ninety-three, and in the previous four years seventy-four, while in ten years from 1860 to 1870 the population increased from 1,499 to 1,771, or over eighteen per cent. The year 1869 however was exceptionally mortal, the deaths numbering forty-six, double the average, owing to the prevalence of continued fever. In 1870, when there was more intermittent sickness than in all the preceding years, but twenty-one persons died, or one in eighty-four, a very low rate for Connecticut.

East Haven, except that portion which makes a part of Fair Haven, is a farming town, and lies on the east side of New Haven harbor and the Quinnipiac river. In 1870 it had a population of

2,714. On the west margin near the water, running north and south nearly the length of the town, is a sandstone ridge. The southern part adjacent to the sound and bay is largely made up of salt marsh and sandy plain. Half a mile or more northwesterly of the central village is a large tract of wet meadow and swampy ground, from which issues a small stream which crosses the main road and runs to the sound. On the eastern margin of the township, lying between ridges, is Saltonstall lake from which a mill-stream of crystal water flows southward. West of the lake and the ridge, running nearly parallel to the latter, is East Haven or Farm river which enters the town near its northeast angle and pursues a southerly course to the sound. It is a clear and for the most part lively stream, but on its margin is much wet and swampy ground.—There have been no recent changes of topography in East Haven.

Comparatively few cases of Intermittent fever have occurred in East Haven. The first that has come to my knowledge was one in the practice of Dr. Stone in the family of Mr. Ludington at Morris Cove, June, 1866. Others were met with in the same neighborhood soon after. In 1867, Mr. S. T. Andrews and his wife, two-thirds of a mile north of the old village, on Farm river, and also a man on Prospect street, had the disease. In 1870 isolated instances occurred in different parts of the town, one or more at Morris Cove, one in the central village, one on the North Branford road near the river above named, one on the road running north from the Fair Haven bridge near the North Haven line, one or two a mile southerly from the bridge, one on high ground on Prospect street, and probably others. In 1871 there was an increase of the malady and greater concentration in particular localities. One case appeared a mile northerly from the Fair Haven bridge, a few others in the central village, and one at South End on the sound; but the major part were on Farm river. Near where this river enters the town, at a place called Foxen, where one instance in a child of sixteen months occurred in 1870, there is a group of some twelve families, every one of which (with one exception) suffered more or less. Hard by is a basin of water three or four acres in extent, with no natural outlet, which was partially drained for the purpose of obtaining muck four or five years ago, since which time in dry seasons the water has been much reduced, and a considerable tract of bog and mire exposed to the sun. To this partial drainage the people near seem inclined,

in the absence of other visible causes, to trace their sickness. Further east in North Branford, on the road leading to the central village, a very few scattered cases occurred. Southward from Foxen, more than three miles down the river, (along which the fever appeared at intervals,) near a small tract of wet land at the outlet of Saltonstall lake, there is a factory and mill and a group of dwellings among which the disease appeared in nearly a dozen instances. Several of the sufferers, however, belonged to a party who worked in the drained part of a large swamp getting out peat a mile east, in the town of Branford. There were other cases near the swamp and on the main road running east. Going north-erly and stopping at a solitary farm house near the upper end of the lake, I found that the disease, produced on the spot, had been there. There was wet ground near, but nothing unusual.

Dr. N. B. Hall of Branford writes that Intermittent, "not limited to any particular locality," has been prevalent in that town for three years. He has found it "near the sea-shore at Double Beach, Pine Orchard, and Stony Creek—also through the central parts of the town, and on the hills in the hitherto healthiest part of North Branford," the disease often assuming the form of remittent fever. These new complaints have taken the place of typhoid fever formerly so common.

Since the commencement of the present endemic, beginning in West Haven and at Lake Whitney, the first case in the city of which I have an account was that of a child in York street, in July, 1864. The next cases occurred in the following year, in the northern and northwestern parts of the city, in the neighborhood of Beaver ponds and Westville. South of Whalley avenue, and more centrally, it scarcely appeared at this period. In the succeeding wet seasons of 1866, '67 and '68, it hung around its old quarters, but made no advances. Indeed it seemed, as in certain other localities, to be losing courage, and gradually dying out. Nor did the drought of 1869 wake it to life. But with the fearfully dry season of 1870 came a great change. The disease revived in its old abodes, surpassing all it had done before, while a passion for travel was quickly developed. It moved down West river in a broad belt, half a mile wide, as far as the tide-gate and Congress avenue; proximity to the river seeming to encourage its progress, and remoteness to embarrass it. There is a group of families at the head of Oak street, near an artificial ice-pond, fed by springs and surface-water, but almost dry in

summer, which suffered much. One case appeared at the Connecticut Hospital, none at the Orphan Asylum.

From the same starting-point the scourge (in 1870) traveled eastward across Dixwell, Ashmun, Canal and Prospect streets, and appeared on Hillhouse avenue and the high ground of Sachem's ridge, the last one hundred and thirty feet above the plain below. In the northwest, beginning at Whitneyville, it came down Mill river as far as State street, embracing within its sweep Whitney avenue and Orange streets, and a large tract between the latter and State street. Over all this territory, half encircling the central city, the fever was common, in several neighbourhoods rife, but nowhere so general as in certain districts outside the city limits—West Haven, Westville,* Hamden and North Haven. But few of the thickly-peopled streets on the side of the advancing enemy were wholly exempt, but the cases were scattered and comparatively few. They were still fewer, indeed scarcely existed, on that large area, much of it low and level, looking seaward, and lying between West river, below the Milford turnpike on the southwest, and the Quinnipiac on the northeast, bordering to the extent of two-thirds of its circumference on tide water and the vastest mud-flats. This tract embraces much of the heart of the city, all its maritime parts, and those portions south of Congress avenue, and east or easterly of State street and the Hartford railroad.

In 1871 the fever occupied all its old positions, was far more common than before in many populous streets, and made considerable inroads on territory which till then had almost escaped. Its general progress seemed to be, as on former occasions, from the north and northwest to the south and southeast, passing over the limits of the previous year. The apothecaries in the northern, western and central parts of the city put up by far more ague medicine for city use than in any former season. The com-

* The last Census of the United States, in giving the population of New Haven, says:—"The city of New Haven comprises all of New Haven Township." This is incorrect. Westville, or all the eighth ward, and that small portion of the first ward lying west of Dixwell avenue, and adjoining the eighth ward, belong to the town, but not to the city. The seventh ward, or that territory situated between Mill river and the Quinnipiac was made a part of the City in 1870. If from 50,840, the population of the town in 1870, there be deducted 1265 for Westville, and about 300 for that portion of the first ward referred to, there will remain 49,275 for the city.

plaint, in a few instances, appeared in Olive street and further east, and also to the extent of three or more cases on that equally low and level tract which lies east of Mill river and the Hartford railroad. Some of these, it is claimed, were due to visits made to outside malarious centres.

The greater prevalence, within the last two years, of Intermittent fever, in the city, is often attributed to the more frequent disturbance of the soil in carrying out a system of sewerage, street paving, &c. ; but I have been unable to discover any certain connection either in time or place, or any fixed proportion, between the supposed cause and the alleged effect.

The average mortality in the town of New Haven, in the six years beginning in 1865, when fever and ague broke out at Beaver ponds and Westville, and ending with 1870, was one in forty-five nine-tenths of the estimated population, while in the next preceding five years it was one in forty-four nine-tenths, a slight advantage in favor of the ague period. In 1870 the deaths were one in thirty-eight, a higher rate, according to the Registration report, than in any other town in the State. Norwich, however, has usually surpassed it in this particular, the average death-rate, from 1861 to 1870 inclusive, taking the average population, having been one in forty-three six-tenths, while that of New Haven was one in forty-six fifteen-hundredths. In 1871 the deaths in New Haven were 1092, or one in forty-nine of the estimated population.

So far in 1872, fever and ague has done no more than hold its own in New Haven. In the other localities mentioned in the preceding pages it has again appeared, but in certain places in a somewhat mitigated form.

Since the beginning of Intermittent fever in the New Haven region, in 1850, the disease has appeared in many places on the sound, in Westchester county, N. Y., and in Fairfield county, in this State. Dr. Hurlbutt writes that it has prevailed in Stamford, more or less, during the whole period of his practice there, about twenty-one years. The cases, though not confined to any locality, have been most common "around the river, mill-pond and marshy places," and for the last few years have been increasing in frequency.

In Norwalk, as I am informed by Dr. Lynes, the fever first showed itself about 1853. For a few years it was confined to the immediate vicinity of the N. Y. and N. H. Railroad, but

afterward extended on each side and became more general. It still prevails, limiting itself to a belt along the railroad and the shore, some five miles wide, through the town. This belt of about the width named, the Doctor thinks, reaches from the State line, or a point further west, to New Haven.

In Westport the complaint appeared several years ago, but it has not been common, nor has it manifested its usual local preferences. Dr. Blackman supposes that not more than a dozen cases, in all, have occurred. I am told (I cannot say how truly) that Black Rock, in Fairfield, suffered severely about seventeen years ago, "almost every family having the fever." It afterward subsided, and about seven years since (my letters of inquiry have not been answered and my information may not be correct) took up its residence in Bridgeport, pitching its tents on the east side, near the river and the ponds. At a later period it spread in the neighborhood, high ground affording no protection.

Dr. Beardsley, of Milford, says that that town was visited lightly several years ago, but is now free from the malady.

Up the Housatonic river, at Birmingham, Dr. A. Beardsley, of that place, states, in a letter, that a year ago he met with three distinct cases of tertian (which he believed to be indigenous) near the new "Ousatonic lake" formed for manufacturing purposes by damming the river.

On Connecticut river, according to my information, the fever appeared several years ago at Essex, and more recently in Middle Haddam, Portland, Wethersfield, Hartford, East Hartford, &c.

Intermittent fever seems to have some connection with low wet grounds, lands which have been recently overflowed, water-courses with a fluctuating level, mill-ponds, bogs, &c. This connection, if not uniform, is in this latitude not often wanting, especially in the first year of the disease. On this point the medical profession is nearly agreed. The received opinion is illustrated and confirmed by events which have transpired in the New Haven region. The earliest cases of our present endemic occurred around the saw-mill pond in West Haven, on the borders of Lake Whitney, near the mill-sites of Augurville, Centerville, Ives' station, Mt. Carmel, and of Westville; in the vicinity of Beaver meadows, the salt marshes at North Haven, and the reservoirs of the Fair Haven Water Co., to say nothing of similar localities outside, in Cheshire, Meriden, &c. Of all these places, the more notable of the kind within the limits named, the disease took

possession in the first instance, and has persistently maintained it. Even the subordinate centres more recently established (flag-stations, so to say) have had a similar local connection or association. The groups of dwellings at Quinnipiac village, at New Hamburg, at the upper part of Oak street, at the south end of Saltonstall lake, on the North Branford road at Foxen, on the Derby turnpike west of Maltby park, on the west bank of West river south of Allingtown cross-roads, &c., are each furnished, on a reduced scale, with the reputed conditions of the fever. I do not mean here to affirm any necessary connection, like that of cause and effect, between the facts alleged, but it is difficult to suppose that the circumstances of situation and topography have had nothing to do with the sickness of the places named—sickness to be noted as early, aggravated and wide-spread in the primary centres, and of later occurrence and more limited in extent in the secondary. It is true there are many other equally suspicious localities, beyond the present ague limits, which have not suffered.

Though water or moisture be regarded as an indispensable condition, it is not of itself a sufficient cause of the fever. Pure clean water is, in its place, wholesome everywhere. Water of every kind that is much agitated and thus exposed to the air, like a small stream running rapidly over an irregular surface, becomes purified. Any organic matter which may be present is attacked by the oxygen of the atmosphere, disintegrated, and quickly converted into a harmless substance which is deposited as sediment, while the noxious gases escape. It is only dirty water which is hurtful, and dirty water is usually that which exists in small quantity, or perhaps as moisture merely, in contact with much decaying organic matter. Agitation, in common cases, with free exposure to the air, hastens greatly the putrifying process, but it also cleanses. Thus a stream of whatever size, running rapidly over a rocky bed, with occasional places of still water for deposits, is always pure or soon becomes so. It has been estimated (incorrectly, as some think) that the contaminated water of the Thames (England) becomes clean after running twelve miles. When the aqueous element is so abundant as at all times to cover deeply the sources of corruption, shutting out the air, decomposition is almost impossible. Especially is this the fact when there is little internal motion to mix up the surface-water, which always contains air, with that which lies below. Thus the bottom of the

deep sea is sometimes regarded as a great cemetery where, in darkness and silence, beyond the reach of decay, are deposited the extinct but ever fresh forms, marine and terrene, of the ages. *

It is a mistaken notion, the wise ones say, that what is properly called a marsh, or a basin of stagnant water, or an expanse of mud and mire, is demanded for the production of Intermittent fever. It is only required that there be land which is occasionally overflowed, and then dried by a summer sun. Very little moisture is needed, seemingly in some cases the less the better, if there have been previous abundance. It is only essential, says Macculloch, "that the land should be partially inundated, that it should be dry in some places and wet in others, or that pools and dry spots should be intermixed," "or that it should be subject to peculiar alternations of moisture and dryness," &c. It is well known that the clearing up of wooded lands at the West, exposing the humid ground to the action of the sun, is followed by ague. The same is true when the moist earth of fields long fallow is turned up by the plough. On the other hand, according to the *Medico-Chiurgical Review* for January, 1828, there are "immense [peat] bogs in Ireland and Scotland" where "an ague or intermittent of any kind is rarely seen." In tropical climates, sickness often abates in the beginning of the wet season, and is greatly increased at its termination, or during the "drying up of the rains."

Paludal fever, so called, is peculiarly a disease of tropical climates, and of the warm season in temperate latitudes. It is said that in Italy one must ascend to an altitude of fourteen or sixteen hundred feet, and in the West Indies two thousand or twenty-five hundred feet, to be secure from attack. Some say that a climate or a hot season, in which the thermometer ranges at times above 80°, is necessary to develop the disease. However this may be, the complaint in this latitude disappears in winter. Though attacks are not infrequent in cold weather, (as we have all had occasion to know,) it is plausibly claimed that these are relapses, or the result of morbid impressions received previously. It is well known that the seeds may be planted in one season and

* Recent deep-sea dredgings have proved that living creatures, furnished with eyes and highly organized, exist at great depths, thereby showing that air sufficient for respiration and light for vision (however minute the quantities) penetrate far deeper than was once supposed. Submarine currents, till lately unsuspected, are inferred from the eccentric distribution of the fauna of the sea-bottom.

germinate in another, even when the sufferer has removed to a distant and quite healthy neighborhood.

The opinion is general, but not universal, that dead vegetable matter is in some way connected with fever and ague. Certain it is that such matter is usually if not always present. This should not excite surprise, for, except in certain inhospitable regions, this earth is covered with vegetation and vegetable debris. Wherever man can exist to become the subject of fever, there plants live and die. Says the *Medico-Chirurgical Review*: "There is scarcely a spot of this earth's surface to be found that is not covered or imbued with both vegetable and animal remains in a state of decomposition, and ready to afford pabulum for the sun's rays, with or without humidity, to extricate malaria." But dead organisms, thoroughly desiccated, or in a freezing climate, give off no noxious gases, exhale no offensive odors, and are not hurtful. Plants in vigorous growth absorb and appropriate or utilize the products of decay, and thus prevent the injury which otherwise would result from the enormous amount of rotting organic matter which is mingled with the soil. This matter is so prejudicial to health in the cities because there it is not appropriated, but too often left to infect the air, and in many ways to poison the sources of human existence.

Three agencies then—water, heat, and dead vegetable substance, all necessary to life—are believed to be concerned in the production of Intermittent fever, neither of which is active except it be combined with the others. The first two supply the conditions which are required for the decomposition of the third, the supposed cause of the mischief. Vegetable as well as animal bodies, deprived of moisture, or much reduced in temperature, are nearly incorruptible, because in that condition the molecular mobility or facility of motion among the atoms of a compound, which is essential to physical change, is not possible. But if heat and moisture be supplied in sufficient but not excessive quantities, the molecules become loosened, existing affinities are enfeebled, and the way prepared for new combinations. With these advantages, the oxygen of the atmosphere, acting as an outside chemical force, seizes hold of the vegetable fabric, destroys its texture, and causes its dissolution. During the process, certain well-known gases are evolved—carbonic acid, carburetted hydrogen, and sometimes sulphuretted hydrogen and ammonia. These gases, if inhaled, excite when concentrated well-defined morbid symptoms,

but, singly or combined, are not supposed capable of producing Intermittent fever. This fever, in the opinion of those who claim to know, is caused by something else emitted by decaying vegetable matter in connection with the gases named, and with watery vapor, but distinct from them—something which, though certainly material, is too tenuous for the senses, too subtle for chemistry, to detect. It is usually considered an organic principle, volatile or æriform, as the case may be, which mingles with the air, is wafted by the wind, and is called marsh miasm, or *malaria*. Its alleged physical properties are multiform, always curious and sometimes contradictory. Notwithstanding its ethereal character, it is comparatively heavy, and keeps near the ground; seizes laborers in the field who sit or lie down, but not those standing erect; enters the lower stories of houses, but not the upper, the windows of which may be left open with impunity; flows leeward with the moving air up the valleys, but is arrested or turned aside by any considerable obstacle. It is unable to climb a hill say sixty feet in elevation. Indeed, it is often so much of a groundling that it cannot leap a fence or wall a few feet high. Such is its grossness that it becomes entangled by a forest or clump of trees, and cannot reach the dwellings in its range thus protected. If the impediment be removed, the enemy is released and safety at an end. In the Campagna of Rome the marauder is entrapped and held in captivity by certain “bushy thistles” which the laborers cannot cut without speedy sickness. It does not travel far, some think not more than half a mile, unless its dispersion is prevented by continuous ridges, without becoming too dilute to be hurtful; but thus conducted and compressed it may be conveyed in an active state a much greater distance. A dry and deep ditch sometimes serves to direct it to a distant point. If it pass over a clean sheet of water, however, it is supposed to be absorbed, so that a ship riding at anchor half a cable’s length (360 feet) from a sickly shore, and on the leeward side, is free from disease. In its horizontal movements it is sometimes suddenly arrested as if an effectual obstacle were interposed. Thus, in several places in Italy and England, a mile or more from the supposed cause, the families on one side of a road will be attacked, while those on the other escape; or the dwellers on one bank of a river will be smitten, while those on the other are in health, the winds in the mean time being variable.

Though certain facts, otherwise considered inexplicable, seem

to prove the gravity and grossness of the ague-miasm, there are others quite as well attested which indicate, with provoking inconsistency, the opposite qualities. Those whose theory receives damage should reconcile and explain, or modify their views; but they do neither. For instance—On the coast of Norfolk, England, the levity of the malarious principle is decided, and so peculiar that in its haste to mount upward it passes by the open windows of first stories, but finds good lodgings in the second or upper. As a general rule it is dissipated with the mists and fogs by the morning sun, floats in the upper air during the day, is driven hither and thither by conflicting currents, and precipitated at night-fall with the dews, possibly at a distant point far to the windward. In mysterious currents of air, rectilinear, curvilinear, vertical and mixed, Dr. Macculloch, the great writer on this subject, finds a ready solution of many difficult problems. Numerous instances are on record in which the poison proved harmless in the valleys and on the low grounds near its supposed source, but baneful on the adjoining hills. Authors* refer to a place in Malta where “the malaria which is produced on the beach beneath a cliff produces no effect on the spot itself, while it affects, even to occasional abandonment, the village situated above.” “Out of seventy-six unhealthy towns and villages enumerated in Sicily, there are thirty-five situated on hills and declivities, many of them at considerable distances from the tracts which produce the disease.” Under favorable circumstances, Dr. Macculloch thinks malaria may be blown three miles without losing its noxious qualities. Indeed, he contends that the moist east wind of spring, meeting with no obstacles, brings it from Holland to the eastern coast of England, fifty or one hundred miles, causing the Intermittent so prevalent at that season.

Most conspicuously, miasmatic fever has its home in the country and the villages. There, where the air is supposed to be freest from contamination and extraneous matters of every kind, the poison is generated and disports itself. In the crowded streets, narrow lanes and dirty courts of the city, where the atmosphere is laden with impurities and the soil soaked with filth, it advances with difficulty and gains no foothold. The supposition

* I have not thought it needful in all cases to burden these pages by references to authorities. The borrowed facts or alleged facts introduced, as the medical scholar will instantly discover, have been gathered from the most respectable sources, and are, as it were, the common property of the profession.

is that it is overmatched, possibly neutralized, or shamed and turned back by the noisome odors and nameless abominations it encounters. Notwithstanding much may be said against it, it still loves the open air, and can scarcely be charged with uncleanly associations.

According to Macculloch and the class he represents, the existence of periodic fever *proves* the presence of malaria. This admitted, our duty is plain; we have but to look for it. If, owing to the topography of the place, it is not found readily, the search must be continued with the undoubting confidence which faith inspires. If seriously embarrassed, because facts are wanting, we are at liberty to supply the deficiency with supposition and needful assumptions. Pressed with difficulties, Macculloch finds it necessary to use this liberty, and to trace malaria to sources not usually suspected. He accuses water-casks, ditches, canals, gravel pits containing a few square rods of water, ornamental lakes, small ponds in gardens and parks "dedicated to gold fishes and river gods," and even running streams. He thinks "there is no spot of water or of marshy vegetation small" enough to be safe; that the poison may be generated in any place where vegetable decay on the most reduced scale is going on; that the effect does not depend on the quantity produced; that like the venom of contagion it will act in the minutest dose; and that one minute's exposure, or indeed a single inspiration, may be sufficient for its decisive working. Agreeing with others, he maintains that if the soil be gravelly or rocky and quite dry, "where no vegetation exists, or can exist, but stunted heath plants," the cause, if need be, should be dug for. A few inches below the parched surface there will be found to excite suspicion clear and potable water, or several feet lower down distinct traces of vegetable matter resting on a stratum of clay which retains the moisture and sends back through crevices and cracks the miasm there generated.

Taking hold of the proffered helps and following the directions, that inquirer must be sadly lacking in ingenuity or enterprise who cannot find, in any supposable case, a satisfactory cause of disease. This is eminently true when the investigator is permitted to go several miles or many leagues for the poison and to float it on the winds, against the surface current perhaps, to the desired point; or to suppose that the fever may have been contracted twelve or twenty months before, and many hundred miles away.

It is difficult to embarrass, much more to defeat, the sharp-eyed, quick-scented seeker of malaria, who avails himself of the license which the prevalent theory allows. Clad in panoply, as it were, not even the facts and proofs of Dr. Ferguson need alarm him. Ferguson, be it remembered, thought that periodic fever was independent of vegetable decay, humid or dry, and that paucity of water where there had been previous abundance (the paucity which we have in the last stage of the drying process) was alone necessary. In way of evidence, his paper in the *Edinburgh Philosophical Transactions* refers to the sudden breaking out of the disease in the English army in Spain, in 1809, which had encamped in the half dried, stony bed of a hilly ravine which had lately been a water-course, where vegetation was impossible, and soil could not lie because of the torrents. The spot was selected on account of the purity of the water in the pools which remained. Other proofs are given supposed to be decisive.

Though heat, moisture and dead vegetable matter be the usual concomitants and seeming conditions of Intermittent fever, considered as causes it appears possible, especially in tropical climates, to eliminate and set aside each one of them. The almost universal prevalence of these agents—their necessity to the normal living actions which they are supposed to pervert—may sometimes make this difficult, but it is comparatively easy to show that there is no uniform proportion between them and the disease in question. If the two (the agents and the fever) have the relation of cause and effect, increased or diminished intensity in the first would of necessity be followed by an equal increase or diminution in the second. There must be entire correspondence, for this the assumed relation requires. Notably this has been wanting in the New Haven region. Irregularity and aberrancy have been frequent. As a general rule, the dry seasons, when heat and humid vegetable decay along the water margins abounded, have been most sickly, but the fact has often been otherwise. Eighteen hundred and sixty-six was uncommonly wet, but the fever was then more universal on Hamden plains than before or since. The warm months of 1867 were also wet, but that was the worst year on West river at Westville, and the first in which the disease undertook to travel extensively, chiefly in the valleys. Notwithstanding the mill-ponds were full, the malady appeared for the first time in all the villages on Mill river north of Lake Whitney and south of Mount Carmel, and on the banks of the Quinnipiac

in North Haven. Of the last-named place it should be said that the tide washed marshes (and the clay-pits, if these must be named) are but little affected by rain and drought, though the proportion of salt to fresh water is greatly changed. Extraordinary dryness characterized the summer of 1869, but this did not revive the declining disease in West Haven, around Beaver ponds, and in the northwestern section of the city. There was nothing remarkable in the meteorology of 1871, and yet early in the year, and interruptedly throughout the season, the complaint was very rife everywhere, while its circumference in all quarters was greatly extended. Above all others, it was its favorite year for exploration and excursion. In the mean time, in the reputedly dangerous month of August, Pine swamp was drained and cleaned, the laborers, even those sleeping on the spot, having much less than the average sickness. Again, if the salt marshes and the attendant circumstances, unaided by other influences, caused the mischief in North Haven, and on Mill river south of Whitneyville and north of State street, the same or similar causes should not have been so long inoperative in Fair Haven, in the south part of East Haven, on Mill river below State street, on West river south of the Milford turnpike, in the south-east portion of West Haven, and round the bay from Oyster Point to the mouth of the Quinnipiac. The strong odors emitted by the extensive mud flats of the harbor and the river estuaries, so annoying to those near when the wind is right, indicate, what reason suggests, that rotting organic matter is here far more abundant than on the odorless margins of the Quinnipiac above Cedar Hill, where a vigorous vegetation utilizes the products of decay. Notwithstanding salt (or salt and fresh) water marshes are supposed to be quite as injurious as those of fresh water, it has been claimed that North Haven got the fever by the aid of the west wind from Lake Whitney, on the other side of the Quinnipiac ridge, a mile and a half distant. But it should be mentioned that the lowest and most practicable part of the ridge is opposite the least objectionable portion of the lake, and that further north, against the suspected portions, where the poison-freighted west winds would naturally cross, the ridge is much higher and the line of connection longer. In addition to this, it may be said that the dwellers on the more elevated ground in the line of the alleged communication did not suffer till 1870, three years later than the North Haven people. East of Centerville, however, half

way to the original ague-center in North Haven, where the line is shorter and the ground very high, two cases* (perhaps more) occurred in 1867. Curvilinear and vertical currents of air (if to be believed) might answer for the Quinnipiac valley, but not, without incredible strain, for the other places named. I may err, but it seems to me that the irregularities spoken of are not well explained by any extant theory.

The hot and dry seasons, as we have seen, are usually most fruitful of ague. They are so because there is in those seasons along the water courses, where the disease greatly abounds, a wide margin of seething, decomposing vegetable matter. Thus men reason; but those who do so forget that in the aggregate there is less decay at such periods than at others. In summers like 1870 organic bodies dissolve very slowly except in wet places, which are few, while the arid air is poorly fitted to transport malaria so termed. In the year named the soil covering nineteen-twentieths of the ague-stricken regions was so entirely deprived of humidity that those molecular changes required for decomposition were impossible. On this account vegetation was starved, and the crops cut off. Manure heaps and piles of offal and rubbish had their moisture all extracted, and became as odorless as an ash-bed. But in wet summers and in hot muggy weather everything corruptible rots and moulds. Fogs and mists hang over hill and valley, and even the air gets musty. Nuisances before endurable become intolerable. Emanations and vapors from the reeking, smoking soil are floated far. Growing trees, pernicious weeds and carrion-birds utilize much; but if the rains are too frequent or the sun too much obscured crops perish. Notwithstanding these ill-omened accompaniments, the wet seasons are usually not favorable to malarious diseases.

To those who speculate with so much satisfaction on the direful agency of dead organic matter, I would present the additional fact that fever and ague begins in the early spring, often (as in 1870) in the last month of winter, when vegetable decay is inconsiderable or quite impossible, a well known fact of which I ask respectfully an explanation.

* I am constantly reminded that isolated cases like these, mentioned as belonging to a certain locality, may in some instances (notwithstanding my particular attention has been turned to this point) have originated in some other place which has been visited by the sick. It is difficult to find adult persons who have remained so constantly at home as to preclude the possibility referred to, while diligent inquiry may have failed to elicit all the facts.

There has been a tendency of late years to greatly modify the conditions thought needful for the development of Intermittent fever. The progress of discovery and the stubbornness of the facts involved have made this modification necessary. Three-quarters of a century ago it was supposed that animal putrefaction aided in producing the disease. Afterward only the lowest animal organisms, and still later humid and decaying vegetable matters alone, were recognized as causes. This conceded it became necessary to admit that the ordinary offensive gases naturally suspected were not the sources of mischief; and then, as the inquiry proceeded, to allow that none of the usual products of decomposition could account for the effects. At first it was deemed essential that there should be notable marshes or much low wet ground, and a conspicuous amount of rotting vegetable matter. Then it was agreed that but little water was required, and finally that neither water nor decaying vegetation in any considerable or appreciable amount was indispensable. The latest and most advanced opinion seems to incline to the side of Ferguson, that a marsh is most deleterious when it "ceases to be a marsh in the common acceptance of the word and sensible putrefaction is impossible;" that soil which has been thoroughly baked—which has become as dry as a summer sun can make it—is still moist enough, particularly in southern latitudes, to give off malaria, even in places where no vegetable matter is visible or conveniently accessible. These successive admissions and modifications of opinion made to save the fragments which remained, have mutilated and much weakened the miasm-theory. It may turn out that it was not worth the sacrifice and should have been abandoned.

Constrained by the inadequateness of the malaria-theory as hitherto expounded, eminent men have attempted to harmonize the facts and solve the mystery by further investigation and new suppositions. In pursuit of this object science has been interrogated and light sought from many quarters. Among the most zealous and confident of recent inquirers have been the microscopists. By them the mischief is supposed to arise from certain low living organisms, animal or vegetable, which enter the system, and pervert the functions. This view, favored by an interesting class of facts in nature and in the history of disease, is a favorite one among the scientists of the day. In the *American Journal of the Medical Sciences* for January, 1866, Prof. Salisbury, of Cleveland, published a well known essay in which Intermittent fever is

ascribed to the spores of certain species of palmellæ, belonging to the natural order Algæ, which are found ("only below the summit ague line") as a white or whitish, or as a brick-red dust sprinkled over the beds of drying ponds and stagnant pools, or covering the broken soil of humid low grounds and peaty bogs, in malarial districts. These spores rise into the air, "and are suspended in the cold, damp exhalations from the soil after the sun has set, and fall again to the earth soon after the sun rises." In the Northern and Western States they reach an elevation of from thirty five to sixty-five feet. At night the Doctor collected them, in the acts of going up and coming down, on plates of glass supported on pegs near the surface of marshy grounds and stagnant pools. While breathing the poisoned air of these places, he always had "a dry, feverish, constricted feeling in the mouth, fauces and throat," followed by a constant desire to swallow and hawk and spit. The peculiar sensation extended at length to the bronchial and pulmonary surfaces, and continued two hours after the exposure. His friend by his side and "numerous other persons" suffered in like manner. In the morning expectoration and in the urine of ague-patients these pests of the bog and of humid, drying soil, in the form of "minute, oblong, microscopic cells," were constantly found, but never in the excretions of persons living above the ague-plain.

In proof of his theory Dr. Salisbury presents several cases with the circumstances, and then gives the results of certain experiments intended to be conclusive. He cut several cakes covered with palmellæ "from a decidedly malarious drying prairie bog," and carried them five miles, to a high, hilly district three hundred feet above the stream levels, where Intermittent had never been known, and placed them on the sill of an open second story window where slept two young men. Both felt "unnatural" about the sixth day, one had an ague fit, complete in all its stages, on the twelfth, and the other on the fourteenth day. "The type was tertian," though but one paroxysm is referred to. Four persons on the first floor were unaffected. The experiment was repeated at another point near by on a young man and two boys. The man escaped, but the boys were attacked, one on the tenth, the other on the thirteenth day after exposure. These, if fairly stated, are remarkable cases, and it is to be regretted that at this most interesting stage the Doctor's "other duties, and the difficulty of obtaining the consent of parties for experiments," arrested further proceedings.

In October, 1868, in the same Journal, Dr. H. C. Wood, Jr., Professor of Botany, &c., in the University of Pennsylvania, examines critically Dr. Salisbury's theory, and the facts on which it is based, and denies their sufficiency. He admits that fine dust, odorous principles, pine pollen, the poison of rhus and of some contagious diseases, certain composite seeds, and minute atoms of matter of every name, as since shown by Prof. Tyndall, are floated in the air, but will not allow that non-volatile particles of any kind have the power, which Dr. Salisbury's views make necessary, of actively dispersing themselves. He affirms too that the palmellæ are not parasitic, and cannot live without light, and therefore cannot exist inside the human organism as the new theory implies. Frost does not kill them as it does malaria. They have been found growing in the centers of icicles, and flourish everywhere, above as well as below the ague level, on the mountain, on the plain, in the swamp, and wherever moisture and light are found. They abound in the cities where Intermittent is scarcely known, and have no necessary connection with vegetable decay. Prof. Wood has lived with them, and swallowed them by thousands, while Prof. Leidy has slept for months with growing masses near his bed, in all cases without suffering. Immersion in a solution of sulphate of quinine, one grain and a half to the ounce, does not harm them as it should to account for the cures wrought by that article. As for the bog-cakes, Dr. Wood thinks the effects seemingly produced were not caused by the "ague plants," but by the bogs themselves, or the mysterious something which bogs generate or extricate whether in or out of place. I am not quite satisfied with the critic's position.

In the manner indicated, Prof. Wood shows that there is no genetic connection between the palmellæ and malaria, and gives reasons for believing there is no similar connection between any protophyte or other "organized entity" and periodic fevers.

The proofs and reasonings offered in defence of the current theories of the origin of Intermittent fever are not satisfactory. The existence of a specific ague-poison, organized or otherwise, issuing or escaping from drying swamps, ponds and low meadows, is not demonstrated but assumed. Appearances often, and facts not infrequently, are favorable to these theories—give them a plausible character—but the evidence is not of a kind which exacting science demands. When it is claimed, as in this case, that a "cause is known by its effects," it is only necessary to

reply that an unknown cause cannot be said to be *known*. Effects presuppose *some* cause, but not, in the absence of knowledge, any particular cause. The question is not whether there be a cause, but whether the assumed is the true one. In determining this we cannot find an argument of any value on resemblance. No known gas or emanation from the earth, no recognized organism, vegetal or animal, is ascertained to produce a disease resembling Intermittent fever. We have frequent instances of poisoning in which specific effects are produced by certain organic or inorganic principles introduced into the system by inhalation, inoculation, or ingestion. The disorders originating in this way are small-pox, whooping cough, measles, mumps; the disturbed actions caused by the rhus vernix and the rattlesnake, by arsenic, mercury, lead, alcohol, &c. But these morbid states differ widely from periodic fever. In many important particulars they are, as a class, in contrast with it. The two being themselves generically unlike, their causes must have a similar unlikeness. When then it is claimed that the fever in question is produced by poisoned air or malaria, on the ground that certain diseases different in kind are thus produced, the claimant proceeds without warrant, however plausibly he may argue. Much more does he do so when the so-called reasoning is extended, and the bare existence of Intermittent fever is considered proof that the traditional and hypothetical marsh-miasm is present, even in places where no marsh or other accredited source is known, or can be reasonably supposed. When it is assumed that "bare and rocky hills where there is little or no soil," &c., are fountains of malaria, assumption becomes presumption.

The evidence yet adduced is not sufficient to prove that there is such a thing as malaria—I mean any specific poison, the *sine qua non* of marsh fever. Certain it is that all attempts to isolate it, to clothe it with physical properties, and to give it other than an imaginary existence, have broken down hopelessly. So far as science informs us, the air resting over marshes, &c., is made up of the same ingredients as that on the mountains, consisting of seventy-eight parts of nitrogen, twenty-one of oxygen, and one of carbonic acid, with a variable proportion of watery vapor. It is true its lower stratum often holds in temporary suspension various impurities, and it may contain the very thing alleged. It cannot be proved that it does not; but till evidence on the positive side is forthcoming doubt may be excused, even a contrary belief tolerated.

There are not wanting eminent writers who, discarding prevalent opinions, have contended that periodic fevers are produced by common causes, the non-naturals, so called. The latest of these is Dr. Oldham, a British surgeon in the India service, who has published a small but excellent work (which has this moment reached me) entitled "What is Malaria?" By a skillful array of facts he proves conclusively that the popular theories are grounded on limited observation, ignore a large class of important truths, and are wholly inadequate. He denies the existence of a specific poison, and claims that the fevers in question are the consequence of "chill," or the sudden abstraction of animal heat which follows abrupt changes of temperature. The early evening air is most dangerous, because the time is coincident with the greatest thermometrical changes. The prolonged and excessive heat of summer favors sickness by debilitating and relaxing the system, increasing susceptibility, and breaking down the powers of resistance. Heat without sudden alternations, as in the valley of the Amazon, is powerless. Dampness, as of low wet grounds, acts injuriously by augmenting the conducting quality of the air, and causing the body to cool faster than it otherwise would; but dampness without a falling temperature is inoperative. Attacks are most frequent in the early autumn, because then the circumstances most favorable to "chill"—cool nights, hot days with abundant evaporation, cool and damp nights, and a weakened and susceptible body—are all present. These circumstances, it is admitted, are often the immediate forerunners of the ague paroxysm. Facts in illustration have been of frequent occurrence in the New Haven region. For instance—Several persons from a healthy neighbourhood had been spending the day (a hot one in August) with a family several miles distant. They started for home in an open carriage at sun-down. Their way lay through the valley and across the river, over which hung a fog. They were thinly clad, the air was cool and all felt chilly. Within a few hours three out of the four were seized with the endemic of the low grounds they had passed.

But suppose "chill" explains the first paroxysm, how shall we account for the second and third? There are other difficulties. Out of these grow objections one of which seems to me fatal to the views of Dr. Oldham, and of all others who have attempted to trace Intermittent fever to its particular and sufficient cause. The character of this will be indicated by the question: Why is not

the disease active at all times and in all places, if only the specified conditions are present? Why does it prevail so generally in one year or a series of years, spreading far beyond its usual limits, and then disappear partially or wholly, perhaps for a long period, the circumstances supposed to control it having undergone no change? In Ireland, "notorious for its extensive tracts of bog" and fen, why is it so rarely met with? Why was it, up to the time of Dr. Nathan Smith or later, alway absent from the valley of the Connecticut river above Northampton, where the reputed causes were sufficiently common. When twenty years ago a few cases, home-produced, were reported to the New Haven Medical Association, only one member recollected having seen it in the preceding forty years. A few had traditional but very indefinite knowledge regarding it, while a large majority had never heard of it. When twelve or fifteen years later the malady became rife, the cases in the New Haven region numbering thousands, the people wondered and were much perplexed. They had no knowledge, traditional or other, but were somewhat enlightened by the rumor that the late Dr. Eli Ives had (prophetically, as it seemed) foretold its occurrence (recurrence). On no theory yet offered can its entire absence (so to say) for forty years previous to the ague era of 1850-57, and its great infrequency for a much longer period, be accounted for. At the time named there had been no recent or important change anywhere in the New Haven region. The saw-mill pond in West Haven did not exist, nor had the New Haven Water Company's dam been constructed. Mill river from end to end was as it had long been. The Quinnipiac valley in North Haven, and West river in Westville, are still in the condition they were before they became notable ague-centers. The tract at Beaver meadows having been a harmless morass, with abundant anti-malarious indications, for an indefinite period, is now and has been for eight seasons the apparent centre of Intermittent for a wide district. The dwellers around it have suffered more persistently, if possible, than any other people in the N. H. region. If heat, moisture, decaying vegetation, drought, undrained swamps and drained mill-ponds, or damp air, a sudden fall of temperature and "chill," caused it in the several places named from 1850 to 1857, or from 1864 to 1872, why did they not produce it in the long period ending in 1850? Their absence during all the years of this period will not be pretended.

Again, if the causes enumerated are the true and sufficient ones,

why has not the fever appeared in several of the more distant towns in this county? Why, for instance, is Waterbury, in the Naugatuck valley, some seventeen miles in an air line N.N.W. from New Haven, exempt? I name it because I know its topography and history. The site of the original village was a swamp lying but a few feet above the bed of the river. When the writer was a boy the sweet flag grew on the "Green," cattle and horses often got stuck in the mire by the roadside, while a dry cellar on the principal street for about one fourth of a mile each way from the "meeting-house" did not exist. The central school-house, where the town urchins learned mischief and the catechism, was underlaid and surrounded by bog. In the spring, often in the summer, the river overflowed its banks, covering several hundred acres of meadow and morass, and leaving much mud and soil to enrich the ground. All along the border of these flooded fields, close to the settlement, was a chain of ponds and shallow, half-filled basins, or instead, tracts of low marshy land, which became dry or partially so in the summer and early autumn. Mists, sometimes dense fogs, hung over the village, now a city. Swamps and wet meadows fringed all the water-courses. Mill-streams abounded, furnishing numerous mill-sites, many of which were early improved. At every accessible point they are now dammed, and hard at work. In ordinary summers, the ponds, large and small, are drawn down, laying bare considerable margins, and exposing to the sun much rotting vegetable matter. If there be a spot anywhere in this latitude which, viewed in the light of popularly accepted theories, *ought* to be infested with fever and ague, and which certainly would be were the theories good ones, that spot is Waterbury. So far as I can learn, however, no well authenticated indigenous case has ever occurred within the limits of the town. The same apparent causes which are now producing the intermittent malady in the New Haven region originate in Waterbury only colds, common fever, rheumatism, pneumouia, or whatever else low wet grounds and a damp foggy atmosphere usually give rise to. You may ride through the river-valley after night-fall, a hundred times, in the worst season of the year, without an ague-paroxysm. I speak only of the present and the past, and cannot of course predict the future.

Precisely what is the acknowledged connection between Intermittent fever and drying mill-ponds, marshes, &c., cannot now be determined. Nor can we name the local causes which control or

influence a score of other diseases—goitre, elephantiasis, the matted hair of Poland, phthisis, &c.—which are nearly or wholly confined to particular districts or countries. However humiliating the thought, our ignorance must be endured till observation and science can make new developments. In the meantime, we should gratefully avail ourselves of some excellent knowledge empirically obtained. The world has had abundant opportunity to know that effectual and permanent drainage will in temperate latitudes, often if not alway, mitigate or remove the marsh-fever pest. Though the disease may break out and even become rife in places unprovided with bogs, mill-ponds, and the like; though capricious in its movements, erratic, and scandalously inconsistent, going where it should not, and refusing to go where it should; it cannot be denied that in its migrations, when free to choose, it *prefers* the bogs, &c. It has a natural affinity for them, searches them out and finds near them a congenial home. In their absence, it might not gain a foot-hold. The comparative infrequency of the malady at the present day in England is attributed by English authors to an improved system of drainage. Says Rawlinson, quoted by Aitkin: “Within the last half century land drainage and town sewerage have ripened into sciences.” “Agues (and malarious cachexiæ) are reduced. Since 1840 an annual mortality of English towns of 44 in 1000 has been reduced to 27; an annual mortality of 30 has been reduced to 20, and as low as 15; and human life has now more value in England than in any other country in the world.” (The last statement is probably incorrect.)

History shows that diseases are influenced by the general law of periodicity. They come and go—have their periods of recurrence and decline. This is especially the fact with those of a febrile character. They have an intermittent sometimes remittent existence. If seemingly continued they have their seasons of exacerbation—a perceptible flowing and ebbing. Often too in their visits they move in a certain lineal order. Noah Webster, prompted by the suggestion of Sydenham, has shown this in his work on Pestilence, published in 1799. Influenza, the type of its class, usually leads the group. Then come measles, whooping cough, scarlatina, small-pox; followed it may be by dysentery, Asiatic cholera, yellow fever or plague, the more formidable maladies usually not appearing till others have prepared the way. The cholera of 1832, both in this country and in Europe, was preceded and introduced by influenza, measles and scarlet

fever, and more immediately by a mild diarrhœa which was more extended than the pestilence which followed. The order is not quite uniform, but enough so to prove the movement is governed by some law. All the functions indeed, whether morbid or healthy, are paroxysmal—have their cyclical changes.

Though wide-spread diseases often appear suddenly and march in procession, seemingly they have not over-much respect for rank or rules of any kind. The most notable of them—the typical specimens—are called *epidemics*, and the times of their greatest prevalence *epidemic periods*, or seasons. During one of these periods there is what is termed an epidemic constitution—a peculiar state or condition of the bodies of men, more marked in some than in others, which is the ground of morbid action—the predisposing cause of the malady which follows. Of the periods named one of the most famous, heralded by influenza and measles, began in 1792 and closed about 1805. It was a time of great mortality from yellow fever and plague. Another with the usual forerunner commenced in 1807. A third was brought to a close soon after the cholera of 1832. In seasons like these the ruling disease, whatever it may be, extends with great facility; leaves its accustomed haunts perhaps and visits new regions. Asiatic cholera has its natural home in the East Indies, but it occasionally becomes epidemic and travels round the world. In Demarara the yellow fever is said to be general once in seven years. It is a native of the tropics, but it sometimes comes as a sweeping pestilence to our northern cities. In 1794 it appeared with destructive effect in New Haven, carrying off sixty-two out of a population of about forty-seven hundred and fifty. It was immediately preceded by malignant sore-throat, and the entire mortality in that year was one hundred and seventy-nine (exclusive of twelve who “died at sea”), or one in twenty-six and a half of the people. The disease was followed in 1795 by a fatal dysentery, which killed seventy-five of the one hundred and fifty-nine who died in that year. Those maladies which are commonly propagated by contagion alone become rampant during these periods. Small-pox breaks through quarantine regulations, and cannot be restrained. Neither vaccination, inoculation or a previous attack in the natural way, offers full protection. Varioloid, so called, is common, while cases are met with which cannot be traced to communication with the sick. At this moment the disease is holding high carnival in the cities of Europe and America. Universal vaccination,

our best safeguard, was supposed to have exterminated it in Ireland, but recently it has broken out in Dublin and other places. In London, according to Dr. Letheby, seventy-five per cent. of the cases have been those of persons who had been vaccinated.

Intermittent fever, though usually a local or endemic disease, sometimes changes its habits, and without losing wholly its peculiar instincts, submits to the control of epidemic influences. When this is the fact, it breaks the fetters which before bound it, extends beyond its old limits, and perhaps appears in regions which it seemed to have quitted forever, or possibly invades remote and previously unsuspected districts. Notwithstanding its native liking for swamps, &c., it visits places where these are nearly or wholly unknown. In hot climates, says Dr. Oldham, it prevails "on barren rocks, and in sandy deserts where vegetation does not exist, and where no trace of moisture is visible." A few years ago, says Dr. Aitken, the disease became very general in certain parts of England assuming the characters of an epidemic. Preceding its appearance, in its migratory form, in unfrequented districts, there is usually noticed a more or less decided change in the constitution or diathesis, in consequence of which new treatment for the usual disorders is demanded. This was observed in the New Haven region in the years which followed 1850, as already stated. The intermittent diathesis was rife in the towns of this neighborhood, as proved by the augmented demand for quinine, and the unwonted control it exercised over the diseases of that time. Since its first appearance this diathesis has gradually assumed a more decided form and brought under its sway a larger population. The fever which followed has in its maturity measurably lost its local prejudices and attachments, or at least its exclusiveness so marked in the beginning, and to a proportionate extent enlarged its boundaries. In its wandering in the last two years ('70 and '71), it has in a good degree been unmindful of topography. Large tracts of recently flooded ground and much rotting vegetable matter, &c., are now not necessary to its existence or thrift, as proved by its appearance in Quinnipiac, the eastern parts of Wallingford and Meriden, New Britain, Foxen, &c. Nor is immunity from attack always to be found in an elevated residence or in a favorable season. Like several epidemics, influenza, Asiatic cholera, &c., the malady has seemed to spread with greatest facility along the great thoroughfares, moving with the tide of population and business.

When the period of storm is past and sickness has abated ; in other words, when the epidemic constitution has given way to its opposite, the diseases named spread slowly and with difficulty. If they appear at all they are confined to the places of their birth or have a limited range. Certain of them which quarantine regulations and seclusion of the sick could not restrain, are now easily controlled. Small pox, before so ungovernable, becomes sluggish and docile. If once introduced it will soon run itself out, though no measures are taken to prevent its spreading. Something more than contagion is necessary to preserve it.

Why the diseases in question appear and disappear periodically has not yet been explained. Sydenham supposed periodic fevers "owe their origin neither to heat, cold, dryness nor moisture; but rather depend upon a certain secret and inexplicable alteration in the bowels of the earth whence the air becomes impregnated with effluviæ," &c.; but there is no evidence in favor of this or any similar theory. If I do not mistake, the causes should be sought further back and deeper down. The bare fact of periodicity will not surprise us when we remember that nearly all the movements of nature are of this kind. When we reflect too that man as he now exists (whatever may be said of his origin) is but the product and result of the physical forces which surround him, shape his existence and fit him for his condition here—that the world outside supplies the materials of his life and growth and development—that the vital force which maintains the functions is but physical force transplanted and transformed—we should expect to find him, in sickness and in health, individually and collectively, obeying the great law of periodicity. Indeed, it could not be otherwise. His constitution is similar—generically the same—in all ages and countries because his environment and inheritance are similar. On account of this similarity all men are the subjects of similar diseases, their physiology and pathology simultaneously undergo similar changes, and the universal organism revolves. There are subordinate differences due to local causes and special family influences which complicate the movement, affect its seeming regularity and alter the result. Why epidemics appear and disappear at the precise times they do is not understood. We should know more probably had we studied faithfully their history, their antecedents and consequents, physical and organic, and all the circumstances attending them, recognizing, as we must, the modifications which nature has wrought in the

organism, and the correspondences and harmonies which ages of action and reaction have developed. What the weather-prophets in Washington, on a limited scale, are now doing for meteorology, may some day, I hope, be accomplished for epidemiology. Accurate and persevering observation, in all parts of the world, for a few generations, would doubtless throw a flood of light on this subject. By this proceeding, though the problem to be solved is a very difficult one, we should perhaps discover the law which governs epidemics and be enabled to predict their return or at least give the "probabilities." This result obtained, we should possibly have all the explanation which the case admits.

The peculiar form of Intermittent fever—its paroxysmal character, &c.—is probably connected with the general causes which have been considered. As the modifying influences referred to have a great sameness in the same localities or districts, there must be an equal sameness in the constitutions, diseases and vital movements, morbid, periodic and other of the inhabitants—a sameness which differs, sometimes widely, from that of other localities or districts. But here, as in other cases, the question is so complicated and involved that we are not soon likely to obtain all the light we desire. There is a wheel within a wheel hard to understand.

ARTICLE IV.

REPORT ON PUBLIC HYGIENE.

BY WM. B. DE FOREST, M.D.

In the discharge of the duty assigned to me at our last meeting, I offer the following report upon Hygiene, not in the privacy of the individual man, but upon Public Hygiene, that department of medical science which treats of the preservation of the health of communities; composed of individuals it is true, but still, an aggregate entity; which looks to results of general application and utility, even where the individual may suffer; holding, with Milton, that

*"To the public good
Private respects must yield."*

It is *State medicine* in English phraseology. It is preventive medicine according to others. In fact, it is the sifted experience and wisdom of the past ages gathered, systematized and applied by the educated mind and enlightened philanthropy of the 19th century in the interests of sanitary science, and, in the search after more, in the larger interests of humanity itself. It is prophylactic. It would rather *prevent* than cure. But it relies on the therapeutic art and science to cure or to relieve what it could not prevent.

It endeavors to enlighten the legislator, the magistrate and the people everywhere, in their homes, in their labors, in their habits of life, as to what conditions are favorable to health and what conditions invite to loss of vigor, health and life.

It is the object of this report to tell something of what is now being done at home and abroad in furtherance of the cause of public hygiene. Of course a bare summary only can be given. The details of the points presented are very many, and involve in this work, as in every other, its failure or success, and yet they must be omitted here.

Let us briefly glance at this work in England. In 1848 a General Board of Health was established by act of Parliament.

In ten years thereafter the subject of the public health was brought before the Privy Council for their consideration. And annually, from that time, the results of their labors in investigating matters pertaining to the public health, through the agency of the best special talent upon each given subject, have appeared in the documents laid before the Council by its chief medical officer. They are made to the Council, but they are made for the people, "with one sole object in view, viz., the improvement of human health and the lengthening out of human life in each individual man and woman."

Supported and encouraged by such governmental proceedings, the result has quite naturally followed that the intellects of the highest order among chemists, engineers and naturalists, as well as among physicians, have become earnestly engaged upon the hygienic problem—to discover the occult sources of disease, the conditions favorable to their development, the possibility of *their prevention* in many cases, and ultimately of *their extermination* in others.

The foremost minds in this cause consider it a public necessity, as much "as air and public roads and water are necessities." Dr. Farr, in 1869, while addressing the British Medical Association, as president of the section on State medicine, insists moreover that "a sanitary code is needed, with proper sanitary officers"—a suggestion soon followed by the assertion that "a ministry of Public Health will eventually be needed for the British Empire. Such a ministry would divide itself into four departments, administration, medicine, engineering, statistics; each of which should be so organized as to work in harmony with a council of health and executive heads; each town should have its board of health, and its health physician in communication with and in aid of the Central Board of Health." So speaks the Registrar-General of births, deaths and marriages in England, and beyond question the best living authority. The yearly documents laid before the Privy Council, replete with the facts, observations and conclusions of its chief medical officer, Mr. Simon, and of his subordinates, enforce the like doctrine. The British Association for the Advancement of Science finds that somehow or other matters pertaining to public health are of paramount interest, and will crop out in its various sections, as happened in 1870. The general demand by the public for information upon this subject is felt by the newspapers and periodicals, and they interest and instruct their readers

accordingly. The names of Huxley and Forbes and Farr, of Peabody and Sir Sidney Waterlow, of Burdett Coutts and Octavia Hill, add their emphasis to the necessity of this great cause. With such a state of facts, we may know of a certainty that the days of inaction and ignorance are passed, and all that talent and skill and philanthropy can do to devise and execute great sanitary measures for the public good, are to be attempted.

Let me suggest here some of the ways and means through which this attempt is made in England.

The matter of most general interest is probably that connected with *sewerage*—including the whole subject, the construction of sewers, the proper disposal of their contents, not simply in a sanitary view, but in the interests of agriculture, and as a closely allied topic what form of privy, whether a water closet or a dry earth closet, should be preferred. *Drainage* of the land is another subject of interest—in cities and towns for the health of those who dwell upon it—in the country for increasing its fertility as well as for hygienic uses.

The *paving of streets* for promoting their cleanliness, *the removal and economic use of decomposing organic matter* and noxious and offensive vapors and gases, no matter how or where generated, receive due attention. The effects of particular trades and occupations upon the health of those who follow them—e. g., the manufacture of white-lead—once so dangerous,” has been rendered almost innocuous; and years will pass in the largest manufactories without a single man being attacked by lead colic. The making of matches is another of those most dangerous operations, both from the inhalation of the phosphoric vapor and the spontaneous combustion which so frequently occurs. The use of machinery instead of the hands prevents the last, and a still greater benefit has arisen by a different preparation of phosphorus being employed.

The Sheffield cutlers, who formerly suffered severely from the fine dust of the shops entering the mouth and nostrils and from their posture in labor; the curriers from an unwholesome atmosphere arising from the skins and leather; the operatives in the cotton mills of Lancashire—have been taught that their maladies are greatly lessened, “and often removed by thorough *ventilation*.”

This very thing, ventilation, in its application to all structures used for human habitation or labor—the form and materials for dwellings, the water supply, their exposure to sunlight,—these are

some of the practical things in which improvement and progress are constantly made.

But to revert for a moment to sewerage—a subject of such vital interest to all large cities. The city of London, within whose police circle dwell 3,883,092 human beings, a number larger, by a whole city like New Haven, than the aggregate population of eleven of the largest cities of the United States, has the necessity laid upon it to provide a safe and efficacious method of disposing of all the vast and various matters of decomposition and of filth incidental to such a multitude of people.

Until within a recent date, many sewers emptied into the Thames in the very heart of London. The emanations from the river arising from the water-closet draining invaded not only the Parliament House, but all buildings upon its border for an indefinite extent beyond. Whether the odor thus given forth *could be proved* to be a cause of disease or not (and there certainly was a difference of opinion amongst chemists and sanitarians), yet the body of the inhabitants declared the nuisance intolerable, and that the Thames must be cleansed. I will make a brief statement as to the mode in which this was accomplished for two reasons. 1st, that we may know that the object to be attained was worth a great cost in money, viz., twenty-one and a quarter millions of dollars; and 2ndly, that we may be taught, so far as this one example goes, the effect upon the health of the inhabitants, upon the borders of a river subject to the tidal flow of the ocean, into whose stream the sewage of such a city is disgorged at high tide, twice every day. This is done from two immense sewers, by means of huge openings, which are closed by an elaborate system of gates. The sewer on the east side of the Thames terminates two miles below the village of Barking; that on the west side at the village of Crossness, and each about ten miles below London, where the river is about 600 yds. wide, and the country on either side low and level—so low that quite to the city above and to the ocean below embankments are necessary to shut off the water and preserve the land for use.

What are the sanitary results of this vomiting forth of the sewage of London twice daily upon those who inhabit these villages? Let an unprejudiced and competent witness, Dr. Henry J. Bowditch of Boston tell us. “I wanted,” says Dr. Bowditch, “to see and judge for myself, so far as I could by inspection and conversation with the inhabitants, what effect had been produced,

and what would be the influence on my own senses of the emanations at the outlet. Accordingly I visited Barking, and fortunately met Dr. Parsons, the officer of the Union in that town, an active, earnest, and thoroughly accomplished physician, one too who has the power to examine facts carefully, and to modify his opinions, if need be, under the influence of facts. He had joined with his fellow citizens in protesting against the allowing of London sewage to enter the Thames two miles below Barking. He felt persuaded that it must be injurious. He was called upon by the Government Commission to present facts, and he began to collect them under the impression that the result would be as he and his fellow citizens had supposed. But he has found that death statistics do not at present (after a lapse of two years' exposure) sustain that view. Seventeen per thousand living is the death-rate of Barking. He was surprised at this result. He remembered, moreover, that he had not been specially called to persons residing near the outlets, and there was no greater amount or peculiar character of disease prevailing there than at other spots in his circle of practice. Dr. Parsons drove me to the outlet. Our course for nearly half a mile was directly upon the top of the drain. Every few yards I saw gratings of iron, which I learned were the ventilators of the sewer; but I observed no special odor arising from them, as I had expected.

Arrived at the mouth, I placed myself directly over the partially running stream. It was low tide, and I could see the whole of the opening. I stood over the ventilator just above the gates, and where I know that there was a quantity of sewage water. I was still more surprised at the absence of odor in all these places.

The keeper of the gates has a house and rears a family above and between them and the outlet into the Thames. He assured me he never observed any particular odor, and that his family enjoyed good health.

The inferences I was obliged to make were: (1st) That by some means unknown to me the excreta had become deodorized during the water carriage; and (2nd) that at present there was no proof that this deodorized sewage water of London does actual harm to those dwelling near it." (See Ann. Report of the State Board of Health of Mass., p. 239.)

To the importance of sewerage works another fact testifies,—“There is now hardly a town (in England) wherein they do not exist in a more or less perfect form, at the average cost of £1 per

head of the population of the towns" for their construction. "To this is added as the average sewer rates of well-drained towns about $2\frac{1}{2}$ per cent. on the rental of the houses." (Eng. Cyclopaedia Arts and Sciences, vol. 7, p. 487.)

The *homes for the poor* is another matter of great interest. The conviction that a home for a family, without regard to privacy, ventilation, cleanliness, light, and those arrangements absolutely necessary to comfort, is destitute of all the pre-requisites to decency, health and self-respect, and of course the most prolific source of vice, disease, and crime, has been accepted as an axiom. To meet this great want, a most noble beginning has been made. In our admiration of the philanthropy of the donors and of the magnitude and beauty of the structures, we are apt to forget the squalor and wretchedness which they have supplanted. Let me take you to London, and point out the five large ranges of houses known as the Peabody Buildings, situated at Chelsea, Islington, Spitalfields, Shadwell and Westminster, into which no one is received as a tenant who is paid more than \$6 per week; and, in the suburbs, to the 500 neat cottages with their garden-plots, affording neat and comfortable homes for more than 1,200 families, whose health and general thrift become at once apparent from observation and from statistics. And now pass on to Columbia Square, where, like an oasis in a desert, stand the well-built and ornamental market-house, a lodging-house, a rectangular block of four handsome brick buildings finished with stone, and a reading-room, erected for the poor by Miss Burdett Coutts, much on the plan of the Peabody buildings, and with the same freedom from epidemics and favorable effect upon the character of the inmates. Other workers aim at the same end by a somewhat different way. Miss Olivia Hill becomes the landlord of some of the worst tenement houses of London, and by her personal superintendence and labors, collects her rents, and gradually improves the cleanliness, the health and the morals of her tenants. The history of her doings and success is one of the most interesting and suggestive in connection with this subject. The capital employed is small, but the results are great.

But that method which on the whole promises to be the most comprehensive and enduring is that which combines capital and philanthropy with profit to both. "The improved industrial dwelling company" of Sir Sydney Waterlow, the capitalist, and of his associate Mr. Allen, the practical mason, who has lived and

toiled among the working men of London over forty years, and who knows their necessities and desires, begun on this plan, has been erecting substantial buildings every year since 1863. It has been a perfect success. The rent is more than the poorest can pay, being about double that asked at the Peabody Buildings; but the conveniences are greater, and each family has an entire house to their own separate use. In 1871 twelve buildings were thus occupied; these contained 430 suites of apartments of three rooms, 623 of two rooms, and 31 shops." (Second Annual Report State Board of Health of Mass., pp. 181-214.)

These statements show us what shape the effort for sanitary reform is taking in England. And what has been cited is only by way of sample. The Christian philanthropy of a great people is exerting itself to prevent or relieve human woes and lengthen the days as well as joys of man. For comprehensiveness of plans, for system and vigor in their execution in this direction, no nation since the period of the Crimean war has attempted more or achieved as much as England. As I pass to the next division of our report, we shall see that we, at home, have been taught some things from this source.

To show what advancement has been made in our own country, no better illustration is afforded than in the work begun in 1869, and still continued, in the neighboring State of Massachusetts.

In that year the General Court established by law a State Board of Health, the first in all these United States, with ample powers for investigation, and funds at its disposal for any legitimate purpose.

The objects and duties involved in this action of the Legislature are thus set forth in the First Annual Report of the State Board of Health:

"*First.* It directs the Board to take cognizance of everything tending to public health, and of course requires them to endeavor to eradicate everything tending to public disease and death.

"*Second.* It directs the Board to diffuse among the people a knowledge of the means of obtaining individual and public health, and of preventing disease.

"*Third.* The Board was ordered to investigate the effects of the use of intoxicating liquors upon the industry, prosperity, happiness, health and lives of the people. And it was intimated that the Board suggest legislation on any or all of the subjects committed to them for investigation."

Such are the broad foundations upon which Massachusetts is building her system of State medicine.

As our object is information, pardon me if I recite very liberally from the Reports of this Board of Health, issued in 1870, 1871, and 1872.

The first thing, therefore, for this State Board to do was to put itself in connection, through some vital and intelligent agency, with all portions of the State. This was done by a circular sent to every town in January, 1870, addressed to the Local Board of Health, for the purpose "of establishing such communication that the State Board of Health may be able to investigate the causes of disease and death, which are often obscure when examined in detail, but when grouped and classified in large numbers sometimes reveal the existence of influences having an important bearing upon public health and the prevention of disease. The local board was also requested to furnish the name of some physician in whom they had confidence, that through him, as the medical correspondent, the State Board might apply for local information and for facts relating to disease within their jurisdiction. In all the essentials this is the very plan by which the weather reports are made up at Washington, which we read every day, and are found so correct, although as yet announced as "probabilities," and very illustrative of the value of the principle of the circular, "that causes often obscure when examined in detail become when grouped and classified very intelligible instructors."

But this State Board have secured other and more competent agents,—because fitted by their previous studies and tastes for the investigation of specialties,—to examine many matters most intimately connected with their object. The water used for drink, its properties during the varying conditions of a low ebb in drought and of a full flow after copious rains; the pipes used as conduits for the water supply, and the metallic salts, especially of lead, resulting from such use; the vitiated air in dwellings, manufactories, school-rooms, and other places, the resort of a multitude, the causes which produce it, and the mode of its prevention or removal, involving the subjects of ventilation, warming and the construction of dwellings and other places of human habitation,—these matters, so fundamental, have been assigned to men of special science, that knowledge, so far as at present attainable, might guide the people of the commonwealth in relation thereto.

Thus far we trace, in the doings of this Board, what may properly be styled State medicine. We hear of little within the commonly accepted province of the physician.

We now notice their efforts in guarding the public health from dangerous articles of food or drink.

The people are warned against the use of *water for drinking or culinary purposes* drawn from lead pipes; against the use of milk from cows suffering from the foot and mouth disease*; against eating raw pork, or pork but partially cooked, and insisting on the necessity of *thoroughly* cooking lean pork before placing it on the table, to avoid exposure to trichiniasis; against the use, for food, of slaughtered diseased animals, and insisting that "no meat should ever be allowed to leave the shambles in any part of the State without thorough inspection and permission for sale being given by a properly qualified person."

Upon the important topic, "the use and abuse of Alcoholic Stimulants," this State Board have made the most comprehensive and thorough inquiry, through a correspondence which "virtually embraces," in the language of Dr. Bowditch, its president, "the civilized parts of the globe." He thinks from the data thus obtained "some hints" may be found "toward the unraveling and establishing of the great laws which govern the vice of drunkenness the world over." He instances the *fact* that "by the vigor of modern statistical science, we can foretell the *number of suicides which will be committed during any season*, in any of the great capitals of Europe or of this country," *a matter apparently most subject to human caprice*, as showing the marvelous and wide-spread influence of some hidden law or nature in these results. And he inquires, "Can we not therefore hope to learn by these wide-spread, if not numerous, data on intoxication, some of the laws governing this terrible evil of our race?"

And this most important deduction from these data is stated, viz: that "*the appetite for stimulants is one of the strongest of human instincts.*" Expressing his own belief, Dr. Bowditch says, "As I consider the love of stimulants a human instinct, which is seen wherever man lives, I cannot believe in the possibility of its *suppression.*"

But it is *modified* by various influences, as climate, race, fashion, the cultivation or non-cultivation of the grape. The deduction

* Such milk, in small quantities, *when boiled*, has been used without producing any noticeable effects.—Dr. Thoran, in Twelfth Report of Medical Officer, Privy Council, page 298.

next set forth, from the correspondence before alluded to, is "the existence of a *great cosmic law* which influences intemperance over the entire globe." The existence of intemperance within isothermal zones is strikingly illustrated, and a general law, as shadowed forth by the information obtained from the fifty-two "observation stands" scattered over the civilized world, is deduced, viz: "Intemperance prevails the world over, but it is very rare at the equator. The tendency increases according to latitude, becoming more frequent, and more brutal and disastrous in its efforts on man and society, as we approach the northern regions." As the report may not be within the reach of all my hearers, I cannot forbear to mention some other topics very ably discussed, to wit: that "intemperance is modified by race;" that races are modified, physically and morally, by the *kind of liquor they use*; "that *beer, native light grape wines and ardent spirits should not be classed together, for they produce very different effects upon the individual and on the race*;" that light German beer and ale can be used even freely without any very apparent injury to the individual, or without causing intoxication, as they contain very small percentages of alcohol (4 or 4.5 to 6.50 per cent.); *while ardent spirits on the contrary, unless used very moderately and with great temperance, and with the determination to omit them as soon as the occasion for their use has passed, are almost always injurious, if continued moderately for any length of time, for they gradually encroach on the vital powers.* If used immoderately they cause a beastly narcotism which makes the victim regardless of all the amenities and even the decencies of life; or perhaps they render him furiously crazy, so that he may murder his best friend;" that races may be educated to evil by bad laws, or by the introduction of bad habits. France and parts of Switzerland are beginning to suffer from the introduction of absinthe and of Schnapps. And he very pertinently puts the question to the Legislature and people of Mass., "*whether by classifying all liquors as equally injurious and endeavoring to further that idea in the community, are we not doing a real injury to the country by preventing a freer use of a mild lager beer, or of native grape wine, instead of the ardent spirits to which our people are now so addicted?*"

The statement that "a race, when it emigrates, carries its habits with it, and for a time at least, those habits may override all climatic law, is illustrated by the influence which England has

had upon our whole country by overshadowing it with a love of strong drinks and with its habits of intoxication—as more recently it has covered Ceylon, parts of the East and Australia—an influence made greater than it would have been by the non-culture of the grape, for which the whole of the United States is favorably situated. The progress made in this direction in California and Ohio should be followed by the whole country, *as a temperance measure*, that by the use of light, unfortified domestic wines, cheap and abundant, that object may be promoted—and for the some end, instead of refusing the German larger beer, we should seek to introduce it as a substitute comparatively innoxious for those potent liquors which now bring disaster and death into so many families.”

Grog-shops open for the sale of ardent spirits should be supplanted by other places, restaurants and the like, where good food, tea and coffee should be afforded cheaply.

The moral sense of the community should be aroused to the enormity of the evils flowing from open bars for the sale of ardent spirits. The horrid nature of drunkenness should be impressed by all possible means upon the moral sense of the people.

The habitual drunkard should be punished; or if he be a *dipsomaniac* he should be placed in an asylum for inebriates, established by the State, for medical and moral treatment.”

Such, gentlemen, in mere outline, are the facts, deductions and methods of relief, in relation to this most vital matter of public hygiene, presented to the Legislature and through it to the people of Massachusetts, by the State Board of Health “as a valuable contribution to the discussion of the general subject of the use and effect of intoxicating drinks, without expressing, as a Board, any opinion concerning the inferences or special methods advanced by their chairman.” The whole matter is presented in a new light, and is the result of an honest as well as able physician and inquirer after truth in a most difficult problem of health, morals and legislation.*

“The use and abuse of opium” is another of those social questions of much public interest.

From an official source we learn that from January 1st, 1871, to June 30th of the same year, the importations of opium into the United States were at the rate of about 246,000 pounds per year, not including the quantity exported. In 1840 about $\frac{1}{10}$ part of that

* See Third Annual Report of State Board of Massachusetts, pp. 72-112.

quantity was imported. Our population now is somewhat in excess of two inhabitants to one in 1840. Yet the importation of opium is almost ten times greater. Now "what becomes of it?" is a question that must interest a good many.

The legitimate use of it in medicine as well as that employed in the many nostrums, allowing for the increase of our population, is not supposed by competent judges to be proportionably larger than it was 30 years ago.

Thirty per cent. of the importations is regarded by those who have examined the matter as sufficient to cover all the uses above named. But to make most liberal concessions for the purposes specified, we may allow one-half. There remains still 123,000 pounds of this drug to be accounted for. It does not remain on hand, for the importation is on the increase. This all points to one thing, viz: to the opium habit, opium eating as a growing habit in our country. It is the only solution of which the fact is capable. While then we cannot reasonably hope to prove by statistics the actual number of opium eaters in our land, yet we may feel very sure that, while a larger number use ardent spirits as a drink, a very large number fly to opium as their solace and support, and, as we all know, not a few to both spirits and opium in some of its forms. Though slower than alcohol in its destructive work, it is far more sure of its victim. The ematiation so insidious, the countenance sallow, the skin grown too tight—as though it was a misfit—these are the external signs of the poison. But how with the mind that inhabits such a body? The waste and feebleness of that are only the faint reflections of the waste, the wretchedness, the ruin of the mind in all its capacities, moral and intellectual. Such is the general rule—let no one be led astray by some exceptional cases. Opium eating and opium smoking are each pernicious to health and morals. "The men accustomed to the use of opium *can by no means relinquish it*: the poison flows into their inmost vitals; physic cannot cure the disease, and repentance comes too late for reform"—is Chinese opinion from an official source.

That the evil is on the increase in England as well as in this country is fully proved. From 1840 to 1850 the importations of opium swelled in the ratio of 3.5 to 1; and the prices had advanced fifty per cent.

A coincidence between our own case and that of England is worth considering. Dr. Stillé is quoted (in the paper on this subject in

the Mass. Report for 1872, to which I am indebted for most of the thoughts and facts stated) as follows: "The habit of opium chewing has become very prevalent in the British Islands, especially since the use of alcoholic drinks has been to so great an extent abandoned, under the influence of the fashion introduced by *total abstinence* societies, founded upon mere social expediency, and not upon that religious authority which enjoins *temperance* in all things, whether eating or drinking, whether in alcohol or in opium." If this accounts for the thing in the British Islands, may we not find a similar reason operating much more powerfully in this country—and in *some of our States*, with the superadded influence of unwise legislation? This growing evil may find its strongest allies in institutions and laws intent on the extirpation of one great vice and crime, but impotent for the work, because they attempt too much, and deny to all men any appropriate indulgence of an appetite for stimulants, which is natural.

The *remedy* for this abuse of opium must be found in the self-control of the individual. The higher the standard of morals, and the more the opinion of the people and their formal judgments, as expressed in their laws, conform to the very essential necessities of man's nature, in providing for their harmless gratification, and not for their eradication, the easier will it be to extirpate this and other kindred habits. "Be not righteous over-much; neither make thyself over-wise; why shouldst thou destroy thyself?" are words of true wisdom to us all; but especially to be considered by reformers and legislators.

Another danger to public health has been forcibly set forth in a paper, "On the evil effects of the use of arsenic in certain green colors," contained in the Third Report of the Massachusetts State Board of Health.

Though stating nothing new as to the poisonous properties of arsenic, when thus used, it spreads the facts before the people that certain shades of green in wall paper, artificial flowers, toys, lamp shades, confectionery and other articles, are sources of real danger—sometimes of fatal effect.

Two green coloring pigments, largely employed in producing that beautiful color so agreeable to the eye in these articles of common use, contain a large percentage of the poison. One, the arsenite of copper, known as Scheele's green, contains more than one-half its weight (55 per cent.) of white arsenic. The other, the aceto-arsenite of copper, named from the town where it is manu-

factured, "Schurinfürt green," contains still more of the poison, viz: 58 per cent. These are known in common, among painters, under the names of emerald green, or simply "emerald," or mineral green, more rarely as Brunswick green or Vienna green. They furnish the prettiest, most durable shades of green, at small cost and by a process of manufacture not requiring great skill. The extent of its use may be conjectured from the statement that "in 1860 a paper maker in England said that in his shop alone two tuns of arsenic were used weekly."

Besides wall-paper and artificial flowers, to which the color is but loosely applied—no mordant being used, as in calico printing, to fix the pigment in the texture of the cloth—a light fabric, called "tarlatan," is sold for dresses and for milliners' use. In this article the green color is fixed only by starch or size. Upon tearing a strip of "tarlatan," the light green cloud which rises is arsenical dust. A dress of ordinary dimensions would contain three or four ounces of pure arsenic feebly held in its texture. Out of many recorded examples I quote the following. On the occasion of the performance of a new ballet at Strasburg, the dancers, who represented water-nymphs, were dressed in green tarlatans. These dresses "nearly cost the lives" of those who made them and of those who wore them. So large was the quantity of the arsenic in the fabric that nearly all were more or less poisoned.

The arsenical greens are often used in confectionery, in ornaments of pastry, in toys, in the boxes of water colors so much used by children. But it is in paper that it is most used, in paste-board boxes, show cards, tickets, wrappers, lamp-shades, &c. Especially in wall paper is this possible danger to be avoided. And there is a real, practical difficulty here, since all paper hangings which are green are not to be condemned as poisonous. Some do not contain the arsenical pigments, yet this cannot be determined by any distinctive physical emblem; while others, which may contain to every square foot of surface a quantity of the arsenical pigment, varying in different specimens from twenty-eight to seventy grains, can be detected only by the chemist's tests. Those tests applied to the green dust, which may be brushed or scraped from the paper, will reveal the secret. And when it is considered that an apartment of usual size in our dwellings, papered with arsenical hangings, would according to the lowest rate above named contain nearly two pounds of a poisonous pigment, one half of which, by weight, has arsenious acid, we

reasonably conclude that the danger to life and health from the inhalation of that minute dust which may be given off by many causes, day after day, or night after night, is a real danger and not the bugbear of one wise over-much.

Cases of actual poisoning from this cause are numerous. They constitute a mass of evidence which cannot be set aside. For some striking examples I must refer to the essay upon this subject in the Third Annual Report of the Massachusetts State Board of Health. Let one be quoted as typical of all. In the case of Dr. Halley of London, as condensed from the Medical Times and Gazette of Jan. 16, 1858, "His library-walls had been covered with a newly made, rich, emerald green flock-paper. Shortly after the work was finished, he commenced to occupy the room every evening for some five or six hours, a single gas-burner supplying the light. After a few days he began to suffer considerably in health; there was constant headache, dryness of the throat and tongue, with internal irritation. After three weeks of this experience he became completely prostrate, not yet, however, suspecting the cause of his malady.

Partial paralysis of the left side supervened. His condition obliged him to discontinue his studies in his library, and coincident with this intermission he began at once to recover. But as soon as he recommenced his labors, the symptoms returned. His attention was now called to the paper on the walls of the apartment. It was found to contain nearly sixty grains of Scheele's green to the square foot. The air of the room was likewise tested, and distinct crystals of arsenic were obtained from the dust. The paper was at once removed, and there was no further trouble."

Before dismissing this subject, it may be well to state that there are *three well defined varieties* of the arsenical paper hangings, viz: *the unglazed*, which stands first in point of danger, as the coloring matter is only moderately adherent and is easily rubbed off; "the satined" or glazed, which has the color more securely fixed, by the process which gives the polish and therefore less easily brushed off; and the "flock" variety, which appears roughened or velvety. This last holds the medium line of danger between the varieties before named. But the three include all grades as to price, plainness, or the most decorative and artistic designs.

This subject has engaged the attention of the government of France, and is now regulated by law. It was brought before the Privy Council of England in 1862, in the "Fifth Report" of their

“Medical Officer.” Very properly, therefore, does it become a State Board of Public Health, or a reporter of a State Society like this, to reflect the light of facts upon this subject among the people.

The *effect of certain occupations upon* the health of those engaged in them, and their proper remedy, has been instanced in brief, when sketching something of the work of British hygienists. The sanitary condition of the dressmakers and other sewing women has always been, in many respects, aside from their vocation, unfavorable. Has the introduction of machines for sewing improved their condition? Twenty-five years experience, with their growing use the world over, would seem to afford sufficient data for an answer.

In this country Dr. Augustus K. Gardner, the able editor of W. Tyler Smith’s Lectures on Obstetrics, and a most competent authority, after studying the subject in reference both to the varied machines and those who worked upon them, published his opinion in 1860, in a monograph, entitled “The Hygiene of the Sewing Machine.” He finds no injury resulting from the use of the sewing machine other than would result from overwork in any other form, viz: *exhaustion*. His conclusion is “Finding no proof that physical disease originates from, or is even aggravated by, the use of the sewing machine, I am forced to believe that, in the moderate use of the muscles of the lower extremities, the analogy holds good in this as in every other form of labor, that use strengthens the organs; that while the use of half the body is not so conducive to health, or to an equal development of the entire body, as if the whole frame were exercised, that it is certainly better than no exercise at all.”

In France, Dr. Vernois, in 1862, stated in an official paper, “that in both males and females the movements of the lower limbs produced an irritation of the sheaths and tendons of the extensor and flexor muscles, inducing attacks of cramp, followed by partial paralysis, and, in the case of females just commencing the use of the machine, the development of a peculiar nervous excitement.”

The next year, in 1863, brought out the result of the inquiry in England. The Privy Council are told in the Sixth Report of their Medical Officer, on the sanitary circumstances of the dressmakers and other needlewomen in Sweden, substantially as follows:—that from examination of several large workshops where

machine work was done, the influence of the sewing machine is for the most part beneficial to the workers, that the circumstances of the muscles of the limbs and trunk being kept in moderate exercise, associated with the powers of procuring good food, tends to improve the health of the machinist—at the same time noting the fact that at times the position of the operator causes pain in the chest and indigestion, and in some cases headache and giddiness are produced by the constant rattle of the machines—and finally that *delicate females*, unused to hard fare and muscular labor, are greatly exhausted by this particular work.

In 1870 the subject was again examined, and a carefully prepared article by Dr. E. Decaisne appeared in the appropriate official documents of the French government.

The investigation occupied about two years, and was thorough and methodical. It included 380 women working in shops, and 281 who worked at home, between the ages of 16 and 25. Of the shop women 127 had worked at least three years, 348 at least two years, and 186 at least one year. Of women between the ages of 25 and 35 he examined 226, as he had the foregoing, as to the effect of their work upon the muscular system, the digestive organs, the respiratory and circulatory apparatus, the nervous system and the sexual organs." The same inquiries were made of 95 others between the ages of 35 and 52.

The hours of labor in all these professional operatives, who ran their machines by pressure of the foot upon the pedal, varied from seven to thirteen hours daily, the great majority working eleven hours.

From these investigations, Dr. Decaisne concludes that the effects of this work upon the muscular system is in no respect different from any other form of over-exertion of any given set of muscles—that beginners suffer most from muscular pains, and cramps in different places, which usually diminish as the motion of the machine becomes familiar—that these pains and cramps are not developed among those who work only three or four hours daily—that it is the *excessive labor*, and not this form of it, which causes the disorders of the stomach so frequent in working women—that dyspnœa is met with about as frequently in machine operators and hand-sewers—that the rattle and jar of the machine does not produce any ill effect upon the nervous system, but only some inconvenience at the first—that the effect upon the sexual female organs caused by the alternate movement of the feet upon

the treadles, such as leucorrhœa and local nervous irritation with loss of flesh (as stated by M. Guibout with so great emphasis), is a matter of fact, extremely rare, and even when it occurs it is seldom the fault of the machine, but is connected with the anterior habits or moral perversion of the operative. Another impression somewhat prevalent as to the use of the machine upon female operators is shown not to be warranted. It is affirmed that women employed in working at the machine *are not*, as has been pretended, more subject than other working women to menorrhagia, leucorrhœa, miscarriage and peritonitis, and the cases of this kind which have been adduced, indicate merely the results of work beyond the strength of the individual woman—and finally this almost exhaustive inquiry establishes the fact, that the use of the sewing machine, when employed within moderate limits, without over-working, as is too often done, is attended with no greater inconvenience to health than working with the needle.

Prefacing the record of their own investigations upon the “effects on health of the use of the sewing machines *moved by foot power*,” as was the case in all the examinations (above recited and) included in their report, the Massachusetts State Board has presented the facts as gathered from 120 towns in that State. The evidence thus obtained is considered as “strongly corroborative of the views of the great majority of medical men, both here and abroad.” The narration of that evidence cannot be here introduced. The general conclusions of the Board must suffice. They are, “*First*, that the sewing machine may be used by a healthy woman of average strength for three or four hours daily, without causing excessive fatigue, or any appreciable ill effect.

Second,—That the illnesses which most frequently prevail among professional operators using the treadles are :

a. Indigestion—attributable to the unhealthy conditions in which they pursue their occupation, particularly the impure atmosphere of the work-rooms, the sedentary employment, and want of open air exercise.

b. Muscular pains of the lower limbs and trunk, produced by the long continued and frequent use of the same muscles.

c. Diseases peculiar to women, *aggravated* by, rather than caused by, the plethoric condition of the pelvic organs, induced by this exercise.

d. General debility.—This means a state of physical deterioration and nervous prostration brought on by overwork.

Third. That other ill effects, such as neuralgia of the feet from contact with the iron treadles, affections of the spine, as well as the nervous effects described by M. Guibout, are worthy of mention only from their extremely rare occurrence.

Fourth. That the unhealthy tendencies of this occupation ("among professional operatives") may be greatly diminished by the substitution of some other motive-power than that of the feet, or the adoption of the improved treadles, and by the proper ventilation of the work-rooms.

Slaughter houses, rendering houses, bone boiling works and other similar places have largely engaged the attention and labors of all sanitarians.

The work of reform has always been slow and difficult. Partly from ignorance upon the subject, but more from a consciousness of their money power, the class engaged in these occupations have often proved persistent against all efforts for their own as well as the public good. In Massachusetts, after a long struggle, the evils of the old system are about to pass away.

The very successful system of a large and suitably constructed "Abattoir," as in Paris, has already been introduced by the butchers and others interested of the city of New York, and is to be established at Brighton also. Humanity to the animals, cleanliness of place, economy of the products of the slaughter house, in the saving of the blood for its albumen and its easy and cheap preparation for the market, of the hair and bones for their appropriate and needed offices in the varied wants of the community—all find ample provision under this improved method of killing, in the least offensive way, those animals designed for the food of man.

While we can devote only this small space to the matter, it is one which deserves the attention of all those who would protect the cities and large towns of our land from a fruitful source of disease. This is a patient for State medicine, and the heroic treatment is that alone which can be successful.

But, gentlemen, much pertaining to this general class of topics must be wholly omitted. We have thus far left, almost unnamed, the whole range of diseases which as physicians we are called to treat at the bed-side. Some of these are certainly preventable in many cases. Let us endeavor then to discover what may be done *by preventive medicine in its application to the zymotic (epidemic and contagious) class of diseases.*

From 1663 to 1665 the plague prevailed in many parts of England and especially in London. On account of this, the court of Charles II. was held at Oxford. Here there was exemption from the plague, although all intercourse was not prohibited between these cities. The reason for this exemption is given by Dr. Robert Plott, the Professor of Chemistry of the University of Oxford, and a cotemporary authority. "The reasons why Oxford is now much more healthful than formerly are the enlargement of the city, whereby the inhabitants are not so close crowded together, and the care of the magistrates in keeping the streets clear from filth. For formerly they used to kill all manner of cattle within the walls, and suffer their dung and offals to lie in the streets. Moreover about those times the Isis (the name given to the Thames about Oxford) and Cherwell, through the carelessness of the townsmen, being filled with mud, and the common sewers by such means stopped, did cause the ascent of malignant vapors whenever there happened to be a flood. But since that, by the care and at the charge of Richard Fox, Bishop of Winchester, in the year 1517, those rivers were cleansed and more trenches cut for the water's free passage, the town has continued in a very healthful condition, and *in a particular manner so free from pestilential diseases that the sickness in 1665, which raged in most parts of the kingdom, never visited any person there*, although the terms (of the law courts) were there kept, and the court and both houses of Parliament did there reside." *

What was done by the Bishop of Winchester for Oxford, has since been done in all the principal cities of England and on the continent. The plague has not visited England in two centuries. Paris has not been attacked since 1668. In fact, wherever civilization has advanced, there plague has receded, till it is now only to be found lurking among the swamps of Egypt, or reveling in the filth of Constantinople. Civilization is the culture of man in his habits, tastes and principles. It stimulates to industry, cleanliness, thrift. It seeks in commerce the means of supplying its needs, and through the same channel equalizes the supplies for the support and comfort of the nations. Hence it is that famine, the gaunt parent of so many formidable pestilential diseases, becomes almost unknown among the civilized nations. When there is extreme destitution, the very condition exists which most cer-

* Eng. Cyclopaedia Arts and Sciences, Vol. 6, p. 435-6.

tainly excites a personal predisposition to disease. The history of the Famine Fever, called now Relapsing Fever, whose first recognized appearance in New York was in 1870, shows how much we are exempted from ravaging disease by the operation of great laws, of the existence of which we are hardly cognizant, viz: the laws of modern civilization. (See the Ann. Report of the New York Board of Health, 1870, pp. 456-507.)

The general method, described by Dr. Plott, as the work of the Bishop of Winchester at Oxford in 1517, with such happy results, has been applied, with all the increased light of science, with equally striking results in our own time.

We notice, first, *Drainage of land to be used for building purposes* as a Measure of Preventive Medicine. This provides a receptacle so constructed that the water which may settle from the surface of the ground or flow from the springs and streams contiguous to it, may find its way through the open spaces in its sides and bottom, and flow onward to its proper destination, whether into a sewer or a natural outlet. The drain, the sewer, and the pavement of the streets for large communities become essential parts of a wise sanitary system—each is often inseparable from the rest. In cities, those portions built upon tracts filled in, over old water-courses, which have been obstructed and cut off, become the seats of zymotic diseases. As an example, I cite from the First Ann. Report of the Board of Health of the City of New York (1870, p. 141). “In the locality near Av. A, between 74th and 76th streets, intermittents have prevailed to an alarming extent. Upon the recommendation of the Health Department, this section was effectually drained, and two old water-courses were protected and provided for. The result is already manifest. There is not a case of intermittent fever in the neighborhood.”

It is owing to this neglect of drainage that houses built upon ground covering obstructed and neglected springs and water-courses are so uniformly damp. Capillary attraction is always doing its work, and a change of temperature develops the results, and the heat by which the occupants of houses so situated endeavor to draw off this dampness only increases the capillary force. In the report upon the nature and necessity of a system of drainage for sanitary purposes in the city of New York, contained in the Ann. Report before mentioned, p. 414, much stress is laid upon this point. The statement is made that, “as a result of this disregard of nature’s simplest laws, we have constantly pres-

ent the various forms of intermittent, typhus and typhoid fevers, consumption, scrofula and all the diseases which are due to this source. A volume might be filled in the citation of cases which have occurred and are daily occurring in dwellings and among families in the lower part of the city, where the obstructed water-courses mark the inevitable line of disease and death. In a large hotel located over one of these water-courses, *repeated* cases of typhoid fever have occurred, which have been fatal. A number of most costly dwellings in certain portions of the city have been abandoned by the owners, as residences, after the death of members of the family, from this cause." (*Id.*, p. 415.) But the conduits constructed for drainage must not be used for sewers. When thus used they may become a permanent source of disease. In the city of New York a drainage stream rises near Fourth avenue, between 90th and 91st streets. In its course it runs under a row of houses on 91st st., where it is converted into a receptacle of sewerage: the consequence is that in all these houses typhus fever prevails, and the lower portions cannot be occupied at all. Nearly all of them have been vacated. (*Id.*, p. 417.)

The report concludes thus:—"The number of individual instances where disease and death have been traced directly to imperfect drainage and neglected water-courses is very large. In one instance an entire family, including the servants, residing in a very expensively built house on 5th avenue, died of diphtheria. The house was located over an old water-course." Many families have always been sickly, until having ascertained that their houses were thus located, they removed and their health was regained. (*Id.*, p. 418.)

The extent of this source of danger to the public health in the city of New York may be gathered from the report of the Chief Engineer, made to the Board of Health in 1871. (Ann. Report, &c., p. 421.) "It is assumed," says the Chief Engineer, "that to defective drainage and sewerage may be attributed most of the sanitary evils from which the city of New York suffers. We find that of the 12,000 acres comprising the superficial area of the city, representing 150,000 building lots, one-fifth of that amount, or 30,000 building lots, is, by reason of the greater or less quantities of water in the soil, rendered almost unfit to be occupied for dwellings or commercial purposes. Yet no attempt has ever been made to establish a system of drainage, by which these 30,000 lots can be made suitable places for residences or store-houses."

These facts, in connection with drainage in a city, may throw some light upon the effect which mill dams and other water obstructions to the free flow of natural water-courses, whether of rivers or bays and creeks washed by the tides, have upon the health of a community. It certainly does seem to involve the same elements of danger to health. By these obstructions the entire water level above them must be changed in a large portion of the contiguous land. That which is level is saturated with water, the dry land becomes wet and the wet lands become swamps. A case, which excited much interest at the time, and is cited in the 3d Ann. Report of the Mass. State Board of Health, p. 63, is in point. "About the year 1828 a dam was built for obtaining water-power for mechanical purposes on the Housatonic, two or three miles south of the Massachusetts line. It affected the height of water on that sluggish stream for a distance of ten miles, and *was followed by such increase of intermittent fever*, that the people sought and obtained legal authority for the removal of the dam, on the ground that its effects on public health were such as to constitute it a public nuisance.

The same cause essentially is recognized in speaking of intermittents occurring in Massachusetts to-day. Says the Report: "In Chelsea intermittents have been observed, and the history of the cases has been carefully investigated, and *their local origin proved on lands reclaimed from salt marsh and now covered with houses*" (p. 63). For a fuller discussion of this subject let me refer the reader to the paper by Dr. Bronson, contained in this volume.

I must not fail to urge that *an abundant supply of good water is essential to the public health, especially in cities*. A striking example will confirm our convictions. It is taken from the foreign news in Harper's Weekly of May 18th, 1872. It is as follows:

"Seven years ago the city of Bombay used to be visited almost annually by epidemics of cholera, which killed from 2,000 to 5,000 persons. This state of things was brought to an end in 1865 by the energy and wisdom of Sir Bartle Frere; and now, though the disease is being constantly imported into the city from the adjacent districts, it is never able to assume epidemic proportions. The remedy employed by Sir Bartle Frere was simply bringing into the city an abundant supply of pure mountain water, placing it within easy reach of the mass of the population, and so removing all temptation to use the polluted water that had previously

formed the main supply. That the exception is not a mere accident, but is the effect of the use of purer water, is apparent from the fact that the suburbs of Calcutta, where the old sources of supply are still in use, are afflicted as they were formerly. That the military cantonments in India are so frequently ravaged by cholera is due to the fact that their water supply continues in its former filthy state. Nothing has been done to improve it, though projects are now under consideration for remedying the defect."

Sewerage is another important matter in preventive medicine. For a city, a system of sewerage becomes an indispensable necessity to the health of the inhabitants. While the subject cannot be treated of here, the omission of this matter would be an error. I name a few points. And, first, what a proper sewer is. A sewer is a water-tight conduit to carry off sewage, which sewage should be aided in its flow by the surface water from rains and the waste water from the water supply. Its construction as to shape, size, and material; as to depth, inclination, outfall; as to ventilation, and its connection with other sewers, and last, but not least, as to the best possible mode of connecting it with human habitations for use and efficient service, are all matters for the highest engineering skill. To prove a blessing, a sewer must not be faulty. Ignorance, or cupidity or knavery, may, and often do, impose a defective system upon a community, which becomes a most prolific source of disease, by creating an accumulation of evils. Better by far it is to have no system at all, than such an one. As to the point of "*débouchure*" of the sewer, the experience of most cities warns against the discharge of the sewage into the slips or docks. The evils arising from this cause are many, and often so great as to defeat the very object for which the sewer was constructed. To no one subject connected with the health of large communities should more importance be attached, and to none should be brought more practical wisdom and special scientific fitness.

The proper *location, construction, ventilation and cleanliness of the homes for the poor*, such as tenement houses, &c., is another department of preventive medicine. The opinion expressed by Prof. George B. Wood in regard to *epidemic cholera in cities* is true of all zymotic diseases. He says, "In cities it has almost always been the lowest, dampest, most crowded, and most filthy sections that have suffered first and most. In general, the well-provided classes of society have suffered little in any country."

(Wood's Practice of Medicine, vol. i, p. 727.) Notice now the effect which follows when those who were thus situated become nearer in their situation to "the well-provided classes."

According to statistics relating to those who inhabit the improved dwellings erected by the Peabody fund and other agencies in London, epidemic diseases have been banished from their buildings.

In New York the "Tenement House Act," enforced by the Board of Health, has improved the ventilation, sewerage and general cleanliness of those houses, and with the following results: "Although less than one-half of the total population of New York occupy tenement houses, yet nearly 76 per cent. of the total mortality in 1868 occurred among this class. In 1869 (under the enforcement of the above law) it fell to 68 per cent., and in 1870 it was reduced to 66 per cent., a gain of $9\frac{1}{2}$ per cent. in three years, and a saving of 2,600 lives. No better illustration of the value of sanitary work could be desired." (Ann. Rep. of the Board of Health of the City of New York, p. 16.)

In furtherance of the same object, *the isolation or the separation of those who are sick with contagious and infectious diseases* from persons in health, becomes a valuable means of preventive medicine. This fact has been recognized and acted upon in the earliest, and in many respects the best, sanitary code which was ever applied to a people. I refer to the Mosaic laws, which embody more of practical wisdom and the essentials of *authority* and *power* for their enforcement, than is accordant with the views and practices of the individual sovereigns of a modern commonwealth. "The *act*," as we should say at this day, "concerning contagious and infectious diseases" runs thus: "The leper in whom the plague is *shall dwell alone; without the camp shall his habitation be.*" (Lev. xiii, 45, 46.) The object of the law is the preservation of the public from disease. While the diseased are to be cared for, it must be done in the greater interest of saving the health of the community. And at this very point arises the great difficulty of a proper enforcement of this principle. The apparent harshness and often real hardship in breaking up a household and removing one or more of its members to a hospital for treatment, against the wishes of the sick and the remonstrances of friends, become often the prominent features of the whole proceeding, and are easily used by the ignorant or timid as the most efficient means to arrest the proper and necessary proceedings of the sanitary officers. The

welfare of the few is made to be superior to the safety of the many. The real foundation of all sanitary law *is humanity*, but in its execution individual interests often suffer.

In most private houses, in the great majority of cases, a sort of separation of the sick from the household is usually attempted. The more complete it is, the better it would be in the zymotic class of diseases. But in the crowded tenement houses of large towns or manufacturing villages the separation of the infected persons from each other, and as far as possible *from the rest of the community*, becomes indispensable.

This of course involves expense on the part of the public, but it is a wise expenditure and for a great public good. It implies the erection and maintenance of suitable buildings for the reception of the sick, and a competent medical staff and attendants. In fact, the same principle, which is at the foundation of the quarantine regulations of most of the civilized world, must be recognized as the principle to be applied with greater or less rigor, according to the varying conditions of the emergency to be dealt with. With diseases like small-pox or the relapsing fever of 1870, as it appeared in New York, there must be no hesitation, on the part of the proper authorities, in the uses of all the known preventive measures to preserve the public health. While formidable, they are not invincible. Of the relapsing fever, the experience of the health authorities of New York authorized the declaration, "*it proved to be in a remarkable degree under the control of preventive measures, when thoroughly applied.*" (Ann. Report, 1870, p. 33.) The removal of such cases from tenement houses and their isolation as far as possible were the first steps to be taken. What other proceedings were had will appear elsewhere.

Of small-pox very similar testimony can be adduced, contrary as it may be to the popular notions. Upon the efficacy of vaccination as a preventive to small-pox in the person vaccinated, there is but one opinion among medical men; while *possibly*, in some cases, where properly performed and repeated, there may be exceptional ones of a want of a full protection against varioloid. Yet they are very rare indeed, and only confirm the rule that vaccination is the great prophylactic remedy for the extirpation of the small-pox, and yet vaccination is neglected and always will be by a large class of people until the law compels obedience in all for the good of all. These very points are so forcibly impressed by statistics in regard to Ireland that I

place them here. Prior to 1863, vaccination was voluntary, and the deaths from small-pox, for the ten years between 1830-1840 were in the total 58,000, or at the respective annual average of 5,800. From 1840 to 1850 the total of deaths was 38,270, or at the respective annual average of 3,827. The mortalities for the last period of ten years, viz.: from 1850-1860, just before vaccination was made compulsory by law, were in the total 12,720, or at the respective annual average of 1,272. Now mark the effect of the law of compulsion enacted in 1863. In the next year, viz.:

In 1864	there were	854	deaths.
“ 1865	“	“	347 “
“ 1866	“	“	187 “
“ 1867	“	“	20 “
“ 1868	“	“	19 “

and in the first half of 1869, the whole number of deaths in all Ireland were *three* from small-pox. Five and a half millions of people, and three deaths from small-pox in six months! What a comment on the protective power of vaccination, and the necessity of legally enforcing its performance! If the State of Connecticut were equally well protected, we should have about two deaths per year. (Mass. Registration Report for 1868.)

Aside from vaccination, the same course of the removal of the patient and his isolation have been productive of great good. I cite an example or two. In the 10th Sanitary Inspection District, parts of the 11th and 17th wards in New York, there are 2,320 tenement houses. And yet in the *whole district* there occurred in one year (from April 1st, 1870, to April 1st, 1871) only 123 *cases*, not deaths, of varioloid and variola. Vaccination was performed on 1,971 persons.

Still more striking is the official report from the Inspector of the First Sanitary Inspection District. This district includes the entire 3d and 5th wards and the greater portion of the 1st ward—the very place where the emigrant ships land their passengers, and where the passengers find boarding-houses after they leave Castle Garden. In this 1st ward there are 600 tenement houses. They shelter 25,000 people, and yet under such unfavorable conditions only 44 cases of small-pox occurred during the year above named. “This result has been owing,” says the Sanitary Inspector, “to our *strict quarantine regulations* and to the *immediate isolation of every new case.*” (Annual Report of the Board of Health of City of New York, 1870-71, p. 83, &c.)

The principle here involved is so important in relation to other of the zymotic class of diseases, that I offer the opinion of Dr. Wm. Tyler Smith and others upon its relation to puerperal fever patients. "It is evidently unsafe to congregate lying-in women, in any numbers, in the same building." Again, "Puerperal Fever may almost be produced at will, by crowding a number of lying-in women together in the wards of a lying-in hospital," or "by the admission of lying-in patients into the wards of general hospitals." Drs. Simpson, Raneshotham, Lurr, Oldham, Copland and Robert Lee concur in this opinion. (Lectures on Obstetrics by Wm. Tyler Smith, 2d ed., New York, p. 742.)

To prevent the occurrence of puerperal fever from *contagion* or *infection*, *isolation*, in *distinction from lying-in hospitals*, must become the order of things. *The obstetrician must observe the precaution of absolute non-attendance upon females in labor when in attendance on puerperal patients. The same regulation should be applied to the nurses and attendants on the lying-in woman.* In these cases preventive medicine is our reliance, for "as regards cure or effective treatment, the disease in its various forms is utterly beyond all the known resources of 'our art.'" (Smith's Lecture, p. 740.) "As to *sporadic cases*," he reasons thus: "As the great laws which underlie the preservation of public health are better understood and enforced in regard to all those things influencing the physical condition of all classes of society, the physician can often, by attention to the cleanliness of the place and the patient, the removal of morbid secretions and the proper ventilation of the room, prevent those causes which readily act upon the already vitiated blood and secretions of the lying-in woman, and give rise to sporadic cases of puerperal fever." ("Lecture L, Smith's Lectures.")

Another chief reliance of preventive medicine is the *disinfection of infected houses, places and clothing and other articles filled with the poison of disease.* Upon this subject great ignorance, often greater guilt, exists in every community. Avarice values its pence above the public safety. The beds, furniture and clothing used by small-pox patients too often are hurried away to the auction room or the second-hand clothes dealer. "A physician" in the New York Herald writes: "I attended a child (for small-pox) some years ago, that early in its sickness seized upon a five dollar bill, and held it constantly till it recovered. The parents of the child passed it to the grocer, after soaking it, so as to spread it open,

gummed as it was by the secretions "of small-pox." The protection of those exposed must be secured by an organized and legally constituted body. A competent officer should advise what disinfectants should be used and how to use them. Fire is often the best of them all. But that most needed are the great disinfectants, *soap and water*. And yet in "the plague spots" of large towns how many there are who neglect the use of soap and water upon their persons and dwellings, and are unable to appreciate the connection between the disease and the dirt and filth which surround them. It becomes therefore necessary to use other means for their protection and the community also. The chemical disinfectants which either transform the decomposing matter by chemical action, or those which arrest fermentation, either singly or in combination, are of signal service.

The houses where contagious diseases have prevailed are to be fumigated. The clothing and bedding are to be cleansed and disinfected. The discharges and foul emanations from the sick are to be disinfected or destroyed.

The agents found most serviceable by the New York Board of Health are carbolic acid and carbolic acid preparations, sulphates of zinc and iron, and sesquichloride of iron, *which arrest fermentation*. Among those agents *which effect chemical decomposition* are chloride of lime and of soda, sesquichloride of iron, chlorine, lime and sulphurous acid.

A single example, selected from the report of the Assistant Chemist to the Board of Health of the City of New York, will show the mode and the effects of their use. The Relapsing Fever of 1869-70 found its home in the lodging houses of vagrants and the tenements of the most degraded classes. These places became "fever nests." Among the places of resort for these wretched people, the house No. 281 Mott street had been a constant source of disease. Twenty-three cases had been removed previous to the middle of May. At that time the house was thoroughly disinfected by washing the floors and wood work with a solution of the chloride of lime. It was then fumigated with chlorine, and finally the walls and ceilings were white-washed. Not a single case has occurred there since.

Another and quite unexpected ally has been brought into the field of preventive medicine by the surprising accuracy, in whole and in detail, of the meteorological observations recorded at Washington.

That a most important matter, as to its ultimate relations to the public health, is in progress of development must be evident to every intelligent person. What can be done at and for Washington in regard to its meteorology, can be done in every city and town of this and every other State. Nor would it be a matter of surprise if, at the public expense, the whole people should be informed in some simple way of what will be the states and conditions of the atmosphere for the passing day in their own region. The whole thing is yet in its infancy. We can hardly estimate the benefits to be derived from such knowledge. But it is certainly not extravagant to assert that such information announced even three times every 24 hours, as at Washington, in all the cities and centers of news throughout our land, would give new and greater facilities for preventing disease and saving life.

The price of gold in New York at any given time is known at once in New Orleans and Boston, and every other stock market of the country. Would it be stranger, if *the condition of the atmosphere, that subtle fluid by which and in which we live*, since it can be so accurately forecast, should be bulletined in the hotels, at the drug stores, at railway stations and post offices, to warn and guide the people in their clothing and business?

Perhaps it may be well to notice here the idea so prevalent among a certain class of people, that it is chiefly in cities and large towns that we are to look for the sources of disease. The country is health and strength, the city is sickness and decay. A little knowledge of the facts will dispel this illusion. Each has its peculiar dangers. In New England it would seem to be established that typhoid fever is a disease of the country rather than of large towns. Cholera infantum and other diseases of the stomach and bowels, especially in children, belong to the cities rather than the country, while diseases of the respiratory system are as common to one as the other. In many other important points there is similarity of dangers.

There is no need of mystifying the matter. There are certain general conditions of health and disease which are always and everywhere operating, and the better these are understood the better the result, both in city and country. Some of these we have brought to your notice. That much has been omitted is obvious. That much is yet to be learned is also true. But that some progress has been made is beyond all question.

But, gentlemen, I should fail in my duty if it should not distinctly appear that *what progress has been made* and of which we

may avail ourselves, *has been made under governmental authority and support*, either of Parliament as in England, or of the State as in Massachusetts, or of a city whose population and necessities in this matter are greater than those of Connecticut. The results attained imply concert of action, science and skill in special branches of study and great expenditures of money. They also imply a range and compass of plans, and a power to execute and enforce them, which rests upon organization, created and upheld by *law*, whose acknowledged foundation, when stripped of its ornamental covering, is *physical force*. Advice is well enough for some, but *orders* from proper authority, to be obeyed voluntarily or to be enforced if neglected, must be at the foundation. Local Boards of Health we have in each town. But the State needs a Board to watch over the interests of the whole territory, to adjust disputes between the local boards, to give protection (as in the case of the cattle disease) by acting efficiently and promptly, and to act as an advising body in the legislation so often sought in matters appertaining to this subject. Until some such step is taken in Connecticut, we shall be left to the varying decisions of as many local boards as we have towns in things of great importance to the public health. One town will make it a penal offence to cart white fish through its streets, and allow an entire family to resist and refuse vaccination while the small-pox is raging as an epidemic.

We, as a medical society, should move in this matter for the establishment of a State Board of Health for Connecticut.

Thus far, gentlemen, to borrow from military phraseology, we have dealt with the outposts, the skirmishers, the outer lines of our defences. The duty which we individually can do for public hygiene has hardly been thought of. And yet *within our appropriate sphere* we can do more than all other agencies combined could effect. For it is the opinions of the medical men who give tone to the medical opinions of the communities in which they live. This is a real power, and we can and ought to appreciate it and use it, not simply as *theraputists*, great and useful as is that department of our science, but also as guardians of the public health in the way of *preventive medicine*.

Let me specify some of those things in which we can serve this cause. We can do this by holding and freely expressing correct views as to *the use and abuse of water*. The water used for drinking, the habit of freely indulging in drinking, at all hours and by

all people—what end it serves in the human economy—its use externally in baths of all kinds, when it should be used, as to the condition of the system—its temperature, and the frequency of its use—how it may effect the nervous and circulating system, and the stomach, the kidneys and the lungs. The ignorance on these things is astonishing. The topic can only be suggested. But the suggestion is very prolific of its countless benefits in health and diseases when wisely used, and of the ruined health and shortened life by its improper use in manifold ways in private life, in charitable public asylums and in State prisons.

Suitable *advice to parents and guardians as to the future life occupations of their children* is a most important auxiliary to public health. The family physician does not perform his *whole duty* when he treats his patient for a disease and health is restored. He is godfather to the household. The feeble child ought, under his advice to the parents, to be put to such a course of life as will fortify, not impair, what constitution he has. The children of consumptive tendencies should not be shut up in factories or stores or colleges—other occupations, where the air and sun are to be enjoyed, must be insisted upon. How many are the bright flowers which have withered and died under the excitement and pressure of over-work in the factory or school or college, whose bloom would still be on them, and in whom their parents would now be rejoicing, if the physician who attended in sickness had felt bound to preserve the health, to prevent disease, by timely caution. It is quite true that the public generally do not regard the office of medical adviser as being in truth *a preventive agency*. Yet such it is, and it must be so considered if its full influence is to be felt in the community. *We* know it to be so, and we must act up to our knowledge.

Nearly allied to the subject just considered, *is the exercise and amusements of the young*, particularly of those who are at school. The errors committed in these particulars are many, and their consequences often serious. In the country we do occasionally find boys and girls who can run and romp and play with the vigor and elasticity of young animals. Neither their style of dress nor the rules of fashion or the instructions of mama, or of some prim teacher of a school, restrain the legs and arms and whole child from entering into the sports with entire "abandon." But in our cities and large towns there is no childhood. We have babies in nurses' arms, young gentlemen and young ladies. The period of life in which nature prompts to a full development of the muscu-

lar system by constant and varied action in the air and sun, is being hedged in by rules of propriety of manners, by the restraints of fashion in dress, by an affectation of superiority in social position, and an aping of the habits of a matured man and woman, which convert what should be childhood into a hot-bed for the premature growth of the natural passions, the undue excitement of the brain and consequent assured germination of all inherited tendencies to disease. For a full discussion of individual hygiene, allow me to commend, especially for females, the "Elements of Health and Principles of Female Hygiene," by E. J. Tilt, M.D.

In all efforts in the cause of public hygiene, the practitioner of medicine holds a most important relation to the habits of the community, in respect to the use and abuse of stimulants and nervines, and for the use of quack nostrums of all descriptions.

It is needless to enlarge on this branch of our subject. That famous box, of which we have heard so often, when presented by Jupiter to Pandora, contained its countless ills and diseases. But Jupiter had small resources of supply, whence to draw, compared with the venders of ardent spirits and drugs and panaceas of our day. Distilled spirits, opium, ether, tobacco, chloral, and the ten thousand combinations of these and other things which assure the public that they give health to the sick, and life to the dying, we encounter everywhere. For one moment suppose none of these things were ever improperly used, can we estimate the lives saved from suicide, from violence, from exposure and want, and the improvement in the health and every essential comfort in the community?

Who do most by their opinions, practices and general influence, to form the habits of the people in these very respects? Not the clergy, nor the temperance lecturers, nor the intemperate, but those men whose advice and prescriptions are sought, because they are judged competent to direct in the matters pertaining to disease, and *whose lives are constantly witnessing to what they judge to be for their own health.* If "the evil which men (the common herd) do lives after them," the evil of a dissolute, sensual and unprincipled practitioner of medicine—no matter how great his skill—lives a thousand lives and spreads its poison in unsuspected and unnumbered households. Where such opportunities for evil exist, the opportunities for a salutary and purifying influence are equally great. And he should improve them, steadfastly holding to the *truth* against all pop-

ular clamor, for it is by conduct founded on truth that a good influence is to flow out, and by legislation on a like foundation that good results are to be obtained. Stimulants, freely used in appropriate cases, we all believe, save human life. "Clinical experience proves, if it prove anything, that *every form of stimulant now in use can be made a blessing, if used temperately and on proper occasions,*" says Dr. Bowditch, and the belief of the body of the profession is the same the world over. (3d Ann. Report of the Mass. State Board of Health, p. 93.) This is the true hygienic position. There is another, just as true, to be enforced upon the moral sense of the people by all possible means, that their *intemperate use* transmits an impaired constitution to children, destroys health, and what is more, all manliness also; that it brutalizes man, and prostitutes all that is good and attractive in woman to the same level, and consigns not only the offenders themselves (generally) to a premature and dishonored grave, but with them, the *blighted hopes* of all who depended on them; assuredly there is a middle course between the extremes of their abuse and of total abstinence. "In medio tustissimus ibis," has a wide application *to all our natural appetites*. Their gratification, under control and temperately, is the rule of life. Their extinction an impossibility. Without them, we should not be human. Living solely or chiefly for their indulgence, we become inhuman, like Nero. If there is no such thing as a temperate indulgence of our natural appetites, without sin or wrong to ourselves or others, the race is in circumstances very much akin to those of the Phrygian king, who (according to mythology) was condemned to be plunged in water, with choice fruits hanging over him, without the power of reaching either, while his mouth was parched with thirst, and hunger gnawed at his vitals.

Certainly as *a sanitary measure*, we cannot approve of the adoption of such principles or practice.

But there is still another sphere of action, which may, by way of eminence, be called the *realm* of the physician, viz: the chamber of the sick in particular, and his confidential relations to his employers and the community, in general. And here he must not only prescribe for the sick, but he must enforce the requirements of preventive medicine, as one having authority. Not offensively, or harshly, but firmly, like one who believes in his profession, and whose chief end is the prevention of disease, while curing it in the patient. The importance of cleanliness in all that relates to

the management of the discharges and secretions of the sick, the diet and ventilation, company, quiet, &c., must be enforced upon the *nurse* and patient, as matters to be observed quite as faithfully as the administration of medicine. "The nurse," I said; alas! while there are enough poor doctors of all sorts, there are more poor nurses. And yet, be the medical attendant perfectly competent for his work, an unfaithful or incompetent nurse may destroy the patient's chance of life. The nurse is to the doctor and his patient what the first mate of a ship is to the captain and the crew. He it is who is the constant presence. The sailors receive orders through him. And he must be reliable, a trained and educated seaman, or everything is at fault. Now the wants of commerce for a class of trained and educated seamen to fill the subordinate positions upon shipboard, are not greater than are the wants of the sick, of the physician, and of the well-being of the whole community, for trained and educated nurses. Every medical gentleman before me feels this; and yet where is the attempt being made, by systematic labors, to meet this urgent need? He who shall attempt this work in our State of Connecticut will receive the hearty "God speed" from many sufferers. A good nurse is a medical necessity, as much as a good physician, to the care of the sick.

As to the sick themselves, it is often the opportunity of the physician, by a proper discernment of the case at his first visit, to prevent grave impending disease. Winslow Forbes, in his work "On some Obscure Diseases of the Brain," makes a remark which illustrates our thought. He says a single dose of blue pill, timely administered, has often prevented the occurrence of insanity by its relief to the system.

We have all witnessed the effect of change of air and place, of food and friends and occupation, in producing the most salutary results, where confirmed insanity might have been developed by a thorough course of drugs and the mistaken kindness of the family. The medical adviser must step in between the patient and his friends and save that soul from death.

His confidential relations to families and others enable him to foresee many approaching dangers, of which he can forewarn them. He and he alone can give the *often much needed caution and advice* to the married, by which the vigor and health of themselves and their children would be secured, and *those disorders* escaped which result from *excessive venereal indulgence*—dis-

orders, often unsuspected in their origin by the sufferers, sometimes known to spring from that cause, and generally borne in concealment and suffering till they can be concealed no longer. Indigestion, constipation, local pains, affections of the mucous membrane, development of tubercles, prostration of the nervous system, varied in degree and locality, as well as in their sympathetic alliances in different constitutions, are only some of the evils from this prolific source of disease. I have made my remarks personal to the individual practitioner of medicine, because "the profession" seems an impersonality, and yet it is to the profession as a body that these duties apply.

In concluding this report I cannot forbear a few words *upon the possibilities of preventive medicine.*

The general drift of the best minds in the medical profession has long been in this direction. In our own country, the most eminent medical authority of the last century, Dr. Rush of Philadelphia, thus expresses his opinion in regard to pestilential fevers: "The means of preventing them are as much under the power of human reason and industry as the means of preventing the evils of lightning and common fire. I am so satisfied of the truth of this opinion, that I look for the time when our courts of law shall punish cities and villages for permitting any of the sources of bilious and malignant fever to exist within their jurisdiction." (Massachusetts Report for 1871, p. 179.)

The eminent vital statistician and Registrar-General of births, deaths and marriages in England, Dr. Farr, thus speaks, in 1869, of the great aim of preventive medicine, viz: "How, out of the existing seed, to raise races of men to divine perfection is the final problem of public medicine." (First Annual Report of the State Board of Massachusetts, p. 11.)

To persons ignorant on these matters, such sentiments are mere nonsense. To the instructed they convey some impression of the distinctness and compass of vision which the study of the known facts of our subject make upon the most acute, logical and foreseeing minds of the last and present century. Such men now comprehend the case. They see "the day-spring" in the slow but steadily increasing light and interest with which the public health is regarded by legislators and magistrates—the constant accession of various conspiring and favoring influences from many departments of science applied to the industries of life, from the press, from the centers of industry, in an awakened interest in the well-

being of the workmen, and the efforts of philanthopists, excited, continued and largely directed by the foremost minds of our profession, not in the exercise of a crazed enthusiasm toward an unattainable result, but as cool, self-possessed and wise teachers inculcating the doctrine of facts upon their fellow *mortals*. For while they thus teach and labor, they know full well "that one event happeneth to all."

"Sed mors pallida, æquo pede pulsat,
Regumque turres, pauperumque tabernas."

Yet men should not hasten to weave their own shrouds or cut short the full measure of their days. Perhaps nothing has done more in this country to fix public attention on the necessity for, and benefits to be attained by, a thorough system of sanitary and preventive medicine, than the comparative health and exemption from the usual ravages of yellow fever of the city of New Orleans, while held by Northern troops during our recent civil war. This case shows in bold relief what may be done to convert a plague spot into a place of safety to life and health. Call this the obverse view. Now turn your eye to Andersonville, and you have the other, the reverse. Destitute of the most common hygienic necessities, without food or water or shelter, except in very mockery of these things, depressed in spirit, and reeking in filth, we see naught but waste, disease and death amongst the thousands of once strong men in that pen for human slaughter. From such contrasts as these we can be taught very much. The one presents an insalubrious and filthy city, disinfected and *protected* by proper sanitary work from pestilential fever; the other shocks us by the horrors of twenty thousand soldiers doomed to disease and death, chiefly from the absence of all sanitary protection.

Such extreme cases show the full developed fruit of causes, often latent and generally existing in germ in every large community. They also teach us how we may in many cases avoid the danger by the use of means at our disposal. While we have in the foregoing report briefly noticed some of the methods of public hygiene and the possibilities to be sought, one most important element in the improvement of the physical condition of men and the preservation of disease has only incidentally appeared. It should be distinctly asserted. And it is this. Man is not simply an animal, but in the language of Bernardin de St. Pierre "he is a religious animal." His complex nature, the body, mind and moral principle, make the man.

The best system of public hygiene should aim for the health, and to prevent or restore the disorders of each individual—education to remove “ignorance, prejudice and sophism”—the revealed truths of God and his providence over the world to reach and mould and sanctify the heart. These are public necessities for the true health of any people, and for the individual the best safeguard against the dangers of this mortal state. Life, with these truths recognized, is living and walking in a divine presence.

Life’s work is not a bubble to burst and be lost when the worker sleeps his last night, but a co-working in the grand results, before the day cometh.

“I see in part
That all, as in some work of art
Is toil, co-operant to an end.”—*Tennyson*.

ARTICLE V.

THE TREATMENT OF PUERPERAL CONVULSIONS.

BY W. LOCKWOOD BRADLEY, M.D., OF NEW HAVEN.

The occurrence of Puerperal Eclampsia is justly regarded as one of the most dangerous conditions to which the pregnant woman is liable; and in none does the practitioner more require the aid of settled principles of practice. No apology, therefore, seems necessary for a paper upon the treatment of Puerperal Convulsions. I am led to confine myself almost entirely to this department of the general subject, because the symptomatology of the disease is well known, and because our present knowledge regarding the etiology and pathology of the disease is vague and unsatisfactory. By the term puerperal convulsions is understood an affection especially characterized by a variable number of convulsive fits, and always accompanied by a complete suspension of intelligence. In order to show the kind of treatment which is most worthy of our confidence, it will be necessary to make slight references to the supposed causes and the pathology of the disease; also to direct attention to the opinions of various obstetric authorities and to statistics of results following particular methods of treatment.

The treatment of puerperal convulsions may be divided into the *preventive* and the *curative*; both must be founded on clinical facts and reduced to set rules for practice, but regulated by the peculiarities of each case.

The premonitory signs which precede an invasion of the disease are similar to those observed in Bright's disease of the kidney. They have been described by Dr. J. Hall Davis, of London (Trans. Lond. Obstet. Soc., vol. xi, p. 270), in the following language: "Dropsical effusions, especially in the form of œdema of the face and upper extremities, associated with albuminuria and deficient urea in the urine, accompanied, in some instances, by the

presence of cylindrical blood-clots, casts of the uriniferous tubes, with fatty epithelium." A knowledge of these signs is necessary to an early and successful adoption of *preventive* treatment; consequently, the urine of the pregnant woman should be examined chemically and microscopically, at least once in two weeks, during the last two months of pregnancy. This is especially important in primiparæ, in those in whom there is œdema of the face, or in whose urine albumen has been present or suspected, in a previous labor or at any other time.

Having detected the presence of these signs or of well-known premonitory symptoms, we must vary our treatment according to the constitution of the individual. Moderate exercise should be enjoined, but all mental excitement should be avoided. If the patient is strong and plethoric, we must seek to overcome any tendency to congestion of the nervous centres by giving an active saline carthartic, ordering an unstimulating diet, and, in rare cases, bleeding from the arm. If, on the contrary, the patient is anæmic and weak, a mild laxative and a nutritious diet should be ordered. In both sthenic and asthenic cases we are liable to have œdema and albuminuria. These conditions should be treated by cupping or counter-irritation over the renal region, and the production of free diaphoresis. In such cases, Prof. Wm. H. Byford, of Chicago (Treatise on Obstetrics, p. 444, 1870), considers the wine of colchicum an invaluable remedy, and advises its administration in as full doses as the patient can bear.

With rare exceptions, albuminuria, as a sign of renal disease in cases of puerperal eclampsia, disappears entirely in a few days, or at least within a month after delivery; for this reason, Prof. Carl Braun, of Vienna, and others, advise the induction or acceleration of labor in cases where the life of the woman is placed in imminent danger by the increasing gravity of the albuminuria, and the extent of the dropsical swellings accompanied, it may be, by functional troubles of the heart and lungs. Dr. Geo. T. Elliot, in his *Obstetric Clinic*, gives two cases in which this operation was performed at the seventh month of pregnancy. In both cases the urine was almost solidified by heat and nitric acid; one woman was universally dropsical, and the other was not; both were anæmic and very weak; both improved after the delivery of the child. In one case the child was still-born; in the other, it died three weeks after delivery. As in all elective operations, imperiling the life of the mother and the child, a decision should only be

made after deliberate consultation. In making such a decision, we shall be assisted by the same considerations which, further on, will be offered for and against the induction of labor, as a method of treating the actual occurrence of convulsions. The reality of the danger, and the success of the preventive treatment, has repeatedly been proved by the occurrence of cases in which the threatening symptoms, properly treated, disappeared, but afterward, at the onset of labor, reappeared and were followed by convulsions.

The *curative* treatment of puerperal convulsions should be introduced by the adoption of certain precautionary measures; injury to the tongue should be prevented by interposing between the teeth a piece of soft pine wood, cork, or other suitable substance; the clothing should be loosened to prevent any obstacle to free circulation and respiration; the room should have a full supply of fresh air, and the movements of the patient should, as far as possible, be unrestrained. After these precautionary measures, we should adopt such of the following methods of treatment as may seem best adapted to each case.

In order to remedy any possible irritation from the accumulation of excretions in the bowels, it is recommended that a powder of calomel and jalap should be administered; or, if the patient is unable to swallow, a drop or two of croton oil placed upon the tongue is preferable. To hasten the movement of the bowels, an enema, rendered purgative by an ounce and a half or two ounces of castor oil, may be given. If necessary, which it very rarely is, the bladder should be emptied by means of a catheter. Through fear of exciting a convulsive paroxysm, all unnecessary irritation of the skin or mucous passages should be avoided. For this reason, and because of their comparative inefficiency, the application of sinapisms to the feet, and of cold to the head, are rarely employed.

Passing now to the consideration of methods of treatment which are more or less debatable, we find that nearly all obstetric authorities are agreed as to the value of bleeding when employed *locally*. M. Cazeaux would confine its employment to cases where the convulsions have followed a profuse hemorrhage. Some value it because it acts as a counter-irritant, and, also, because the quantity of blood can be accurately measured.

Regarding the employment of *general* bleeding there is great diversity of opinion. We find the late Sir James Simpson, Dr. Barnes, Dr. Carl Braun and others expressing themselves unfav-

orable to its employment; on the contrary, Drs. Churchill, Cazeaux, Pajot, Tyler Smith, J. Hall Davis and others are favorable to general bleeding. Dr. Davis says (Trans. Lond. Obstet. Soc., vol. xi, p. 277): "We must resort to it freely among robust plethoric subjects. Generally, one full bleeding will suffice; rarely, when required to be repeated, is more than a second smaller bleeding called for." The opinion thus stated, is, I think, the one more generally adopted by the profession in this country and Great Britain. It is believed that bleeding relieves the circulation, lessens secondary congestion and prevents injury to the nervous centres, especially to the brain and spinal cord. If it does not immediately arrest the paroxysm, it relieves cerebral congestion, and thus shortens the period of unconsciousness which ordinarily follows the cessation of the convulsions.

It should, however, be remembered that convulsions may arise from, or be accompanied by, an anæmic condition of the brain and spinal cord; in fact, Elliot claims (Obstetric Clinic, p. 76) that a majority of the severe cases of eclampsia occur in patients who are anæmic, and whose subsequent histories display tendencies to hydræmia. Prof. Kussmaul, of the University of Heidelberg, and Dr. Tenner have investigated the nature and origin of epileptiform convulsions by numerous experiments upon the lower animals. While declaring (Publication New Sydenham Soc., London, 1859) that a strong flow of arterial blood into the head never produces, but rather arrests, the more frightful convulsions, they do not absolutely reject venesection; on the contrary, they say that "cases but too frequently happen where a rapid abstraction of blood, especially from the external jugular vein, becomes imperative, in order to relieve the brain from congestion of venous blood with which it is surcharged, to facilitate the access of arterial blood, and to arrest an attack of apoplexy."

When, therefore, bleeding is absolutely indicated, we should guard ourselves against carrying it beyond what the case requires; at the same time remembering that, if blood-letting be timidly employed or too long delayed, the nervous centres may suffer serious injury. Of thirty-one cases reported by Dr. J. Hall Davis, eighteen were treated by blood-letting with a result of only two deaths, and one of these was by apoplexy. When venesection is to be performed, the patient should be placed in a sitting posture and the blood should be allowed to flow in a full stream, until syncope is apprehended. If the patient is feeble, and the pulse

weak and quick, we must place our reliance upon other remedies. Prof. T. Gaillard Thomas of New York, at one of his recent lectures, related a case, seen by him in consultation, where an attempt was made to diminish the flow of blood to the head by passing a bandage around the leg; the patient had previously been bled as much as seemed advisable.

In the year 1848, Dr. Richet of France first employed chloroform with success in the treatment of puerperal convulsions; in the same year, Simpson of Edinburgh experimented with it, and, at the present time its utility, at least in a large proportion of cases, is well established. It has been claimed that the necessity for bleeding will be diminished in proportion to the frequency of the administration of chloroform at an early period of the attack. On the other hand, the advocates for blood-letting, who employ chloroform as an adjuvant, argue that, in the majority of cases, the patient is not seen until several convulsions have occurred, and that frequently pulmonary congestion (indicated by lividity of face and quickened respiration) must be relieved by blood-letting before chloroform can be safely administered. The employment of chloroform will be successful for the amelioration or prevention of the convulsive paroxysms in proportion as its inhalation is commenced at an early stage of the disease. Dr. Carl Braun (*The Uræmic Convulsions of Pregnancy, Parturition and Child-bed*) reports sixteen cases treated by chloroform, all of which recovered. This is a degree of success which is certainly unparalleled, and the repetition of, which can scarcely be expected; for this reason, the recommendation made by him as to the manner of administering chloroform is especially worthy of remembrance; he says that, if chloroform be not administered in time to cut short a paroxysm, as much atmospheric air as possible should be allowed to enter the lungs during the convulsive attack and the coma immediately succeeding. Under such circumstances, the respiration and the circulation are very much impeded, and we can understand how the administration of an anæsthetic would be apt to increase the difficulty to a dangerous degree. As soon, however, as the respiration becomes easy, the inhalation of chloroform should be commenced and carried to the production of complete narcosis; nothing short of this will completely arrest the convulsive manifestations. It is impossible to lay down any rule regarding the proper duration and intensity of the anæsthetic sleep. In severe cases, where the paroxysms tend to increase in force and frequency,

it should be continued for three or four hours, then suspended for a time, only to be recommenced, if convulsions are threatened. By a judicious interruption in its employment, it can be continued for twenty-four hours or longer. In certain cases bleeding is inadmissible or insufficient, and chloroform faithfully administered either does not prevent the recurrence of the convulsions, or its use is counter-indicated on principles which govern its general employment. Dr. Elliot (*op. cit.*) reports a case in which he was obliged to suspend its use, because the breathing suddenly stopped and the pulse ran down in a most alarming way. In such cases other remedies have been employed as adjuvants or substitutes.

During the past three years a few cases have been reported in the journals showing successful results from the employment of the hydrate of chloral. The bromide of potassium has been given in doses of a half to four drachms, both before and after delivery, and, in mild cases, with good results. The late Dr. N. B. Ives of New Haven was accustomed, in his treatment of convulsions after delivery, to rely upon the administration by enema of one drachm of tincture of stramonium; and his practice has been endorsed by the experience of other practitioners in the same place. When the attack is somewhat subsiding, it has been recommended by the highest authorities to give an opiate. Dr. Collins of Dublin would restrict its employment to cases where the paroxysms continue after delivery. Believing that opium increases cerebral congestion, Tyler Smith and Cazeaux, in common with the majority of French accoucheurs, are opposed to its employment, except in cases of anæmia or where a large amount of blood has been lost. When the administration of opium is indicated, it should be given in doses sufficient to produce a positive soporific effect.

Sometimes the comatose condition of the patient, or the rapid succession of paroxysms, prevents the administration by the mouth of opium or other remedies. These obstacles to medication are overcome by the hypodermic injection of a solution of morphia. Unlike opium, it does not produce cerebral congestion; and, as in the case of one full bleeding, we gain an additional advantage from the rapidity of its action. Since this method of treatment is comparatively new, and is not even mentioned in the leading text-books, I will give several illustrative cases.

In the year 1860, Prof. Scanzoni, of Wurtzburg, Germany, reported a case which he had successfully treated by this method: His patient, aged 21, a primipara, strong and robust, was seized

with puerperal convulsions at the commencement of labor. Four attacks occurred in two hours and three-quarters; she was then bled to about eight ounces, an enema of twenty-five drops of laudanum was given, the body was put in a warm bath, while cold irrigation was applied to the head. As opium could not be administered by the mouth, a solution of the meconate of morphia was, at three different times, injected under the skin, the whole quantity given being equivalent to ten grains of opium. Two hours after she had another attack and again one in six hours, after which there was no recurrence of the paroxysms for sixteen hours. Toward the end of this time she was delivered of a living child by means of the forceps; she then had a slight and short convulsion, after which they did not recur, and she made a good recovery.

Dr. Bossi of Germany (*Spitals Zeitung*, 1862) reports four cases treated by this method at the Lying-in Hospital at Grätz, Austria; two died and two recovered.

During the past year, three cases, in which this remedy was successfully employed, have been reported to the New Haven Medical Association. In the first case, the patient, aged twenty-two, a primipara, with feeble pulse, was delivered of a stillborn child at the seventh month of pregnancy; she was then taken with convulsions, which continued to recur with undiminished force and frequency until fourteen paroxysms had occurred, notwithstanding the administration of full doses of bromide of potassium, hydrate of chloral and chloroform by inhalation. Dr. F. L. Dibble then injected hypodermically about one sixth of a grain of morphia, after which the convulsions ceased;* in the second case, the injection was made by Dr. S. G. Hubbard; and in the third case by myself. To show what may be expected from this remedy, even in cases where all other treatment has failed, I will give a condensed statement of the last mentioned case.

The patient was aged eighteen, married, a primipara, strong and robust, with slight œdema of the face and hands, and the urine albuminous. Having arrived at the full term of pregnancy, she was seized in the night with vomiting, and, at about eight o'clock the next morning, I found her in a state of unconsciousness. As she was unable to swallow, a purgative enema was ordered. Three hours after she had her first convulsion. The following methods of treatment were practiced in the order mentioned: Bromide of

* One slight convulsion followed the injection, after which she went into a peaceful slumber, from which she did not awake for eight hours, and then made a good recovery.

potassium in dose of a half drachm, chloroform by inhalation, bleeding from the arm about half a pint; a powder of calomel and jalap was with great difficulty administered by the mouth. At five o'clock in the afternoon, the treatment pursued was seen to be ineffectual, and the convulsions, then twelve in number, were increasing in force and frequency; it was therefore determined to hasten delivery. In the course of an hour, the os was sufficiently dilated to admit of the application of forceps, and a stillborn child was delivered. During the two hours occupied in manual dilatation, the delivery of the child and the after-birth, she was kept under the influence of chloroform, and there was no convulsion; but, as soon as the womb was evacuated, she had two convulsions, one occurring soon after the other. During the following six hours she had six convulsions, making twenty in all, and this notwithstanding the administration of chloroform. She was then bled about a pint, and, as she then had two more convulsions, a sixth of a grain of sulphate of morphia in solution was injected hypodermically; she immediately became quiet, slept for three hours, had no more convulsions, and made a rapid recovery.

Of the eight cases which I have collected as having been treated by the hypodermic injection of a solution of morphia, six resulted in recovery. In one of the cases the injection was made before and in three other cases after delivery. In the remaining four the time of injection was not stated.

In two cases reported in the *London Lancet* (May 29, 1869, p. 747) the convulsions came on after delivery, and were arrested almost instantaneously by an injection hypodermically of two minims of Fleming's tincture of aconite and one-third of a grain of acetate of morphia. In both cases the patient made a rapid recovery.

As the result of clinical observation, some obstetric authorities claim that opium and other narcotics have an effect to retard labor; for this reason, those who believe that the condition of pregnancy is the first cause of the convulsions, and therefore, that its early termination is desirable, think that such remedies should not be employed until after delivery has been completed.

When, notwithstanding the employment of the methods before spoken of, the convulsions continue and increase in violence, we are brought to consider what other treatment is necessary.

The great majority of practitioners are, in a general way, favorable to an evacuation of the uterus. They say that the principal cause of eclampsia is to be sought for in a general alteration of the economy, that this alteration is due to renal congestion, which, in

turn, is caused by "the weight and pressure of the gravid uterus upon the kidneys and venous circulation, interfering with the free return of venous blood from that organ." In substantiation of this view, they claim that the convulsions usually occur in the latter part of pregnancy, when the weight and pressure is greatest; and more frequently in primiparæ, with whom the pressure of the uterus is especially great on account of the unimpaired tonicity of the abdominal walls. To this theory it has been objected, that cases have occurred where the abdomen was largely distended by a fibrous tumour of the uterus, and yet no albuminuria has resulted. In reply, it may be said, that the growth, in the case supposed, is more gradual, and, therefore, that the tonicity of the abdominal walls is more readily overcome. That the evacuation of the uterus relieves renal congestion, is also inferred from a fact already stated, namely, that the albuminuria usually entirely disappears in a few days or at most a month after delivery. This belief is based not only on theoretical grounds, but also upon the results of clinical observation. According to Prof. Carl Braun (op. cit.), the completion of labor causes an amelioration of the convulsions in thirty-one per cent. of the cases, their cessation in thirty-seven per cent., while in only thirty-two per cent. do they continue unchanged. It is claimed that the last mentioned percentage will be further reduced by the earlier adoption of measures to accelerate delivery. M. Cazeaux (Treatise on Midwifery, 1855, Am. edition, p. 746) says, "in no case in which eclampsia had existed a long time before we were called to the patient, have we found the termination of labor to put an end to the symptoms, and very rarely did it ever lessen their intensity."

Allowing, then, that there is a presumption in favor of evacuating the uterus, or, as M. Cazeaux expresses it—"in a general way, regarding the termination of labor as a favorable condition," we are led to consider the following questions. The cervix being dilated or dilatable, ought delivery to be accelerated? or, supposing it to be neither dilated nor dilatable, what measures should be adopted?

In all cases of convulsions, even where we have no evidence that labor has commenced, a vaginal examination should be made, for cases have occurred where it was supposed the labor had not commenced, and yet the practitioner, on his first examination, has found the first stage of labor completed; or in still other cases, has discovered the child lying dead outside the vulva.

Supposing that the cervix is dilated or dilatable, ought delivery to be accelerated? If the convulsive attacks are mild and are separated by long intervals, accompanied by a return of consciousness; if the dilatation is complete and the head of the child has descended deeply into the excavation; if the uterus contracts powerfully and the perineum is yielding, it is proper to wait for a natural delivery. If, on the other hand, the same conditions are present, but the uterine contractions are weak and the convulsions are increasing in force and frequency, it is better that the delivery should be accelerated by means of the forceps. Should this be an impossibility, because of the smallness of the pelvis or the large size of the child's head, we may practice turning or even craniotomy. Breech presentations are to be advanced in the usual way by manual aid, followed by a prompt application of forceps.

In all the operations just spoken of, and in those to be mentioned hereafter, chloroform should be employed. It is useful in relaxing the tissues and also as a remedy for the eclampsia. By its aid we are enabled to safely practice manual dilatation in cases where the cervix is yielding, but not fully dilated, and also with safety to adopt early instrumental interference. Dr. Cappie of Edinburgh (*Edinburgh Med. Jour.*, Oct., 1868) has published three cases illustrating the truthfulness of this statement. He says, "in not one of the cases was either the frequency or the severity of the paroxysms in the least affected by the attempts to dilate the os with the finger, or by the still more severe process of dragging the head against its inner surface, and, at the same time, pushing back its edges with some degree of force." Prof. Brickell, of the New Orleans School of Medicine, writing on this subject (*New Orleans Journal of Medicine*, Jan., 1868), says "I have performed manual dilatation again and again, and have never seen the least evil result."

Again, supposing that the cervix is not dilated, and that we have tried manual dilatation without success, and that the convulsions continue, notwithstanding the remedial treatment, what further measures should be adopted? Under the circumstances suggested, cases have occurred where the escape of the amniotic water has diminished the force and frequency of the convulsions; for this reason, M. Cazeaux, Tyler Smith, J. Hall Davis, and others, advise the rupture of the membranes in cases where it is believed the womb is abnormally distended; "otherwise," says Davis (*Trans. Lond. Obstet. Soc.*, vol. xi, p. 280), rupture of the mem-

branes should be avoided as a first measure, as being calculated to interfere with the easy progress of labor, and certainly to render turning more difficult, should it become necessary." If it is decided not to rupture the membranes, or if the escape of the water has not alleviated the convulsions, M. Cazeaux (*Treatise on Midwifery*, p. 746) would recommend a forced delivery, provided the uterine contractions are naturally present, or have been developed prematurely or spontaneously, under the influence of the general convulsions; but if the womb is inert, he is opposed to the operation on the ground "that the time required for the abortive (or premature) measures to act, and for the expulsion of the product of conception, exceeds by far the ordinary duration of eclampsia, and the woman would be either dead or cured before the influence could be felt." Since M. Cazeaux wrote, nearly seventeen years have elapsed, and the objection which he offered has lost nearly all its weight, for, by means of Barnes' dilator, we are allowed to anticipate a very rapid dilatation of the cervix within a few hours. Dr. Robert Barnes, of London, after whom the dilator was named, says (*Lectures on Obstetric Operations*, Lond., 1871, p. 373): "By its (the dilator's) aid it is very possible, in many cases, to expand the cervix sufficiently to admit of delivery within an hour, although generally it is necessary to expend more time. I have completed delivery in five hours, in four hours, and even in one hour from the commencement of any proceeding. In many cases of placenta prævia, when there was scarcely any cervical dilatation, I have effected full dilatation in half an hour." Dr. J. Hall Davis (*Trans. Lond. Obstet. Soc.*, vol. xi, p. 280), writing fourteen years later than Cazeaux, expresses the opinion that, under the circumstances now being considered, parturition should be induced and furthered by means of Barnes' dilator; and he gives a case in which, by this method, he induced labor at the sixth and a half months of pregnancy. In the course of twelve hours the labor was completed, and the patient quickly recovered her former state of health. Dr. Geo. T. Elliot, of New York, writing a year earlier than Davis, says in his *Obstetric Clinic* (p. 39) that "when the fœtus is not viable, we must wait until the mother's life is actually endangered by successive attacks of eclampsia." In the same book, but entirely disconnected with the opinion just quoted, he has published two cases in which labor was induced between the sixth and seventh months of pregnancy. In neither case did the patient recover.

Scattered through the same publication, I have found ten other cases, in which labor was induced between the seventh month and the full term of pregnancy. In thirty-three per cent. of these cases the patient recovered. If the Barnes' dilator, which was used in only four out of ten instances, had been employed in a larger proportion of the cases, the result would probably have been more favorable. Taking the percentage of successful cases as it stands, I think it justifies the induction of labor as a last resort in cases where the life of the woman is greatly imperilled by the occurrence of puerperal eclampsia. It is true that Prof. Hodge, of Philadelphia (*The Principles and Practice of Obstetrics*, Phil., 1864), informs us that he "has had many cases where the mother has been preserved and the infant born alive some days or months after severe and continued convulsions;" but it is equally true that many women have died undelivered. If a fatal termination has followed procrastination in inducing labor, it has also resulted from over haste or want of precaution in the mode of proceeding. In a word, there is no common rule; but we must be guided in each case by a careful consideration of the circumstances. If labor is to be induced, Dr. Barnes advises that it be done slowly and deliberately, and by a method involving the least manual or other operative interference. Such a mode of procedure is described by him (*op. cit.*) in the following language: "It is better to puncture the membranes. This at once lessens the bulk of the uterus, and diminishes the pressure upon the abdominal vessels. If the convulsions remit, we may leave the labor to nature. If urgent symptoms persist, we may dilate the cervix carefully by the cervical dilators."

The evacuation of the uterus may be accelerated by forceps, by turning, or even by craniotomy. Elliot (*op. cit.*, p. 55) gives a case in which the os was so rigid that he was unable to dilate it by means of Barnes' dilator and the warm douche further than to admit the points of three fingers, and was obliged to perform craniotomy; the patient recovered. In a second case (*op. cit.*, p. 125) the child was dead, and he performed the operation to give a slight chance of life to the mother. Dr. Churchill, of Dublin (*Theory and Practice of Midwifery*, Lond., 1860, p. 505), reported a case in which he felt that the patient would probably die before the completion of labor naturally, and he therefore perforated and extracted the child, and the patient recovered, after an insensibility lasting nearly three days. Prof. Hodge (*op. cit.*, p. 448) believes that perforation should be "restricted to cases of

deformity of the pelvis, or of the child, and, perhaps, to a few instances where the child is dead.”

Incision of the cervix may be required in certain cases where there is rigidity from alteration of the tissue, as œdema, hypertrophy, and cicatrix. M. Cazeaux would limit their employment to cases where the internal orifice and upper part of the cervix have been dilated either by the progress of gestation or premature contraction.

After delivery, the accoucheur should take special pains to assure himself that the womb is well contracted, and that it contains no coagula, or portions of the membrane or placenta. Finally, in anticipation of returning consciousness, the room should be darkened, and perfect rest should be enjoined. This is especially important, because the cessation of the convulsions is peculiarly liable to be followed by mania, pulmonary congestion, and various forms of pelvic and abdominal inflammation.

It will, perhaps, be noticed that in the course of my paper I have not referred to the child, and for this reason: Knowing that half the children born during or after puerperal convulsions are dead, I believe that there will be a better chance for the life of the child the sooner it is removed from the influence of uræmic poisoning, or the convulsive action of the uterus; but I am also of the opinion that, when the life of the mother is in such imminent danger, considerations for the child should not be allowed to influence our treatment.

In concluding this paper, I would say that I have endeavored to give a comprehensive statement of the treatment which, at the present time, experience has proved most efficient in puerperal convulsions. When narcotics were the best remedies in the possession of the practitioner, the mortality was at least fifty per cent. Since the introduction of free bleeding, chloroform, and other remedies, the mortality has gradually diminished, and in 1863 was estimated by Prof. Hodge (*op. cit.*) to be twenty-five per cent. In the year 1870, Dr. J. Hall Davis, of London (*op. cit.*), published thirty-five cases of puerperal eclampsia, which showed a mortality of only one in eleven. What we need at the present time is not so much the introduction of new remedies as a better understanding of the principles which should govern us in the proper employment of those now in our possession. When these principles are more fully elucidated and judiciously carried out, we may hope for even more favorable results both for the mother and the child.

ARTICLE VI.

HALLUCINATIONS OF CHILDHOOD.

Being the Annual Dissertation read before the Convention, May 23, 1872.

BY H. M. KNIGHT, M.D., OF LAKEVILLE.

I propose to speak of the hallucinations of childhood, as presented in various forms, and which arise from various causes.

I shall not confine myself to the one more general train of phenomena described under the term insanity, but hope to present, briefly, different manifestations of perverted or deranged mentality occurring in early life.

I question the correctness of the statement that the insanity of the savage, and that of children, is necessarily idiocy.

Certain forms of insanity, of course, cannot occur until after development of the moral faculties; but I can see no reason why sensorial insanity may not exist in children, even in young children, as well as adults.

All the definitions of insanity appear to be based upon a change from the normal standard of the individual, whatever the health standard of the individual may have been; that is, functions are perverted, the senses receive impressions which differ from those received in health, judgment and memory are impaired or lost, the will for the time being is subjected to the sway of the passions, etc., etc., and all definitions go on to explain, more or less minutely, the change from health to the condition denominated insanity.

Idiocy is defined to be "the result of an infirmity of the body which prevents the development of the physical, moral, and intellectual powers." An eminent writer has said, "the type of an idiot is one who knows nothing, can do nothing, and wishes nothing; and every idiot approaches more or less to this maximum of incapacity."

"Monomania is a fixed idea predominating over every faculty of the mind, absorbing all other ideas, and generally influencing the actions of the body."

“Hallucination is a false impression made on the sensorial apparatus, often very slightly interfering with the intellectual powers, and unaccompanied by irresistible impulse.”

I use this latter term to embrace, for my purpose in this paper, all those changes or perversions from the health standard to well marked insanity on the one hand, or pronounced idiocy on the other.

Defects of the mind are as numerous as are defects of the physical system, and are capable of many subdivisions. We have been too content, hitherto, with general conclusions. If a mental deficiency has declared itself in a young child, we have classed the subject of it, without much study or thought, as an imbecile or an idiot; and possibly have too often considered an irregularity or a perversion to be a deficiency. I recognise the difficulty of defining conditions satisfactorily, and especially the poverty of a definition as applied to a psychical or physiological state; but if I may in any degree awaken inquiry, and stimulate careful and philosophic thought, upon the varied abnormal mental conditions of childhood, the object of this paper will have been accomplished. It has seemed to me (whether justly or not, I cannot say) that the medical profession generally, trusting on the one hand to the acknowledged skill and province of our specialists in insanity, and on the other magnifying the Chinese wall of defined distinction between insanity and idiocy, has concerned itself too little in regard to certain mental phenomena presented in early life, which are seldom brought to the notice of other than the family physician. Indeed, we have been taught that insanity does not occur in early childhood, and that any mental perversion or obliquity tended directly and alone toward idiocy. An old writer has said that, as a rule, insanity cannot occur before puberty; because, previously, the intellectual faculties are not developed, or have not acquired strength to exercise perfect functions, and that instances, if found, are exceptions, and like remarkable examples of precocity of physical and mental powers, which we sometimes see as exceptions to a general law of nature.

Cabanis, and others, assumed that the presence or influence of the seminal secretion is necessary before the brain and nervous system is susceptible of insane excitement. It is natural to suppose that, resting upon such teachings, we may have adopted too thoroughly that theory, and by our inaction permitted a condition to occur which, by timely precaution and care, had the case been properly studied and understood, might have been prevented.

Many children possess a feeble physical system, with feeble mental powers, or it may be a feeble frame with precocious mentality; highly nervous, sensitive, excitable, with a strong tendency toward mental derangement. Now, if we repose upon the conclusion that insanity, however slight or partial, is foreign to childhood, and that no mental derangement can exist without it is imbecility or oncoming idiocy, we lose the only opportunity, by inaction, which can occur in the child's life to prevent that sad result.

Doubtless, many of the severe derangements of the nervous system in childhood tend to the production of imbecility, idiocy, or dementia, or of diseases which, if permitted to run an unchecked course, lead into them; but, if exception is taken to the statement that hallucinations occur in childhood which do not alone point toward idiocy, we have only to refer to the epidemic mental diseases of the 13th century,—to the prevalence in an epidemic form of St. Vitus's dance at a later day, and to the influence which a belief in witchcraft exerted upon childhood, both in Europe and America. It must be remembered that I do not use the term hallucination either as essentially a symptom of confirmed or general insanity, or as the term is conventionally understood.

Boismont divides the physical causes of hallucination into three sections: "hereditary diathesis, sex and climate, and temperament." He says that "hereditary tendency may probably depend on nervous or vascular influence." He has seen it as early as the seventh year.

It is recorded that among the Cevennes and in the predicants of Sweden, insane children of five years were discovered.

Esquirol, Haslam, and others, have related cases of insanity in young children.

Dr. Marc, physician to Louis Philippe, tells of "a young girl, aged eight years, who openly avowed her intention to kill her mother, father, and grandmother. Two motives seemed to influence her in this resolution, the desire to *possess their property*, and to amuse herself with little boys and men. She was morose, taciturn, and answered very laconically to any questions addressed to her. In the country she abandoned herself early to solitary vice, without her health appearing to suffer, but on her return to the town she began to fall away rapidly. *Boismont has observed

* Journal Psychological Medicine.

three cases, aged respectively seven years, six, and ten. The first, a girl, was an intelligent and pretty child. Her mother was under treatment for a mental affection. This child was capricious, violent at times, and subject to fearful fits of passion, when she would break or destroy everything within her reach. She also became subject to attacks of ecstasy, when her features would assume a seraphic expression, and her eyes remain fixed upon the sky; she would cry with a voice vibrating with emotion, "I see the angels; they are coming to me." After the attack passed, she would gradually become tranquil, and answer questions rationally.

The child aged six years was a boy. He would endure no control if possible to avoid it, and became furiously enraged if control was attempted. He was constantly escaping, and never found until some mischief had been accomplished.

When taken to the hospital, it was thought necessary to apply mechanical restraint, and when he found himself powerless, he threatened those about him in a most extraordinary manner: "As soon as I am at liberty I will set fire to the house, and if I can find a pointed knife I will stab you to the heart; I should rejoice to see your blood flow, and to kill you."

The third case which this author describes had "a lively, bold, intelligent aspect. Good memory, learned easily, and exhibited only a shocking disposition. Would pinch, bite, strike, and in various ways abuse all who came within his power. Would lie, steal, and obey no orders. Threatened to kill his mother. I now quote the language of this author: "When the boy was in our presence he seemed at first a little abashed; and spoke only in monosyllables. But, speaking to him with precaution, and attributing his misdeeds to his malady, he became more communicative, and answered our questions. He avowed quietly all that he had done; he said, "I have no pleasure except in doing mischief. I should like to shed your blood. When I pushed my mother it was to throw her down." On different occasions he manifested a desire to stab her with a knife to kill her. It is naturally, and without anger, that he does wrong. He knows well that it is wrong, but he feels no regret; he gives a blow as another child would give a piece of bread to a beggar. He spoke to us without reserve. One would have thought that the conversation was upon the most indifferent matter; the eyes had no particular expression. He retains the remembrance of what he supposes to be an injury,

or of an unpremeditative wrong, and avenges it upon the first opportunity.

These three cases establish clearly the fact that mental derangement may occur in childhood; but they constitute rather perversion of instinct, of sentiment, and of moral faculties, than well defined types of mania or monomania. This tendency, moreover, is in relation with the psychological dispositions of this period of life."

But mania, distinct and well defined, may exist in children. Dr. Bucknill reports the case of a lad of twelve years of age who attempted suicide by drowning and by strangulation. He tried to suffocate himself by pressing his fist against his throat, and struck his head against the wall.

Hot baths, and medicines to procure sleep were administered, and in 48 hours he was quiet. Three days after, when the medicines were discontinued, the symptoms returned with all the first violence, but yielded completely to treatment.*

It is usually supposed that hallucination occurring in the adult is evidence of some cerebral lesion; but this need not be received as uniform, at least in the young person. The changes accompanying development in the young brain cause certain great changes in the circulation.

There are children in whom the evidence is plain that the abnormal condition is directly attributable to the vitiated constitution of the nervous element of the child. This taint is hereditary. An acquired or accidental irregularity of the parent may present in the offspring a natural predisposition to irregular or perverse acts. I knew, ten or more years ago, in this State a young man whose walk was that of a staggering drunken man. As he was an imbecile mentally, and we were at that time taking a census of idiots and feeble-minded ones in Connecticut, questions in regard to the *cause* were proper. The mother, in reply to direct questioning, stated that conception took place when the father was partially intoxicated. She saw her husband coming reeling home, and was afraid of him, but was obliged to submit to his somewhat furiously amorous attentions. The condition of the child was undoubtedly the result of the condition of the father at that time. Reasoning by simple analogy, this very marked case will help to explain the cause, or some of the causes, of moral insanity in childhood.

* Greeding tells of an infant born mad, and describes the interesting wonder at some length.

We must refer, in many cases of deranged mentality, to causes which operated before the birth of the child. There are instances of youthful insanity not the result of inheritance, and other instances which are undoubtedly attributable to inheritance alone. It is believed that imbecility and idiocy are more frequently inherited than other forms of derangement. If fright, grief, anxiety of the mother during pregnancy, may cause such cerebral disturbance as shall produce death of the fœtus, or fœtal hydrocephalus, &c., why is it difficult to believe that thought, emotion, passion of the mother, may exert an influence upon the intra-uterine child, from the moment of conception, moulding in a greater or less degree the bias of its future mind. Hereditary tendencies and transmissions have been demonstrated a thousand times.

Dr. Goëlis states that "multiplied experience of the influence of terror and anxiety in the mother during the latter period of pregnancy was afforded me and the other physicians of Vienna in the year 1809, when our imperial city was bombarded. Most of the children who were born after this frightful catastrophe, in about ten, twenty, or thirty days after their birth, were seized with convulsions and died. Within the cranium were found traces of inflammation, and in the ventricles of the brain effusions of lymph and serum."

Maudsly, in an article on hereditary influence, says, "Every effect or defect in the parent must be subject to the fixed laws of individual production, whatever they are; and in considering the nature of any defect or effect in the offspring, we may accept with certainty the proposition of Polonius, that the effect defective comes by cause." "How shall a man," asks Emerson, "escape from his ancestors, or draw off from his veins the black drop which he drew from his father's or his mother's life?"

We have all met, I suppose, with instances where the mental disturbance of a nursing mother has contaminated or poisoned her milk, so that offering her breast to the child has caused convulsions and death. I attended, not long since, a lady who had a good confinement, and gave birth to a large, well formed, healthy child. The infant grew well, and continued healthy. During a period of suffering and mental excitement, the mother nursed her baby, which was soon seized with convulsions, and after about twenty hours of alternate spasms and coma died. In this instance, had the child lived, who shall determine what would have been its mental condition? Several possible conditions arise

before the mind. Perhaps health, or otherwise, epileptic insanity, imbecility, profound idiocy, the exaltation and eccentricity which results from hyperæmia of the nervous centers, or degradation and degeneration of the nervous tissues, with its legitimate following of feebleness, and contradictions in character.

There is a form of mental exaltation or ecstasy occurring in children, of which I have seen several cases. I shall mention two. I refer to phenomena not occurring in a diseased condition, except that the ideal centers were in a morbidly active state, but the children were of a highly nervous temperament; excitable children.

It is said that one of the most famous musicians was in the habit of composing without the aid of an instrument; or else he used one which gave forth no tones. We meet men so occupied with one idea for a time, as to be oblivious to all that is passing around them. I think there is some analogy between the absorbing inspiration of the musician, or the wholly engrossed pre-occupation of the man of business, and the state of the children of whom I am speaking. A precocious girl of $3\frac{1}{2}$ or 4 years of age whom I knew, had a most wonderful memory, and an exceedingly vivid imagination. She would at this age repeat long poems that had been read to her, and would also construct and relate a romance sufficiently entertaining and connected to be interesting to listeners; but could neither repeat from memory, nor entertain by her romantic imagination, without the aid of an automatic movement. When asked to recite a poem, or tell a story, if inclined to comply with the request, she would call for her *shakalo*, or something to shake. Coming from a healthy stock, being wisely guided through childhood, her mental precocity properly repressed and her physical system carefully and thoroughly developed, she is to-day a young lady of more than ordinary culture and acquirements.

Another child, 7 years of age, under my care, with a well formed head, and a bright, beautiful eye; with a strong frame, splendidly proportioned and developed, of healthy parentage, without disease in infancy—having, in fact, never known a sick day, is frequently subject to ecstasy or hallucination. In many respects she is far behind ordinary children of her age, having slowly and imperfectly acquired speech; but in music she is far in advance of most children, and a picture will engage her wrapt attention for a long time. Music once heard is sooner or later

repeated in songs without words, and during the progress of the singing the outer world is closed to the child. But some regular rhythmic motion is the invariable accompaniment if it is permitted, and the forcible arrest of the motion is sufficient to arouse from the trance.

These cases afford proof that the motor centers are involved when the ideal centers are morbidly active.

“M. Delasiauve brought this subject under the notice of the *Société Médico-psychologique*, February, 1856. This affection M. Delasiauve described as having for its fundamental character a disturbance of the intellectual faculties, manifested more or less confusion of idea, but was always complicated with ecstatic phenomena, the paroxysms of which varied in duration, and in some cases returned at short intervals. The patients remained several hours of the day as if wrapt in a sort of mystical contemplation. Often the attention was fixedly directed to one spot, from which not even the most vivid impressions could arouse them. In other cases the attention was alternately directed to different points. The limbs and body were placed in the most grotesque attitudes and positions; sometimes the head was bent in forced directions, sometimes the arms and legs remained elevated and extended. In some of these cases there was seen slow and measured jactitation, after the fashion of Punchinollo. Of the eight or nine cases seen by M. Delasiauve almost all were cured within a limited period, in some cases with relapse.

Bathing, sulphate of quinine, and attention to hygiene, were followed by successful results.

Although these cases were important, they did not, in the opinion of M. Delasiauve, deserve a special nomenclature as a new form of mental disease. The phenomena of these cases do not belong to mania, nor specially to early age. They are met with in those forms of partial insanity attended with convulsions, such as catalepsy and epilepsy. The ecstatic state corresponds to a slight degree of cerebral erethism, whereby the intellect, acting through volition, is subordinated to the automatic organic system. Hence, if this view be correct, ecstasy may take place whenever from moral or physical causes the normal activity of the nervous centers is increased, and favors the production of spasm. The preference of these attacks shown toward early age may be explained by the greater impressionability of that time of life.”*

* Psychological Journal.

One of the most formidable diseases of childhood is epilepsy. Infants just born have been convulsed with it. Mothers state that at a certain time during gestation the fœtus was convulsed or very turbulent, and the evidence of the mother is sometimes confirmed by the paralysis of the infant.

The disease, epilepsy, is usually presented to our notice only after full and well marked fits have occurred. But there are very many instances of masked epilepsy in children, who develop the instincts, emotions, blind rage and terrible fears which we see in the adult epileptic, and which arise from the same cause. We have been taught the doctrine of masked epilepsy, and in 1860 Morel clearly formalised the disease. According to him, and others, epilepsy is present, undeveloped, unmanifested, but producing as much disturbance and injury to the patient as when accompanied by the fit. The symptoms of this form of disease in children are similar to those described by Morel in adults, only that I think with the young we ought to be on our guard, in all cases of reported eccentricity of manner, or unaccountable conduct, and in many instances diagnose the disease before it has advanced to the possibility of a full and lucid description.

* His description, according to Browne, is as follows: "Periodical excitement, followed by prostration and stupor; excessive and motiveless irascibility; the perpetration of aggressive acts having the character of sudden and irresistible impulses; exaltation of sensibility; alternations of delirium and cerebral excitement; exaggerated ideas of strength, riches, beauty, intelligence; fear-inspiring hallucinations; associations of erratic tendencies with religious sentiments; sensation of a luminous atmosphere; frightful dreams; nightmare, gradual weakening of the mind, and above all of the memory; loss of recollection of what was done during the paroxysm; the re-appearance of the same delirium during each periodical return of the morbid phenomena; and, lastly, the violence and duration of the delirium being proportioned to the duration of the remission." In the case of a young child all of the above symptoms, well marked, cannot be found; but there is a striking similarity between his full description, and what I have often seen; and I am sure that I have observed a few instances, in extreme youth, where the disease was plainly marked as described above, and in several have been able to watch the little patients through a period of years, and have seen some go down, until

* Epileptics: their mental condition, *Journal Mental Science*, 1865.

convulsions were severe and frequent, and have seen others emerge from their sad condition. I have some children now under my charge, epileptics, who as often have paroxysms of irresponsible fury, without convulsions, as they have fits without the fury.

A. B., now a young woman of — years, was a very affectionate and beautiful child. It is unknown to me whether convulsions had supervened before any of the strange, unaccountable, violent conduct which marked her character as a child began; but certainly the two conditions were not connected in the minds of parents or medical attendants. Of a kindly disposition, affectionate, fond of caressing and of being caressed, she would sometimes, while in the act of kissing with all the animation of a happy child, be seized with an impulse to pinch or bite, or strike instead. As years advanced, the strange contradictions of character increased in intensity. She received considerable education, and thoroughly understood moral obligations and duties, and was desirous to hold herself amenable to them. This girl, since she came under my observation, has been a decided epileptic, and has at times periods of insanity, and at others convulsions, unaccompanied either before or after by mania.

D. has been under my care for six years. He was not reported as an epileptic, and I do not certainly know that he has had a fit; but my assistants have reported two or three instances when D. very evidently was arrested by an epileptoria, or a “cerebral surprise.” He came to us with a reputation of being an ugly, ungovernable, uncontrollable boy. By reference to the institution records, I find these words used by the person who brought him: “He is vicious and ugly, fond of mischief, and caring nothing for consequences.” He did not come from a family of sufficient intelligence to gain a clear and satisfactory description of his early life. I learned very little about the boy before his admission to our school. He is usually mild, obedient, and glad to be useful in all ways within his power. But periods recur when his eye glistens, his lips quiver when spoken to, as with suppressed excitement, his motions are sudden and rapid, and, unless closely watched and restrained, he embraces the first opportunity to *run*. And he does run, with the fleetness of a deer. Instead of the blind, unthinking heedlessness of a common epileptic seizure, he preserves a sort of method. He runs for a certain goal. He needs about 6 or 7 miles to work off the paroxysm, and then subsides into the quiet, tired boy, is ready to come home, and can give no reason

why he ran away. At the suggestion of a brother superintendent, I have given this lad a brisk cathartic, when the condition was evidently approaching, with good effect. It doubtless exercised a double influence, reducing any slight cerebral congestion, and giving him *something to think about*. In this latter influence, the compound cathartic pill proved itself a *moral means*.

Many young epileptics may be kept from a fit by a moral force. The eccentric or insane impulses may be suppressed by being antagonized.

There is probably little danger that an epidemic delusion will attack thousands of children, and carry them beyond, or in spite of, parental or legal restraint, into the excesses of the past; but new forms of nervous disease attack the race. It has even been said, by some thoughtful physicians, that changes in bodily functions attend upon changes in civilization, and that new social phenomena follow closely upon every discovery in science.

In the early days, the greatest demand was made upon the stomach and digestive apparatus, and but comparatively little was demanded of the brain and nervous system. Then, the diseases were inflammatory; now, infinitely more is expected of the brain and nervous system, and we have more and different nervous disorders.

In my judgment, the majority of cases of disease treated in the United States by our profession consist in some form of nervous disorder, or of disease having its prime foundation in nervous disorder.

"The fathers have eaten sour grapes, and the children's teeth are set on edge."

If such be the present condition of the adult race in our land, what is to become of the children?

Who shall furnish the answer? Certain things must be done. American society must modify its pace in the pursuit of wealth, of position, and of knowledge.

Nervous force, vitality, health of parents, is used up in the mad struggle, and our children are instructed, not *educated*; *crammed*, filled, stuffed, without imparting to the mind a capacity to make a proper use of the knowledge gained.

Every expert in nervous disease is sadly familiar with a whole class, which might properly be denominated "boarding-school cases."

As an instance of the criminal cramming of some of the pro-

fessional educators of our youth, let me mention the last case of the kind brought to my notice.

A frail, delicate girl at school had ten studies! A system of marking was rigidly enforced, 100 being the maximum of good recitations, or perfection in recitation. A monthly report was sent home. All institution and social influences were brought to bear to stimulate to perfection. This girl was obliged to send home one report, in which it was announced to the parents that she lacked 2-100ths of perfection in one or two studies. She accompanied it with a letter of regret and self-condemnation, and expressed her determination to send better returns in the future. Alas! before the next month, disease had claimed its legitimate victim, and that poor over-tasked brain was enjoying such a period of rest as only the delirium of fever affords.

What unparalleled outrage or unmitigated humbug attends much of this so-called education of our youth!

Our children need to receive "that sound education which should consist in the literal educing of the faculties of the mind, as a counteracting agency to the instincts;—one which co-ordinates the faculties of the mind, which gives exercise to reason and judgment, at the same time that it represses without ignoring the instinctive part of our nature." Precocity is an actual danger, and should not be fostered as a wonderful evidence of talent.

The too vivid imaginations of childhood should be restrained and repressed, or they may lead into ecstasies and hallucinations, and to these succeed delusions, or organic changes of various kinds, which leave their indelible stamp as permanent as life.

ARTICLE VII.

THE DUTIES OF MEDICAL MEN TO THEMSELVES AND
THEIR FAMILIES.

BY WM. WOOD, M.D. EAST WINDSOR.

In the code of Ethics of the American Medical Association, which is adopted substantially by most of our Medical Societies, "the duties of physicians to their patients," and the obligations of patients to their physicians, are clearly and concisely pointed out, but no mention is made of the duties of physicians to themselves and their families. There is no one, in whatever position placed, that can claim exemption from personal as well as public duties. This is a world of responsibilities, and the physician who can accomplish the most good in his allotted time has the nearest fulfilled the mission for which he was created. Whatever tends to promote vigor of body and intellect lengthens life and enhances its value. Self-preservation is a law both of reason and instinct. There may be a difference of opinion as to the best way to accomplish it, but none of the fraternity will doubt the propriety, or even necessity, of some relaxation from the cares and anxieties incident to the profession. What trade? What business? What profession is there that so constantly taxes the mind and body both day and night as the medical profession? What can be more trying than to see those in the prime of life suddenly cut down by disease which baffles all medical skill, whose friends are anxiously watching every word and expression of countenance, feeling that you hold the keys of life and death—a slight mistake or error of judgment may sacrifice the life of the patient. What a responsibility! If this were an overdrawn picture, or if it seldom occurred, there might not be that imperative need of relaxation from such mental suffering; but unfortunately it is too true and frequent to need comment. Then again, add to this the immense tax on our physical system—days and nights are often spent without one moment's rest. Neither heat nor cold; neither storms nor tem-

pests; neither malarious nor contagious diseases can be any barrier to the routine of professional duties. With all this overtaxing of mind and body, who doubts the need of some relaxation? No one. Who takes it? Shall I say no one? There are, however, occasional exceptions. While all will admit the necessity of it, the almost universal reply will be, We cannot find time: it is impossible. If it is understood that we mean leaving our business, and spending a few weeks at the sea-shore, or on the mountains, as is customary in the other professions, it would be impracticable, if not impossible, for us who practice in the country. In the cities, where physicians are always to be found, it may be otherwise. There seldom is a day that the country practitioner has not patients that he feels unwilling to leave; and if he absents himself for a short time, his mind is so constantly exercised on their account that there is no respite of care. How then can this overtaxed mind get relief? The answer is simple, and within the reach of all. Engage in some pursuit, if only for a few moments, in which the mind is interested, and which will divert it for the time being from the one beaten track of professional responsibility. The God of Nature has placed at our command various means to accomplish this object; and there is no one of ordinary intelligence that cannot become deeply interested and absorbed in some department of the Natural Sciences, if only a small amount of time and study is given to it. Those who have no particular fondness for it will be surprised to find how soon the study or pursuit of it awakens an intense interest. There is much latent talent in our constitutions, susceptible of great development, if the proper key is struck to cause corresponding vibrations. Some of the departments of science you can be studying while pursuing your legitimate avocation with little or no interruption of time. In your night visits, astronomy comes to your aid. And who is there that can behold the heavens bedecked with innumerable orbs, and trace out the several constellations and planets without seeing the hand of God in all this vast expanse, and not be struck with wonder and awe! In any of the departments of Natural History you will find on investigation a mine of wealth for the weary brain, opening new channels of thought and interest, and diverting it from overburdened care. I will name only those which can be pursued to advantage in this vicinity.

I will speak first of Botany. You can gather by the road-side the beautiful flower, analyze it as you ride along, study its botan-

ical classification, take it home with you and examine its medicinal properties (if any), press it, and before you are aware of it you have collected a valuable herbarium.

Or if you feel more interested in ornithological pursuits, 'with your gun at command as you pass through the woods or by the streams, you can collect as many specimens as time will permit you to mount. With a little practice in taxidermy, if you have an eye for position and form, your cabinet in a few years will excite the wonder and admiration of the public. Of all the departments of Natural History I know of no one that excels or equals this in beauty and interest.

Ethnology is a branch of study which now is attracting considerable attention, and this vicinity is a field unusually rich in specimens. The valley of the Connecticut was the favorite resort and home of a great number of Indian tribes, and the remains of their forts and burying grounds are frequently brought to light by the plow or the washing away of the banks of our streams, and the number and variety of stone implements, as axes, picks, hoes, pestles, chisels, gouges, knives, stone and earthen pots, spear heads and arrow heads, together with skulls which are found, make the fact patent that this section was once the abode of great numbers of our aborigines. It is related by the historian that there were ten distinct tribes within the ancient town of Windsor.

This section is also favorable for zoölogical researches, and not surpassed by any in New England. With a supply of local duplicate specimens you can exchange with zoölogists in any part of the United States and Europe, and in this way accumulate a general collection of great value. Some of our most distinguished physicians have been bright luminaries in the field of Natural History and Science.

If you do not feel disposed to study any of the Natural Sciences, occasionally take your gun and spend an hour in the chase or flushing game, or take your fishing tackle and imitate Walton in his piscatorial sports. This will rest and divert your weary mind. I might mention other sources for diversion of thought, as music, painting, antiquarian researches, &c., but I trust enough has been mentioned to convince all that the field is sufficiently broad and comprehensive. The physician who takes mental recreation will invigorate his mind and body, and prolong his life and usefulness. It is an imperative duty to throw aside

this suicidal policy of taxing the brain to the utmost without any relaxation. It brings on premature mental and physical decay.

I will next speak of pecuniary considerations for services. For ages the song has been sung and echoed and re-echoed through the land that the medical profession is one of love, and the feeling has become quite general that, as such, our services must be gratuitously rendered, except to the rich. It is time the community was disabused of any such absurd idea. Many of the profession have and still do so far succumb to that feeling, that a considerable part of their bills are left uncollected, and poverty stares them in the face. How many have died leaving their families dependent on their friends or the charities of a cold world for support! The laborer is worthy of his hire, whether he be a minister, a lawyer, a doctor, or a day laborer. There are those who have been unfortunate, and have not much of this world's goods, who can barely earn a support, who are willing and would pay if they had the means. They appreciate our services, and their gratitude is ample compensation. There is no profession or class of men who give as much to the poor, and that cheerfully, as the physician. Yet there is a class who always cry poverty, to whom it is no charity to give—a class who spend lavishly for the fashions and follies of the day—who fill the pockets of the quack and empiric to plethora, yet will complain bitterly if the regular profession presents a reasonable bill for services. It is a duty which every physician owes to himself—to his family, as well as to his patient, to use every necessary means to collect his bills from this class. Services that are not considered worth paying for are poorly appreciated. They should be made to feel that the man who has given his money and the prime of his life to acquire knowledge necessary to successfully combat disease, is justly entitled to suitable remuneration for his services. They should understand that a physician cannot live by faith alone. This class constitute no inconsiderable part of the patrons of the country practitioner, and it is high time the profession joined hand in hand to protect themselves, and gain such support for services rendered as will enable them to cancel all pecuniary obligations, and leave a moderate competency for their families when time with them shall be no more. We ask not riches, and we could not get them if we did by our profession alone, but we do ask for a comfortable support. There is no class of professional men in New England that receives so small a compensation for the amount of services

rendered. This is no time or place to go into details, but if you will investigate the subject, you will find facts sustain me in this assertion.

It is the duty of every physician to devote some time to medical reading. It is not only a duty to himself, but to his patrons. The standard authors of medical literature, and one or more of the leading medical journals of the day, should be his daily counsellors. If only half an hour in the twenty-four is devoted to books, it will amount to one hundred and fifty-six hours (deducting the Sabbaths) in the year, or, if six hours are called a good day's work at reading (and it is as much as can be properly digested) it will give twenty-six days of study. Is it not worth saving? The discoveries of medicinal properties in the vegetable and mineral kingdom, and the various chemical combinations which have wrought such wonderful changes in therapeutics in the past few years, and the improvements in surgery, must be kept fresh in the mind—new discoveries are to be looked for, and the physician who neglects to keep up with the improvements ought not, and cannot expect, to have the confidence of the community in which he resides. The strides in medical science during the last quarter of a century have been marvelous, and he who is satisfied to plod along in the old beaten track of his ancestors is not worthy of the name of doctor.

It is the duty of every physician not to absent himself from the house of God on the Sabbath willingly. It is a very easy matter, as it is in accordance with the natural desires of a depraved heart, for a doctor to look upon all days as the same, as his duties require him to heal on Sundays as well as the week day. If chronic cases were seen only on week days—if patients were visited early Sunday morning, at intermission and after service, I doubt not, as a general rule, all the sick would be seen, and we should have the satisfaction of listening to Divine Truth, and the consciousness of having done our duty. If the same economy of time and desire to be in God's Sanctuary were exercised as is exercised to be present at this meeting, our seat would seldom be vacant on the Sabbath.

Every physician should be one of Christ's disciples. There is no one that can exert a greater influence for good. He is the trusted confidant of patrons—admitted to the secret of their hearts—present at the bed of anguish and suffering, and can point the dying sinner to Christ, who cleanses from all sin, and impart com-

fort and consolation to the bereaved. In the language of another, "no practitioner can fully meet the responsibilities of his profession, and properly use the power committed to his hands, without being a truly God-fearing man. In the practice of his profession he will need religious principles to govern his conduct, chasten his judgment, inspirit his actions, and sustain him amid trials and discouragements. He will fail of success often, and when he most coveted a triumph he will need a resource within and above."

In the above catalogue I have only enumerated a few of the most prominent duties of the physician, enough however, if faithfully and conscientiously practiced, to prolong the life, mental vigor, usefulness, and happiness of many if not most of the profession.

MEMOIR OF
NORMAN BRIGHAM, M.D., OF MANSFIELD,

BY JULIAN N. PARKER, M.D., OF MANSFIELD.

Dr. Norman Brigham was born in South Coventry, Conn., in 1790, and died in Mansfield, an adjoining town, where he practiced his profession as physician and surgeon for nearly sixty years. October 15th, 1871, at the age of 81 years and 6 months.

He studied medicine with Dr. Roger Waldo, a highly respectable physician of Mansfield, and received a license to practice medicine from the State Medical Society, Oct. 5th, 1813. Brought up on a farm, he early acquired habits of industry, and thereby was well calculated to meet with the hardships of a country practice.

Having lived in his family and been with him almost daily for nearly seven years, it was sufficient to make me feel that Doctor Brigham was an uncommon man.

He was a very close observer of nature and of men. Nobody could talk an hour with him without perceiving that he had a great fund of original information, information not got at second hand, but from his own habits of studying the phenomena of nature and the conduct of his fellow-men.

His facts and his inferences were not a crude undigested mass, over-loading his mind. But his sagacity and his good sense enabled him to arrange his stores of observation in an orderly method, and to use them as lights to illustrate and adorn his conversation. So that whatever he had to say on ordinary subjects, and especially on subjects connected with his profession, was felt, I think, by most people to be wise, shrewd and practical.

These qualities which have been named seemed to me to have not a little to do with his success as a professional man. His close and critical power of observation made him a good detector of symptoms, and his clear, strong good sense qualified him to adapt his remedies, not simply to disease, but to disease as modified by

the constitution of the patient. And his skillful practice was attended with the rewards not unknown to other long and successful practitioners. He was the beloved and trusted family physician, who could not be given up, even after advancing age with its infirmities had admonished him that it was wise to give his practice over into the hands of younger and stronger men. This brief and incomplete allusion to him as a physician cannot be closed without reference to a trait of his character which perhaps more than anything else endeared Dr. Brigham, and made him what he was to his neighbors and friends. The faculties to which allusion has been made, his keen perceptive powers and his sound judgment, made him a man of unusual intellectual force. But much as he made himself felt in this way, I cannot help feeling that he was more strikingly individual and singular by reason of certain moral traits. One of these properly belongs to any sufficient statement of his professional character, and went far doubtless to attach him as a physician to those who were in the habit of receiving his attendance in sickness: I refer to his *friendliness*. Professional skill may do much to win success in practice. But when, in addition to this, there is a manifestation of friendly feeling in the manner of the practice, the strongest bond is established between physician and patient. And such I think must have been the case between Dr. Brigham and his patients. He had a wide and extensive practice, and had quite a reputation in treating consumptives.

His widow died about three months after him. They leave no children.

His funeral was largely attended by his many friends, who came sorrowfully to pay their last tribute of respect to the departed.

MEDICAL COMMUNICATIONS.

ARTICLE VIII.

ADVANCEMENT OF THE MEDICAL PROFESSION.

Being the Annual Address delivered before the Convention, May 29, 1873.

By the President of the Society,

HENRY W. BUEL, M.D., OF LITCHFIELD.

Gentlemen of the Connecticut Medical Society :

THE quick return of our Annual Convention devolves upon me the duty of addressing you for a few moments upon the interests and progress of our Society. Allow me in the outset to thank you for the honor conferred upon me of presiding over your deliberations, and to ask your forbearance and indulgence in the discharge of the duties incumbent upon me. It is unnecessary to say, and yet I feel assured that each one of you will be prepared to admit, that the absorbing requirements of our profession are, to say the least, not especially favorable to elaborate literary composition. I shall not, therefore, attempt to present you anything of the sort. It will be sufficient if I direct your attention to certain matters that concern the advancement of our calling in usefulness and efficiency, as well as in the esteem and confidence of the public.

The discoveries and progress of science in every department are so rapid and so great, that no one can at all keep pace with them without the most strenuous efforts and self-denying application to the particular field of labor in which he may be engaged ; and at the same time to such a general view of the whole field as shall enable him to appreciate the bearing and importance of any new discovery.

To illustrate: The great number of new remedies which Chemistry has given us—the almost entirely new nomenclature of the science and the continual additions which are being made to it, are enough to task the energies of the ablest to grasp and apply them.

The department of Surgery, with the multitude of highly trained and gifted minds devoted to it, has been no less fruitful in the application of new means or the modification of those already known, to the relief or the cure of suffering and deformity, until the world is alike astonished at its prudent boldness and delighted with its achievements.

The treatment of the various diseases of the nervous system is also becoming continually more fully understood, and what previously was involved in mystery and doubt is steadily being cleared up and definitely appreciated.

In no department of science has the *microscope* been of more signal advantage than in the field of medical research. Into almost every corner of this field it penetrates with the clear light of absolute demonstration—resolving doubts—dissipating clouds—and disclosing to us at a glance new and wonderful revelations. The chemist, the surgeon, the pathologist, the jurist, alike invoke its aid and rely upon its responses. And the end is not yet. Summoning to its aid the wonderful achievements of the photographer, it fixes the discovery of a single observer at some remote point and spreads the intelligence of it through the world of science. Day by day it opens new doors and points to long avenues of truths which are yet to be rendered available for the welfare and happiness of mankind.

But it is not alone in the application of these discoveries, in the every-day duties of our profession to individuals, that we are called to act and work. The public welfare—the general health—the protection of the State from the evils of contagion and epidemic—the relief of the pauper—the reform or the cure of those who are the wards of the public—call upon us for the application of all our knowledge and the use of our best powers. A wide collection of facts and statistics demands the highest powers of analysis, the closest investigation, and the keenest discrimination, to enable us to detect the single grain of truth that may be buried beneath them. Such, to glance at it only, is the field of toil and study to which the physician is invited; nay, which he is obliged to enter. It is, therefore, of the utmost importance that he be enabled to avail himself of every advantage, of every aid,

of every encouragement. For this purpose nothing probably can be of greater importance than the assistance of others engaged in similar occupations and pursuits. A monopoly of wisdom belongs to no individual, neither will it depart from the face of the earth when he lies down in the grave.

To every man, the consciousness that he belongs to a living and active association—of which, however humble, he is yet a part—is a stimulant to renewed effort and worthy endeavor, and an assurance that whatever he may achieve will be duly appreciated and esteemed. Hence the strong hold which our Society has so long had upon its members, and the interest evinced for so many years in its meetings. Doubtless there may be imperfections in its organization, doubtless there will be improvements in the years to come, but it is nevertheless worthy of our cordial support and continual care. To this end I am persuaded nothing can be done which shall be more quickly and certainly felt in the efficiency and vigor of this Society, than the diligent and faithful attendance (even at some sacrifice) of members upon the meetings of our various County Associations, both annual and stated. Let me urge upon you the importance of this matter. It is not so much here in this brief gathering of a day or two, when the time is so fully occupied with the details of business, that the growth and dignity of our profession are to be maintained and strengthened. This is rather the place, year by year, for showing to each other the progress that has been made. Were each one of our County Associations to be brought up to its full measure of efficiency, its members alive to each other's welfare and the welfare of the profession—sharing freely with each other their knowledge and experience, evincing to the public that an honorable profession demands honorable and generous members—we might witness such advances in the tone and standing of the profession as we have hardly dreamed of. The steady and constant attention of members to these points, to the election of new members as they come among us from time to time, would soon give a compactness and power to our organization conducive to its highest usefulness both to ourselves and the public. No one of us has a right to neglect our duty in this respect.

The wider influence of our National Association must be to a great extent dependent upon the zeal and interest which attach to our State and County organizations. With such changes in the representation to that body as shall give it fewer members and

more opportunity for deliberation, an election to its membership would be regarded as an honor to be sought for and prized. The experience of the past few years has demonstrated its unwieldy size, and the necessity of a more compact and efficient organization. Such a change has already begun. We shall then have all the requisite machinery in the way of associations for the advancement of our profession. If those who just now have the foremost rank are insensible to the importance of these considerations, let those who are coming forward bear in mind that whatever they can do to elevate the standard of professional acquirement cannot fail to re-act beneficially upon themselves. The former history of our Society, and the renown of its honored members of earlier days, forbid us to relax our efforts in its behalf.

Let us enter upon another year with renewed determination and increased hope—so shall we *best* discharge our responsibilities, and do our part toward the coming of the better day.

ARTICLE IX.

REPORT OF

COMMITTEE ON INEBRIATE ASYLUMS.

BY B. N. COMINGS, M.D., OF NEW BRITAIN.

Statistics.—There is at present no organized system for collecting statistics in this State by which we could learn the exact number of inebriates in the commonwealth. Careful statistics have been gathered in a few communities, from which we may safely make an approximate estimate that there are not less than twenty thousand inebriates in the State, and probably twice this number of moderate drinkers. In one of the cities, with only twelve thousand inhabitants, a careful estimate gives four hundred and ninety-seven drunkards, eight hundred and twenty-four occasional drunkards, two thousand four hundred and eighty-nine habitual drinkers, of whom three hundred and thirty are females. Of all the men over twenty-one years of age who have died for the last five years, fifteen out of every forty-one, or more than one-third, were intemperate. Taking the facts, so far as known, as a basis of estimate, not less than one-fourth of all the men over twenty-one years of age, who die in Connecticut, are intemperate.

Increase of Intemperance.—It is an alarming fact that intemperance is rapidly on the increase in the commonwealth. The percentage of increase, as indicated by the increase of crime, and the increase of the number of places where intoxicating liquors are sold, and as indicated by statistics, where they have been carefully collected, is more than ten per cent. annually, thus doubling the gross percentage every ten years. Thirty years ago, of five hundred operatives in the factories of one of our villages, there were only twenty who used intoxicants; now, by actual estimate, there are one hundred in the same number of operatives; but the increase for the last ten years is estimated to be greater than for the twenty previous years. In several of our

cities there has been a very large increase in the number of places where intoxicants are sold, averaging, at the present time, one for every one hundred inhabitants, including men, women, and children.

Temperance Discussion.—For the last half century the subject of intemperance has occupied a large share of public attention, and been a fruitful theme of discussion in the pulpit, on the platform, and in the various publications of the day. Much of this discussion has been a random and a superficial consideration of the follies and absurdities of intemperance as a vice, without any calm philosophical inquiry into the physiological and scientific principles which are involved in this the greatest humanitarian problem of the age. The proper limits of a reasonably lengthy report will not permit us to discuss all the points involved in such a problem; we shall therefore only ask your attention to a brief consideration of the claims of inebriates to the sympathy and aid of the public, and the means by which their condition may be improved.

Until quite recently intemperance has been regarded by the medical profession and the public mind generally as a pernicious habit or a vice which its victims may abandon at will. The inebriate has been the constant and fruitful subject of ridicule and satire, and of denunciation and legal prosecution. He has been a target for public declaimers and a victim for the petty courts. The rum-seller has turned him out of doors when his presence has been likely to keep away better customers, and the moderate drinker has treated him with scorn and contempt because he suggested too emphatically a condition to which his own habits were tending. He is, therefore, socially without friends and legally an outcast and a criminal, not welcome in the social circle, in the church, or in good society. The time has now come when it is the imperative duty of the medical profession, as the students of the infirmities of the race, to investigate his case and extend, if possible, a helping hand.

Intemperance a Disease—Dr. Willard Parker, of New York, stated in the meeting of the American Association for the Cure of Inebriates: "I feel that inebriety is as much a disease as scarlatina or small pox." Other prominent medical men in this country and in Europe have been equally emphatic in this opinion, and it is becoming a settled theory of the profession. A distinguished divine has recently said that he felt "that the doctors made a mistake in teaching that drunkenness was a disease." He regarded it as a sin, and would have it severely punished. Among theolo-

gians there is a very general disposition to coincide with the reverend D.D. But how a series of acts which destroy a man's moral sense, weakens his power of volition, disorganizes nearly every vital organ in the body, and fixes permanent changes in the brain, the controlling organ of all, can be a sin and nothing more, we cannot comprehend. Two very lengthy articles have recently appeared in a Boston journal in which the writer attacks with great vehemence the theory that drunkenness is a disease. His argument is based on the assumption that the man acts freely in becoming a drunkard, and has the power of choice or will, and therefore cannot be diseased, and he apparently assumes that the medical theory denies that drunkenness is a vice, both of which are absurd. A man who has a morbid appetite from disease does not necessarily lose the power of volition thereby. His will-power may be weakened, but it is not likely to be destroyed. A disposition to palliate the crimes of such men as Foster has probably intensified the opposition to the theory that drunkenness is a disease. But this, it must be remembered, was the plea of the lawyers and friends, and not of the medical profession. The true physiological view is entirely misapprehended from a superficial idea of it. Continued use of alcoholic stimulants induces a disease, known as alcoholism, inebriety or dypsomania. The moral quality of any act of drunkenness is not necessarily changed by the fact of disease, but the degree of the guilt may be estimated by the extent of the disease. To the physiologists alcoholism is not a vice, it is a consequence of a series of vicious acts, it is the organic penalty for drunkenness, and because the criminal is suffering the penalty of a violated law, he is not thereby excusable in continuing the same violation while he still retains some of the qualities of a free moral agent, and so much of this will-power as he may have lost was by his own free-will act. Let it be distinctly understood that neither the inebriate nor his friends have either a moral or legal right to demand that he shall be exempt from those penalties which the common sentiments of mankind have affixed to the commission of high crimes. The theory that alcoholism is a disease demands that the inebriate shall be taken care of and reformed when practicable, and when not practicable put where society can be protected from his brutality. The highest good of society as well as the best good of the individual demand that the fallen shall be lifted up and reformed, and the Christianity we profess confirms this demand. We have alluded to this matter because

it has been made an issue in theory by such high authority we can not consistently ignore it, and because it practically involves the great question, whether the inebriate shall be treated only as a criminal and an outlaw, and severely punished with fines and imprisonment, or whether he shall, under favorable circumstances, be treated as a victim of disease. It is the most important problem we are likely to be called upon to solve. A proper solution of it involves the highest good of a very large percentage of our fellow men. If alcoholism is an idea of the imagination, a mere fancy and not a disease, and the inebriate not a victim of disease, then he is not our patient—then the case belongs to the moralist and the legal authorities, who, it must be confessed, have not hitherto been very successful in his reformation and cure. We believe the medical profession will very generally adhere to the opinion that inebriety is a disease, and that the victim of it should be treated with kindness and sympathy, with a view to his reformation and cure, unless he has become so brutalized that reformatory means promise no hope in his case.

It is a current statement among temperance men, including those who do not believe that intemperance is a disease, that at least one hundred thousand persons die annually of intemperance in this country, and we have no reason to doubt the correctness of their estimate. What is the real cause of the death of this large army of persons? Medical men will not easily comprehend how so many persons can die of vice without disease. Our understanding of the matter is, that those persons die of disease induced (by the vice of intemperance) in some one or more of the vital organs. We know of no other way of accounting for this great mortality, except on the theory of disease. Men who are guilty of a vice may, and often do, reform, and become permanently good men; and unless actual disease has been produced by a life of vice they are rid of the vice. The temptation soon ceases to trouble them.

But this is not true of alcoholism. Repentance and reform do not cure this malady. A man who has once been an inebriate is always liable to certain phenomena which are characteristic of this disease and no other. A person may have practised total abstinence for years, and yet, if he chances to become debilitated and be in a low nervous state, he is liable to exhibit the characteristic symptoms of *delirium tremens*, showing that the organic conditions for this terrible disease, though they may have been latent for years, were not extinct. The patient was free from

the vice, but not from the disease. The dysomania is never cured, to such an extent that his old mania is not liable to be aroused by the taste of an alcoholic stimulant. There are persons of this class who can never safely touch their lips to the wine cup at the communion, or use alcohol medicinally. Some years ago, the writer prescribed for a patient, of whose habits he was ignorant, two ounces of whiskey with quinine, to be taken in four doses, and on the following day was surprised to find the patient in a state of beastly intoxication. He had been an abstainer for two years. The first dose so excited him that he compelled his wife to send to the drug store for whiskey. ✕

The autopsy of inebriates in a large percentage of cases reveals serious organic changes in the brain: such as excess of fluids in the ventricles; enlargement of the blood vessels; hardening in some cases, and softening in others. The most important organic change is in the molecular structure, which can be shown only by the microscope, if at all. If no organic change whatever were revealed in the brain, this fact would not necessarily prove that the brain was not diseased. In that most obscure and treacherous of brain diseases, cerebro-spinal meningitis, post-mortem examinations have sometimes failed to reveal any organic lesion, when the symptoms had been well marked in the patient; in other cases perhaps no more distinctly marked, the lesions have been abundant and well defined. The brain is so nicely organized, that the most experienced sometimes fail in revealing its pathological changes. There are many cases of insanity in which no pathologist is able to demonstrate organic disease of the brain, when there had been disease sufficient to cause death. Some forms of dyspepsia prove fatal without showing adequate pathological cause. The facts now before us seem very clearly to indicate that inebriety is both a vice and a disease. The one a cause, and the other an effect. In its combined character, it is more appalling in its consequences, and more difficult to manage satisfactorily, than any other that has ever afflicted the race. It is to be devoutly hoped that a better understanding of its true nature and a more thorough and general education of the people may yet stay the ravages of this giant evil. If there is any one argument which would seem to be more potent than any other in persuading men to abandon the use of intoxicants, it is the physiological view that the habitual use of intoxicants stealthily but surely induces disease of the

brain, the most important organ of the body—a disease which must from its very nature be as lasting as life; and besides ruining the moral and physical being, transmits the worst possible heritage to his posterity. It seems to us that if men will not listen to this argument, no other can reach them; nothing but special divine influence. It is one of the appalling facts of this disease, that as it progresses the moral sense and the ability to appreciate moral considerations are more and more obliterated till the individual is more brute than man.

Development of Alcoholic Disease.—Like most agencies which induce constitutional changes in the human system, alcohol does not suddenly produce disease. It does not come over its victims like an intermittent fever or an eruptive disease, heralded by severe rigor or a paroxysm of fever. Its invasion is like that of tubercular disease, which often commences with slight deterioration of health, so slight as to escape observation. Then the little tubercular virus of the future disease is deposited here and there. This enlarges, more is formed, and by and by the diseased action is so fully established that it does not require an expert to detect it. A single act of inebriety does not constitute disease, though it may be one of a series which lead to it. Total abstinence or the ability to practice it at will without inconvenience is practically the only reliable evidence of the non-existence of the disease in question, in a person who has indulged in alcoholic stimulants to any considerable extent. The abstinence must not be intermittent, but must extend to a longer period than usual. Intermittent abstinence is characteristic of dipsomania, one of the worse forms of alcoholism. A desire for stimulants more urgent and imperative than the normal appetite for the ordinary elements of nutrition, must be regarded as evidence of disease more or less grave, according to the urgency of the desire; and whenever it is an inconvenience or a self-denial even to abstain from the use of an alcoholic stimulant either habitual or occasional, it is time to be admonished of danger.

There are various phases of disease induced by intemperance; of these we can only notice the more prominent. Drunkenness and inebriety only characterize certain stages of indulgence. Dypsomania is applied chiefly to intermittent drinkers. Alcoholism is a general term representing any abnormal condition induced by the use of alcohol in any of its forms. Dypsomania signifies a mania or insanity for drink, and like any other mania sets at

defiance reason, conscience, social obligations, public opinion, and in fact, any of the ordinary restraints of men. The disease of alcoholism in its various manifestations, is much more common and general than medical men even have been aware of. It has long been a mystery, an unsolved problem, why so many men fall into intemperate habits when the consequences are so terrible, and when there are so many considerations to deter them from it. Men of culture, men of good sense in other matters, men of brilliant prospects for life, men in exalted positions of honor and trust, men and women too from every rank and station of life, throng this broad road to ruin, not as isolated individuals, not by tens and scores, but by thousands and hundreds of thousands, making in all a very large percentage of the American people. Should we attempt a full report of this phase of the subject, the disease has become so general and so appalling in its consequences, we fear we should be regarded as too extravagant and visionary to be entitled to confidence. We will, however, suggest to any who may wish to know the facts, to take a single ward in the poorer portion of any of our cities, and carefully examine the physical condition of men and women over twenty-one years of age.

Causes of Disease.—The predisposing causes which lead to intemperance in different individuals are very numerous. We can only ask your attention to those most important and most common in their operation.

Love of Excitement.—A love of excitement as an element of character is universal in the race, and does not exist in any other animal to any considerable extent. It is one of the leading qualities which mark and distinguish man from the lower order of animals. We can hardly conceive to what a condition man would be reduced if his love of excitement was blotted out. Alcoholic beverages meet in an artificial way, to a certain extent, this principle in man. But we are not to infer that the love of alcohol is an instinct of man, as a recent medical writer has assumed, for all human beings do not possess a propensity for the use of alcoholic stimulants prior to experience and independent of instruction. Except when the love of intoxicants is hereditary, the child universally rejects them, unless they are disguised by something he instinctively loves. There are whole families, including several generations, who seem to have no tendency to intemperance, and no ordinary circumstances of temptation can induce them to alcoholic indulgence.

Macnish, in his "Anatomy of Drunkenness," says: "We drink at first for the serenity which is diffused over the mind, and not from any positive love we bear to the liquor, but in the course of time an animal fondness for drink is acquired, and men come to like the taste of it as a child likes sweetmeats.

In a normal condition we do not believe that there is an instinctive or a natural appetite for alcohol, but a parent who has acquired this appetite may, and often does, transmit it to his posterity. Hereditary tendency to intemperance has for a long time been recognized by medical men. Plutarch wrote: "Drunkards beget drunkards. There is no reason why the law of heritage so generally recognized in the animal should fail of application in the case of man." Burton, in his "Anatomy of Melancholy," written before the temperance agitation of our time, very quaintly remarks, "if a drunken man beget a child, it will never have a good brain." Dr. Darwin wrote half a century ago: "It is remarkable that all the diseases from drinking spirituous liquors are liable to become hereditary even to the third generation, gradually increasing, if the cause be continued, till the family becomes extinct." A writer in the *British Physiological Journal* gives the result of his observation in these strong words: "The most startling problem connected with intemperance is that not only does it affect the health, morals and intelligence of the offspring of its votaries, but they inherit the fatal tendency and feel a craving for the same liquors which acted as poison on their system from the commencement of their being. It is especially so when both parents are drunkards."

Hereditary Transmission.—Examples illustrating this hereditary tendency, like the following, are abundant in almost any community. Mr. —, the father of five sons, was a total abstainer for five years, during which period he had two sons who were never known to drink; at a later period he became a hard drinker and died of delirium tremens. Of the three sons born during the intemperate period, two have died of delirium tremens, and the other is still living an inebriate. Mrs. — raised six children. During the period of gestation, and the nursing of one of the six, she used milk punch, daily. This son became early in life a common drunkard. The other children are all temperate. Mrs. —, an Englishwoman, was a moderate beer drinker, and fed her children rum in their pap to make them quiet. Three of her sons are in State's prison. The two others at large are common drunkards.

The two daughters, one at fifteen and the other at seventeen, went to street life in New York. The father of this family was a temperate, industrious mechanic. Mr. —, a member of a Presbyterian church, in good standing, of an excellent family, whose wife was of a very decided Christian character, made a daily practice of taking cider, or some mild stimulant, and was for many years considered temperate, though he ultimately died of softening of the brain from excessive drinking later in life, raised a family of six sons of extraordinary promise till they reached maturity, when they all became intemperate.

Hereditary Alcoholism not developed till maturity.—Hereditary alcoholism, like most other hereditary diseases, does not develop until the maturity of the individual; though there are children who evince a fondness for the taste of alcohol from the cradle up. Only a few days since a child of intemperate parents, too young to talk, was seen to cry for whiskey, and when taking it clear from the tumbler smacked his lips with evident satisfaction and cried for more when it was withheld. The alcoholic diathesis is as well-marked and as readily recognized by the observing physiologist as the tubercular. The sensual animal organization of the child of drinking parents as clearly foreshadows its liabilities as the rosy tint of the cheeks, the long eyelashes, the slender neck and narrow chest indicate tubercular tendency. The alcoholic diathesis is early shown by indecision of character, weak will-power, nervous irritability, tendency to convulsions or epilepsy from slight causes. The appetite, which is often morbid or capricious or extravagant, is often stronger than the reasoning powers or the judgment. With such children self-indulgence is a ruling passion, which controls and moulds the character. It requires no prophetic vision to foresee that children thus organized will become easy victims to intemperance, if they are brought within its seductive influence. The peculiarities of the alcoholic diathesis are closely allied to those of hereditary insanity. The same mental and physical qualities characterize each, and it often happens that insanity and alcoholism develop in different individuals of the same family, from the same constitutional causes.

Testimony of Medical Men.—Dr. Dodge, of the New York State Inebriate Asylum, says: "I am of opinion that there is a great similarity between inebriety and insanity. The one is twin brother of the other. The two diseases are closely connected, both in their manifestations and results, and, to a certain extent,

in the means to be used for their removal." Dr. John Nugent, for twenty-six years inspector of lunatics in Ireland, testifies to the Select Committee of the House of Commons that his experience among lunatics led him to believe that there is a very close relation between the results of the abuse of alcohol and insanity. He cited the case of a professional man who had become addicted to intemperance, whose four children were either mal-formed or insane. The population of Ireland had decreased two millions in the last twenty-five years, but there is the same amount of insanity now that there was when the population was larger by two millions. He attributed this in a great measure to indulgence in drink. As to whether drunkenness leads up to disease, or whether the disease leads up to drinking, he thought they both acted on each other as cause and effect. If there is a disposition to insanity, drink is sure to develop it. On the other hand, there are other persons who show their insanity by a disposition to drink. He cited the case where one brother became insane and the other a drunkard. Dr. Arthur Mitchell, Commissioner for Lunacy for Scotland, stated that nineteen per cent. of the cases of insanity was caused by intemperance. The children of drunkards are in larger proportion idiotic than other children, and in a larger proportion become themselves drunkards, and are also in a larger proportion liable to the ordinary forms of acquired insanity. Dr. Forbes Winslow, from an experience of thirty years among the insane and intemperate of the upper classes of English society, stated "that a large percentage of frightful mental and brain disturbances can be traced to the drunkenness of parents, confirming the great physiological law that like begets like. In a list of criminals he observed a case in which a father was a drunkard, grandfather a drunkard, grandmother an idiot, and in the whole line of that family they figured as drunkards, criminals and idiots. All the forms of vice were hereditarily transmitted. In Norway, in ten years of free liquor traffic, after the removal of the spirit duty, insanity increased fifty per cent., and congenital idiocy one hundred and fifty per cent. Dr. Crane, an English physician, says the children of inebriates have twenty-nine times as many idiots among them as the children of the temperate. Dr. Thomas Nelson, Superintendent of Queensbury, Edinburgh, says: "There is a hereditary taint which may lead a person to fall into dissipation very easily, and there is a peculiarity of temperament which marks a person for an incurable drunkard."

I have quoted this concise synopsis of the testimony given by a few of the leading medical men before the select committee of the House of Commons, because there are many who seem inclined to discredit both the fact of the alcoholic diathesis as well as its hereditary nature, and because the vast importance of this hereditary transmission is so little known and so inadequately appreciated. We might add to this a large amount of testimony from prominent medical men in our own country, but we only ask your attention to the following declaration, prepared and signed by the leading medical men of New York. "We are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount of physical disease; that it entails diseased appetites upon offspring; and that it is the cause of a large percentage of the crime and pauperism of our cities and country." Signed, Edward Delafield, M.D., President of Physicians and Surgeons, and of Roosevelt Hospital; Willard Parker, M.D., Ex-President Academy of Medicine; A. Clark, M.D., Professor College of Physicians and Surgeons, and Senior Physician Bellevue Hospital; James Anderson, M.D., Ex-President Academy of Medicine and President Physicians Mutual Aid Association; E. R. Peaslee, M.D., Ex-President Academy of Medicine; C. R. Agnew, M.D., Ex-President Medical Society of the State of New York; Stephen Smith, M.D., Surgeon Bellevue Hospital, Commissioner of Health and President American Health Association; Alfred C. Post, M.D., LL.D., Professor of Surgery in University Medical College and Ex-President of N. Y. Academy of Medicine; Elisha Harris, M.D., Secretary Amer. Public Health Association, late Sanitary Superintendent Metropolitan Board of Health, and Corresponding Secretary Prison Association of N. Y.; Erasmus D. Hudson, M.D., Physician and Surgeon; E. D. Hudson, Jr., M.D., Professor of Theory and Practice of Medicine, Woman's Medical College of N. Y. Infirmary; Ellsworth Elliot, M.D., President of N. Y. County Medical Society; Stephen Rogers, M.D., President of the Medico Legal Society of N. Y.; Andrew F. Smith, M.D., Visiting Physician to St. Luke's Hospital, &c.; J. E. Jarmin, M.D.; Verranus Morse, M.D., Brooklyn; E. T. Richardson, M.D., Brooklyn; William H. Hall, M.D.; Walter R. Gillette, M.D., Physician to Charity Hospital, Lecturer University Medical College; J. R. Leaming, M.D., Physician to St. Luke's Hospital, President University Alumni Association, Emeritus Professor of Medicine, etc.; James O. Pond, M.D., Treasurer N. Y. Academy of Medicine; and others.

The subject of hereditary transmission was very fully and ably presented to this Society at the annual meeting in 1870, by Dr. Bronson of New Haven, and we ask your attention again to the following emphatic sentences. "An individual is in structure and function but the recapitulation of all that has gone before. An abridgement of his ancestry and of himself. The family pattern, whatever it may be, is faithfully copied and its modification successively adopted." This doctrine, that the sins of the father shall be visited upon the children, is as old as the decalogue, and we cannot over-estimate its importance in our treatment of the vices and infirmities of our fellow men.

Hereditary taint not confined to children of Low Drunkards.—This inheritance of moral and physical evil is not confined to the children of the low drunkard. It is, if possible, more sure to be the inheritance of the moderate or temperate drinker, who daily confines himself within certain prescribed limits. The brain of such a man is never absolutely free from the alcoholic influence, while the common drunkard's may be clear of it for intervals of several days, or it may be weeks when this peculiar diathesis might not be transmitted. The degeneracy of the children of our prominent statesmen and politicians, as well as of many others in higher life, sadly confirm this view of the subject. The writer was in college with a young man who bore a great name, but who was then an inebriate at eighteen, and went to an early grave from intemperance. That great name has no living representative, while the name of Adams, as an almost solitary exception, remains honored among the great men of to-day. The elder John Adams was noted for his temperate, frugal habits; John Quincy, "the old man eloquent," was an abstemious cold water drinker to the day he died so gloriously in the House of Representatives, the great theater of his life.

Social Habits.—There are probably more men who commence alcoholic indulgence with the social glass than in all other ways combined. Young men and boys of highly social nature, without any hereditary taint, very easily acquire the habit of using intoxicants by falling in with the social customs of American society, and the alcoholic disease is established long before they become conscious of the evil consequences which are sure to overtake them.

When there is a hereditary taint the social net is wide spread and very attractive, and they that enter it are sure to be firmly caught. Indulgence is in such perfect harmony with their organ-

ization, that intemperance is as easy and natural to them as scarlatina or measles. Their systems are morally certain to take the disease at first exposure, and the younger the exposure the more rapid will be the progress of the disease. The brain in the young is more easily affected by alcohol than in the aged. A young man of twenty acquires a morbid appetite for intoxicants much easier and more rapidly than a man at forty. A person who practices total abstinence until forty years of age is tolerably sure to be temperate for life, but there are plenty of men who are moderate drinkers up to about this period, when alcoholism is fully established, and then rapidly rush on to the inebriate's end.

Medicinal use of Alcohol.—We cannot overlook a prevailing sentiment that the medicinal use of alcoholic stimulants is frequently a cause of inebriety. The country is flooded with patent bitters and nostrums, which contain a very little poor medicine and a large amount of poorer whiskey.

If we may judge by the shelves of druggists and grocers and the advertisement of newspapers, and the handbills which deface the rocks and fences by the roadsides, the quantity used must be very large. There are some persons in every community who constantly patronize these preparations, because their self-respect or their social position will not permit them to frequent the saloon, or the open bar, or keep a private bottle in the presence of their families. So it often happens that the family physician is called to prescribe for symptoms that are very difficult to explain on the hypothesis of a temperate life.

Prescription of Alcoholic Stimulants.—We wish we might feel that there is no other improper medicinal use of alcoholic stimulants, but it occasionally comes to our knowledge that persons who have been under medicinal treatment for a few weeks are known soon after to exhibit a fondness for drink. We will report a single case in point. A boy sixteen years of age, of a good family and no hereditary taint, was very low for several weeks with typhoid fever, and was kept constantly under the influence of wine or whiskey. He recovered of the typhoid fever to have dyspepsia and die at twenty a broken-down and ruined inebriate. It cannot be denied that there is a very loose and reckless prescription of alcoholic stimulants, a use positively inconsistent with modern science and the best good of the sick; an indefinite method of prescribing, which leaves the patient at his own discretion as to the amount to be taken, and the length of time it is to be used; a

free and easy way of prescribing which gives a professional sanction to moderate drinking. When the physiological conditions actually exist which render alcoholic stimulants the only appropriate remedy, we do not believe that injurious effects are likely to arise from a judicious prescription.

Treatment of Alcoholism.—The most appalling fact connected with the disease of alcoholism is, that there is no positive and permanent cure of it. If alcohol once produces its peculiar molecular changes in the brain, the most delicate and important of all the organs, there is no specific remedy known to the profession. What is done cannot be undone, more than we can recall the past or restore an amputated limb. The appetite once formed, seldom, if ever, dies. By extraordinary watchfulness and care, it may, however, be repressed and held in subjection.

Dr. Collins testified before a British parliamentary commission, that he had come to regard it a well-established fact, that the appetite once formed for intoxicating drinks never becomes extinct, but adheres to a man through life. Dr. Morel, a French physician and author, says "I have never seen a patient cured of this propensity, whose tendency to drink was derived from the hereditary predisposition."

When the appetite for intoxicants is once formed, or when this appetite becomes a disease, an abnormal condition of the brain is permanently established. Thenceforward there must be an irrepressible conflict between reason and appetite, a conflict in which reason must incessantly maintain the defensive and concede nothing. The slightest concession is an ignominious defeat. Total and absolute abstinence from all that can intoxicate is the only condition of safety. Here "the price of liberty is eternal vigilance." We know of no personal achievement nobler and grander than the triumph of the inebriate over his appetite. We always bow with respect to such a man whenever we meet him.

The only successful treatment of this disease consists in the employment of such physical and moral means as shall enable the inebriate to persist in total abstinence, and so long as he can maintain this position he is said to be cured. This in a certain sense is the only cure which is effected in any disease. The insane may be discharged from the asylum sane and remain so for months or years, and become insane again on exposure to the original exciting causes of the disease. As a matter of fact the inebriate is reformed but not cured, and it is of the utmost import-

ance that the reformed person shall be deeply impressed with this view of his case. Whenever the reformed flatter themselves that because they have abstained a few weeks or months, and even for a longer period, they are cured, and may indulge to a slight extent, a return to their cups is an absolute certainty. A merchant in one of our cities reformed, was a total abstainer for twelve years, accumulated a handsome property, held a good standing in the church, and in the community, and then had a slight attack of diarrhœa, for which a physician whom he met at a drug-store administered a prescription containing a small quantity of brandy. This the merchant drank without any knowledge or thought as to its contents. Like a drop of blood to the caged tiger, the old appetite was aroused. He drank to intoxication, and continued to drink with a mania which was irrepressible, and died in three months of delirium tremens. Not long since a man, who had been reformed, under Good Samaritan influence, for more than two years, and been very active and successful in reforming others, went to New Haven on business in apparent good health, was by some means, unknown to his friends, induced to drink. A terrible debauch and delirium ensued, and he died in three days from the time he left home. These are marked but by no means rare cases. The Washingtonian, Good Samaritan, and other kindred movements, have everywhere been attended with similar cases of relapse from total abstinence to debauch.

Benevolent Organizations.—These organizations have been more successful in permanently reforming men than any other public measures which have been tried, except inebriate asylums. The secret of whatever success has attended these efforts has been owing largely to the reciprocal aid the members extend to each other. Jones and Smith have been companions in drink, and together take the pledge with an earnest purpose to keep it. Jones flatters himself that he is all right and in no danger of falling, but he feels that it is a doubtful matter with Smith, so he manages to meet him often, perhaps daily, and cheers him with words of encouragement and hope. He knows it must be a terrible struggle for Smith to keep his pledge. At the same time Smith is deeply anxious about Jones, and is bound to keep watch of him, and does follow him day after day; thus each of the two men are kept from falling by a persistent effort to save the other. Sympathy for each other is a marked characteristic of all inebriates who are trying to reform, and is an important element of suc-

cess in their treatment. This is one of the reasons why their treatment can be more successfully conducted in an inebriate asylum, where the patients are brought into association with each other.

Inebriate Asylums.—The treatment of inebriates as a separate class of diseased persons is of recent origin. The oldest public institutions in this country are the Washingtonian Home of Boston, and the New York State Inebriate Asylum, which were opened in 1857. The Inebriate Home for King's County, New York, and the Washingtonian Home of Chicago were established in 1867. There are now nine establishments, public and private, in this country for the treatment of inebriates. All of these institutions are comparatively in their infancy, and have experienced the usual difficulties which attend new institutions.

Insane Asylums.—Through the long ages the insane were regarded as possessed of evil spirits, or willfully vicious and wicked, and, in all cases, as dangerous and untrustworthy members of society. When Pinel took charge of the Bicêtre Asylum in 1792, it combined all in one the qualities of a jail, a house of correction, a penitentiary and a hospital. Assassins, sick patients, paupers, and idiots, lived in fearful promiscuousness. The insane were kept separate in pens six feet square, with only a small opening through the door, to admit light and air. There was a bed of loose straw renewed only once a month. The patient had a chain around the waist, manacles and fetters on the wrists and ankles. He received neither care nor medical treatment. Pinel ordered the irons to be struck off all the patients, and then began the era of common sense and humanity. Looking back, as we now do, less than a century, it seems incredible that such barbarous and inhuman practices could have prevailed so long.

At our stand-point to-day we know that thirty to forty per cent. of chronic cases, and seventy to eighty per cent. of acute cases of insanity are incurable. Our present advanced knowledge of the diagnosis, pathology and the general treatment of insanity, has come to us mainly through the asylum, and if it had accomplished no other good, it has proved of inestimable value as a school of scientific observation of mental diseases. The result of this noble and humane experiment has been most satisfactory, and the question of the practical utility of an asylum for the treatment of the insane is decided for all time. Closely allied to this great move-

ment, and in part growing out of it, is a still greater problem—what can be done for the inebriate?

Present Treatment of the Inebriate a Failure.—The present public treatment of the drunkard in spirit and principle is practically what the treatment of the insane was in the last century. The laws of this commonwealth, as well as many others, make the drunkard a vagabond and a criminal. Our large cities support daily police courts, three-fourths of whose business is to administer fines and punishment to the unfortunate victims of intemperance. The idea of reformation does not enter into the system. It is entirely penal, and not very humane at that. Gov. Jewell made especial effort to obtain the criminal statistics of this State for the year 1871, and in his annual message, 1872, reported to the Legislature the appalling facts, that there were between ten and eleven thousand criminal prosecutions, of which twenty-two hundred and seven were in New Haven, one thousand five hundred and sixty-three in Hartford, eleven hundred and twenty-four in Bridgeport, three hundred and thirteen in Norwich, and one hundred and twenty-eight in New London, etc. Eight towns in which no intoxicating liquors were sold reported no criminal prosecutions. It is well known that crime has increased in this commonwealth at a fearful rate since the war. Last year there were three thousand three hundred and eighty prosecutions before the police court in New Haven, and over two thousand in Hartford. By an abstract of returns concerning jails for the year ending March 31, 1873, it appears that there were two thousand nine hundred and fifty-seven committed to the county jails. Of these, only two hundred and twenty-nine reported themselves as temperate; fifteen hundred and ninety-eight are registered as moderate drinkers; eleven hundred and twenty-nine as habitually intemperate. Only a small portion of the cases of prosecution are sent to the county jail. Some are fined and others sent to the town house. In New Britain there were six hundred and fifteen arrested, five hundred and forty-three prosecuted, and only sixty-four sent to jail. Taking this estimate as a basis, it will make the number for the State twenty-five thousand one hundred and thirty-four, an increase of fifty per cent, on Gov. Jewell's returns. By the returns of the clerk of the police court, the increase in New Haven is also over fifty per cent., amounting to one arrest for every twenty-four inhabitants. In Hartford, however, the increase was only thirty per cent. The number of arrests or prosecutions

does not represent so many different individuals. The returns of the county jails indicate that more than one-half had been committed before. Jailor Fenn informs me that the passion for drinking is so strong with some of these persons that they commence drinking as soon as they are discharged, and are returned again in a few days or weeks, and are thus reported several times during the year.

It has become a very grave question whether our present system of jurisprudence is not radically wrong. These returns indicate that twelve-thirteenths of these cases of prosecution were inebriates, who were in all respects treated as other criminals, no effort having been made to reform them. Your committee desire to say most emphatically that we regard this as a great wrong and a grave mistake in political economy,—a wrong to the community as well as to the unfortunate victims of this barbarous system of the past. It is both the right and duty of society to protect itself against crime; but it is neither morally right nor the part of wisdom to ruin the criminal when it can reform him. We believe coming generations will regard our treatment of the inebriate with the same amazement and abhorrence that we from our position contemplate the abuse of the insane in the dark days of the by-gone centuries. We have munificently provided for the blind, the deaf, and the insane. This is as it should be. Every citizen of Connecticut has reason to be proud of our humane institutions; but we have as yet treated with indifference a much larger class of persons, whose influence on the well-being of our citizens is vastly more important, because more numerous, than all of the above classes, which would be largely reduced if our inebriates were properly cared for.

Success of Inebriate Asylums.—Considering the nature of intemperance as a disease, and the fact that all of the inebriate asylums in this country are comparatively new institutions, and consequently of limited experience, the success which has attended their efforts is very encouraging and hopeful. Dr. Parish, President of the Pennsylvanian Sanitarian, stated to the select committee of the House of Commons, that from thirty-three to forty per cent. of the admissions, as based upon subsequent inquiries were apparently cured as completely and permanently as any other form of disease, mental or physical. That the proportion of cures is not larger is attributed to a lack of power to induce or compel the patients to submit to treatment for a longer period. Dr

Dodge, of the New York State Inebriate Asylum, testified before the same committee: "I am informed by reliable and trustworthy authority, that of the whole number of patients treated in the New York State charitable institutions, the proportion of completely cured is only from thirty to forty per cent. That includes the acute and chronic cases, and I am warranted in claiming for inebriate asylums an equally favorable result." The annual report of the New York asylum for the year 1872 gives the number of patients, 256; discharged with great hopes of a permanent cure, 198; discharged unimproved, 58. The Pennsylvanian Sanitarian admitted 278; cured, 70; insane, 3; improved, 130; incurable, 35; still under treatment, 15. Dr. Day of Boston, who has devoted especial attention to the treatment of inebriates since 1857, and to whom we are personally indebted for many valuable suggestions, reports full fifty per cent. cured. In estimating the results of treatment in inebriate asylums, we must bear in mind that many of the patients are retained for only a short period, not long enough to fully establish a reformation. The average time is only from ninety to one hundred days. Nearly all the patients go to the asylum in the worst possible condition, mere wrecks of humanity; most of them are confirmed drunkards who are completely broken down and bankrupt in morals and health, if not in fortune, and in everything which constitutes true manhood.

Treatment of Dysomania.—The least hopeful cases are the subjects of dysomania, a form of disease which manifests itself in periodic attacks. The victim of this disease is sometimes a total abstainer for long intervals, when he breaks loose from all restraint and abandons himself to drink and persists in it with the frenzy of a maniac. All the powers of his being are apparently given up to drink. Reason and conscience are for the time being dormant. Appetite rules with an undisputed sway. But this cannot last long without producing death or a reaction. The stomach becomes exhausted and rejects the accustomed stimulus. What was before sought after with the greatest zest and earnestness is now loathed and abhorred. While the passion for drink is dominant, the dysomaniac will encounter heat, cold or storm, sell his own clothes, the keep-sakes of his wife or the bread of his children, to procure the stimulus he craves. When the attack has passed he will decline a gift of the same beverage. He has decided now to drink no more. He is in earnest for total abstinence, and is often a most vivid and successful advocate of the temperance reform. He is

now greatly surprised that other men are not as earnest for temperance as himself. But when his periodic mania comes around again he plunges at a single leap from the highest pinnacle of total abstinence to the lowest gutter of inebriety. It is only when this class of men are brought to appreciate their liabilities to fall, and are led to rally their highest moral energies against it, that they withstand one of these periods. It is therefore a very difficult matter to reform such men, and still more difficult if the disease is hereditary. As we have already intimated, the mutual support which this class of patients render to each other is a very important means of cure and cannot be overlooked in their treatment. With the approach of these attacks there is a feeling that they are without friends and that fate is against them; that a terrible destiny awaits them which they cannot escape. The presence of another person who has successfully withstood the same trials inspires confidence and hope. It is obvious that such patients cannot be treated successfully in private practice, nor can they be reformed by a short period of treatment in an inebriate asylum. They are difficult to manage under any circumstances; but we are not to despair of their reform provided they are subjected to the right kind of treatment, a sufficient length of time. The average period of ninety or one hundred days is too short for this class of patients. They should be detained in the asylum at the discretion of properly constituted authorities, until they have withstood several of these periodic attacks without falling. In the New York State Inebriate Asylum, as given by the report of last year, the periodic drinkers are in the proportion of ninety-six to one hundred and sixty constant drinkers.

Constant Drinkers.—The constant or daily drinkers require a shorter period of treatment, and are more easily and successfully managed. The greatest trial with this class of patients is during the first days or weeks of abstinence. Constant drinkers usually require constitutional treatment to restore their general health and detention long enough to fully overcome the unrest and nervousness which follow abstinence from their accustomed stimulants. This will depend upon the general health and habits of each patient, the length of time he has been an inebriate and his constitutional antecedents. The percentage of cures is in all cases largely in favor of those who have been retained a period of six months or more. There is no medical secret in the treatment of inebriates, no specifics, and no routine practice which applies to

all cases. Perhaps no disease which afflicts the race is more subtle and incomprehensible than alcoholism. To insure success in its treatment requires the highest order of tact and practical skill. It is usually not one malady alone which is to be treated, nearly every vital organ is more or less impaired, and it is absolutely essential to success that the constitutional treatment should be wise and efficient. The moral and mental treatment should be judiciously adapted to the peculiar mental and physiological characteristics and idiosyncrasies of each patient.

Separate Asylums for Inebriates.—The universal testimony of all medical men who have devoted especial attention to the treatment of inebriates is in favor of separate asylums for this class of patients. Those who have had large experience in the management of the insane condemn in decided terms the admission of inebriates to the insane asylum.

A bill was before the Legislature of Pennsylvania last winter, making it a misdemeanor for any physician to give a certificate for an inebriate commitment to a lunatic asylum. The feeling against it is very decided and positive both in this country and in England. Not to multiply testimony on this point, we will only give an authority which will not be questioned in Connecticut. Dr. Butler, formerly of the Retreat, says: "Inebriates cannot be successfully treated in an insane asylum, because with only here and there an exception, the inebriate will not consent to the restrictions and regulations of an asylum, especially in regard to his liberty, and his detention for a length of time sufficient for his permanent recovery. Very generally the inebriate lacks not only self-control, but a due and reasonable appreciation of the necessities of his disease. He has, moreover, an unreasonable confidence in his own power of self-control. He very reluctantly assents to the rules, regulations and restrictions of the asylum, so demanded by the necessities of the lunatic, and regards them as inapplicable to himself because he is not insane. Frequently inebriates will come to the asylum of their own accord, promising to remain as long as I wish to have them; but in a few weeks becoming, apparently, in good health, they either demanded or took their discharge, there being no legal authority for their detention. It follows, therefore, that I have no faith in asylums where they are not detained by process of law, and where no discharge within a year can be obtained, without the approbation of the superintendent and the concurrence of the board of directors. But I have faith

in their recovery when they are detained a sufficient length of time, and have seen some very gratifying examples of successful treatment.”

The investigation we have been able to make, in regard to the inebriates of the State, and their claims to sympathy, has deeply impressed us with the conviction that their treatment is radically wrong in principle and penurious in its results, tending only to increase the evils we deprecate. But we wish it distinctly understood that we do not advise any larger liberty for wrong doing. We feel that the spirit of the age, and our present knowledge of the causes of vice, ought to enable us to adopt such measures as shall greatly reduce the amount. As we have already intimated, our present system is strictly punitive and not reformatory. The principle of punishing drunkenness, and the minor offenses which are induced by it, the same as other crimes, we do not approve. To imprison the drunkard with common criminals, to be contaminated by their influence, is practically consigning him to a school of vice and crime, and is thereby multiplying the number of criminals in the commonwealth. In no case should an inebriate, or a common drunkard arrested for intoxication, or any minor offense growing out of it, be placed in a cell or apartment in which a criminal charged with an aggravated or malicious crime is confined. Special provision tending to their reform should be made for inebriates, and when deprived of their liberty in any manner they should be retained for a period long enough to thoroughly rid them of the immediate effects of alcohol, and not only long enough to teach them that they can live without stimulants, but are positively better off without them. If the first period of detention fails of reformation, the second and subsequent commitments should be for longer periods. The inebriate should be made to understand that the object of his detention is not punishment, but reformation. To carry into effect these views some special legislation will be required. A State Inebriate Asylum is a necessity. But on the basis of Gov. Jewell's statistics, the recent reports of the county jails, and the police courts to which we have already referred, it will be wholly impracticable to build asylums for all the persons who are presented for drunkenness and the misdemeanors for this cause.

Legislative Action.—A part of the duty required of this committee is to present the matter under consideration in such form, that the society may take suitable action thereon and present the subject

to the Legislature at its present session. In obedience to this requirement, we recommend the appointment of a special committee to bring the subject suitably before the Legislature, with a view to obtain, if possible, the enactment of a special law to be entitled: *An Act for the Reformation of Persons of Intemperate Habits.*

Under this act there should be at least three classes of subjects.

First. Those who are guilty of misdemeanor or breach of the peace, while under the influence of intoxicating drink.

Second. Those who neglect the support of their families, squander their property, are guilty of idleness or vagrancy, in consequence of intemperance.

Third. Those who may voluntarily seek treatment in an asylum or those whose friends may apply for their admission.

For the first offence of the first and second classes, a nominal fine of from one to five dollars; for the second offence, within twelve months, a fine of from five to twenty-five dollars; for a third offence, within twelve months of the second, detention in a jail or house of correction not less than four nor more than twelve months; for a fourth offence, detention not less than eight nor more than twelve months; for any subsequent offence within twelve months of last discharge, detention for one year.

For the third class of persons no admission to the Inebriate Asylum for a period less than four months nor a discharge within a year without the approval of the Superintendent of the Asylum, and of three of the County Commissioners, except the full board are present, when the concurrence of six shall be required.

On recommendation of the keeper in charge and of three of the County Commissioners, any person of the first and second class may be transferred to the asylum for such period as they may decide upon, not less than four nor more than twelve months. Under this act an asylum should be established with accommodations for fifty patients on a farm owned by the State, and suitably located for the purposes of such an institution.

Under this act, any city or town may establish a house of correction, provided the accommodations, the employment and the regulations, are such as to be approved by the Board of Commissioners.

Under this act, the Legislature shall appoint a Board of Commissioners of one from each county, who shall hold office for four years, two new members being appointed each year and one-half of the number to be practicing physicians. This board shall be designated as Commissioners of Reformatory Institutions.

It shall be the duty of these Commissioners to meet as a whole board twice annually. First immediately after any new appointment, and again at least two weeks before the meeting of the Legislature. One half of the Board shall visit, in their half of the State, all the jails, houses of correction or public institutions of correction quarterly, including the Inebriate Asylum. They shall be authorized to establish rules and regulations for such institutions when not fixed by the Legislature. It shall be their duty to make an annual report of the condition of these institutions, with complete statistics of the number and classes of persons, ages, previous habits, etc., the expenses of the institutions, the number of persons admitted and discharged, and any other statistics the Governor may require. It should also be their duty to act on the applications for admission or discharge which may be submitted to them under this act. At the first meeting after the appointment of the board they shall establish the prices of labor and board in each of these institutions, which shall be as near actual value as practicable, except in the Inebriate Asylum where the prices may be varied according to the circumstances of the patients. Whenever the amount of wages shall exceed the price of board, the balance shall be credited to the individual and paid to his family monthly, or in case of no family, paid in full on his discharge. The expenses of the Inebriate Asylum should be paid in part by the patients when practicable. One half of the fines received for violations of the liquor law, and one half of the fees paid for licenses granted under the license law, should be devoted to the Inebriate Asylum.

All of which is respectfully submitted in behalf of the Committee.

B. N. COMINGS.

ARTICLE X.

REPORT OF THE COMMITTEE
ON MATTERS OF PROFESSIONAL INTEREST.

YOUR Committee regret to be obliged again to refer to the small amount of interest which they have succeeded in exciting in the objects for which this committee was instituted.

The few communications received are appended. It might be easy to present year by year a statement of the state of health—the prevailing diseases, etc., in every town and city in the State; and we are not without hope that this may be done at some not far distant time.

The paper of Dr. Bronson will give some information regarding the history of the origin of this Society, new, we believe, to most of its members.

Your committee would commend to your consideration the propriety of ceasing to exercise the power of giving licences, or the degree of M.D. It seems to us that whatever reason there may have been in the past for the exercise of any such power by this Society, no necessity exists at present calling for the use of this power. The difficulty which arises from this practice by the State Society is simply this—and should be plainly stated, that it may be plainly felt—that almost without exception, those who resort to this method of securing the sanction of some regular authority, are unable to obtain, by reason of ignorance, a diploma from any medical college whose diploma would give them qualification to become members of this Society. If a medical diploma is worth anything, do not let us belittle it by our action. And it is no more than justice to the great body of practitioners who have obtained such diplomas, and spent years of time, and no small amount of money, that they may be fitted to become members of this Society, that all who wish to enter its ranks should come in through the same gate.

In regard to one other subject, your committee desire to call your attention, and solicit your aid, in perfecting some plan which shall be honorable to the State, and efficient for the end desired.

State medicine, or public hygiene, has been in various places attracting an increasing degree of attention, as its claims have come to be more fully understood. So far as the subject has been legislated upon in this State, it has been only in the most fragmentary and imperfect manner; and the time now seems to have come when the entire subject might be reviewed, and all needed laws enacted which should place this State among the foremost in this matter.

It is not proposed to enter into any extended criticism of the laws of the State on this subject; one point will illustrate it well enough. In the first place, a board of health has well nigh despotic powers. Now the law provides that the board of health of every town (the organic law of Connecticut not recognizing a city) shall consist of the entire civil authority of the town. To state the law is to show its absurdity.

The rapidly changing social condition of the inhabitants demand constant and intelligent action. Our villages are fast becoming cities, and the cities expanding their limits with yet greater speed. In all these places there are many existing removable causes of disease, which the public good requires should be treated intelligently and efficiently, while yet they may be removed, and removed at a moderate expense. The neglect of such sanitary precautions has in some of our cities resulted in permanent causes of disease, or if not permanent, only removable at great expense.

To place the sanitary legislation of the State upon a basis of science, and to give it efficiency and consistency, seems every way desirable. This will never be done if the subject is left to haphazard legislation. To promote such legislation as will be harmonious and beneficial must be the work of those who make such matters their special study. If all considerations, private and public, are to be merged in this one, that of the public safety, it is surely all the more important that the highest attainable knowledge should be devoted to that subject. If the public safety requires that a despotic power should exist, it demands quite as loudly that that power be guided by the highest intelligence—that science and not superstition, that wisdom and not folly should order its decrees. Appended to this report is a crude sketch of what is intended to be recommended. It was the intention to pre-

sent a schedule of laws such as it was desired to submit to the legislature, including a revision of all laws now existing on this subject on the statute, but circumstances have prevented the fulfillment of that purpose, and the fragment presented only shows something of the scope of the plan. It is believed that the united voice of the members of this Society would go far toward procuring such legislation as would be in consonance with the requirements of science, and honorable to the Society.

H. A. CARRINGTON,

Chairman.

OUTLINES OF AN ACT REGULATING THE FORMATION AND DEFINING THE LIMITS AND POWERS OF BOARDS OF HEALTH.

I. STATE BOARD OF HEALTH.

1. Shall be composed of seven members nominated by the Governor, and confirmed by the Senate, having a term of service of seven years; after the first year, one shall be annually elected, to fill the vacancy which will occur by reason of the expiration of the service of one member. Upon their organization the terms of service of the several members shall be determined by lot.

2. A majority of this Board shall in all cases be physicians.

3. The officers shall be a President and Secretary.

4. Shall meet regularly at such time and place as a majority shall designate, not less than four times each year (quarterly); and may be called together at any other time than its regular meetings at the request of two of its members, or by the President, if in his opinion it shall be necessary.

5. The members of this Board shall serve without fixed salary; but shall be allowed their actual personal expenses incurred in going to or from the meetings of the Board, and a per diem compensation, not exceeding ten dollars, during attendance on the same.

6. The Secretary shall receive such salary as the Board may determine.

7. A majority of the Board shall constitute a quorum.

8. The Governor shall be, *ex-officio*, a member of the Board, may at all times participate in its deliberations, but shall have no vote in its decisions.

9. The members of the Board, immediately after their election, and upon the reception of a certificate to that effect from the Secretary of State, shall meet at the Capitol of the State, at such

near time as shall be designated by the Governor, for the purpose of perfecting their organization, and of entering upon the work hereinafter assigned to them in their corporate capacity.

10. It shall be the duty of this Board to collect, by such measures as it shall determine, the fullest possible information, to be tabulated and classified as far as possible, which can be obtained in regard to all those matters which directly concern the health of the people of this State; it shall especially institute inquiry concerning any such causes of disease, with its territory, as may be removed or obviated; it shall report the same to the Legislature, and shall at the same time suggest what legal measures, if any, it deems best or proper to prevent or remove all such causes of disease.

11. To promote the prosecution of such inquiries the duly appointed agents of this Board shall receive such aid and assistance from any inhabitant of the State as they may need; and any person resisting or obstructing such agent shall be punishable by a fine for every offence, not exceeding — dollars.

12. Directly after its organization, the State Board shall publish the names of its officers, and the address of its Secretary, and all local Boards by their Secretaries shall thereupon report to the State Board the names of the members, with their terms of service; also the Health Officer and Registrar.

13. This Board shall decide upon the form and language of the certificates to be used by Registrars and Physicians and Clergymen for making returns for all marriage licenses, marriage certificates, reports of cases of contagions, or other diseases, and of deaths.

14. The classification or nomenclature to be used by physicians in making their returns to the local Boards shall be determined by this Board; and copies of the same shall be kept by every Registrar, for the use of all physicians; to the end that, as nearly as possible, uniformity may be attained to in classifying diseases and the causes of death.

It shall be the duty of the State Board of Health to procure, immediately after its organization, a codification of the laws of the State in reference to the general subjects of health, the prevention of disease, and registration of births, marriages and death, now in existence, with such modifications, and additions or amendments, as shall seem best, and submit the same to the next general assembly of the State, for its approval.

15. It shall be the duty of this Board to prepare as early as possible, and send to each local Board of Health in the State, a code of instruction for the guidance and government of such local Boards in all matters relating to proper procedure in cases where contagious diseases are prevailing, or existing; and it shall be the further duty of this Board to prepare and publish, in the newspapers and otherwise, directions to the public how best to obviate local causes of disease by disinfectants and otherwise; and it shall be the further duty of this Board to show to the public the value of vaccination, and to urge general compliance therewith; and through the local Boards to adopt such measures as shall appear best adapted to promote its general introduction through the State.

16. It shall be the duty of this Board to prepare and submit to the Legislature of the State, for its consideration and sanction, all such laws relating to the promotion or preservation of the public health as shall by it be deemed necessary and best for this purpose.

17. It shall be the duty of the Secretary of this Board to receive the regular reports from all Registrars of the local Boards, and cause the same to be properly entered in books of record prepared for that purpose. In case any registrar shall neglect to make the returns required by this Act, the Secretary shall make enquiry of the cause thereof, and if the neglect shall be found to be wilful, he shall enforce such penalties as may be determined by this Board. The Secretary shall also make or cause to be made to the Legislature an annual report of all marriages, with the facts of nativity, color, act, etc.; all deaths, with analysis of all ascertainable causes; of births, with the statistics of parentage, etc. Also a report of the meetings of the Board, of its action in reference to all matters pertaining to public health.

18. The expenses which shall be incurred by this Board of Health shall be audited by a committee of its own members, and when so audited and countersigned, shall, upon presentation to the Treasurer of the State, be paid.

II. OF LOCAL BOARDS OF HEALTH.

15. There shall be in every town a Board of Health, consisting of not less than two nor more than five members; with a term of service of not less than two nor more than three years; to be arranged as follows: If it shall be composed of two members, after

their election and organization, choice, by lot, shall be made of the terms of service, for one or two years; in case the number be any other figure, similar arrangements shall be made, and thereafter annually new members shall be elected equal to the number whose term of service is expiring; and in all cases where it is practicable, at least half of the Board shall consist of physicians.

16. At the first meeting of the Board, which shall be held within one week after its election, an organization shall be perfected by the appointment of a Chairman, Clerk, Health Officer and a Registrar of Births, Marriages and Deaths; and immediately thereupon the Clerk shall send to the Secretary of the State Board the names of the members of the Board, and its officers, as provided in section 12.

17. The function and powers of the Local Boards of Health shall be of the same general character as heretofore, to wit: they shall have and exercise all the authority and power necessary to prevent, so far as is possible, the spread of any malignant, contagious or infectious disease, also in regard to the removal of all nuisances detrimental to health, or dangerous to life. Their authority shall be supreme, and each local board of health may adopt such rules and regulations for the control of all removable causes of disease as shall be deemed best by said board.

Every town having communication with the Sound or any navigable river leading to it, may prescribe such quarantine regulations as may be deemed best.

The Registrar of Marriages, Births and Deaths, shall make his returns to the Secretary of the State Board, instead of the State Librarian, as heretofore; but otherwise shall act as in statutes already provided.

Durham, May 2, 1873.

Membranous croup has the past winter prevailed throughout my ride, and field of observation, covering an area of about a hundred square miles, in the form of a parallelogram, extending about five miles north and eight miles south of my residence.

There have been more cases, and deaths, than during a period of seventeen years previous. The first cases proved fatal. I then commenced the use of the turpeth-mineral as an emetic, according to the practice revived by Prof. Barker of New York, and described in his interesting article, published in the *Journal of Obstetrics* for May, 1868.

My experience confirms the statement of Prof. Barker, that it is successful if administered in the early stages, and in cases not diphtheritic. Dr. Barker gives his preferences for this remedy as follows :

“It acts more promptly and efficiently than ipecac or alum, is tasteless, and more easily administered. It does not exhaust and depress the vital powers like antimony.

It is equally prompt in its actions with sulph. copper, while it is much more effective as a sedative. I think the active emesis from the turpeth-mineral accomplishes the following results much more speedily and effectually than any other agent.

It depletes the mucous membrane by an abundant secretion of mucons, which is thrown up from the larynx by forced expiration, which it causes, any albuminous or fibrinous exudation which may be there in a different state, and which by remaining may become subsequently pseudo-membrane ; it acts as a powerful revulsive, and thus diminishes the capillary circulation in trachea and larynx ; and thus it becomes a more effective agent in arresting the inflammatory powers.” My friend, Dr. Manwarring of New London, informs me that after reading B——’s article he has used the remedy in eight or ten cases with like satisfactory result. He testifies to the certainty of its operation as a great advantage.

I have found three or four grains to operate within twenty minutes ; its operation is easy, and continues for a long time ; the attendants are always astonished at the immense amount of phlegm brought up. For the fever which sometimes follows, I have usually given the veratrum, small doses of calomel, &c.

The disease has gone through some families. A minister at Rockland had two small children ; one had it, and was vomited by the turpeth-mineral. A few weeks after the family went to Cheshire on a visit, when the other had it and died. Another family of two children ; one had it in Middlefield and died ; the mother took the other child to North Guilford, when it was taken like the former, took the turpeth-mineral and recovered.

The use of this article in croup is not a recent discovery ; it was used empirically in this State by croup doctors a hundred years ago. They had their specialties in those early days as now ; there was the colic doctors, the croup cancer doctors, &c. Stille Jacobi and other writers give credit to Dr. Hubbard of Maine for bringing this remedy into notice. His article was published in 1840 (See Braithwaite’s, No 14.)

Dr Hubbard's experience agrees with Dr. Barker; he has never known it to salivate or operate on the bowels. He directs if the first dose does not operate, to repeat in fifteen minutes; has given ten grains within fifteen minutes. I have never found a second dose necessary.

The turpeth-mineral was the favorite remedy of the late Prof. Tully in croup. I find on referring to my notes taken from his lectures forty years ago :

“Dio. proto-sulphate of mercury, or turpeth-mineral, the most slandered of any article of the *Materia Medica*.

Operations are—First, ‘Emetic, very slow in its operation, never operating short of an hour and a half; when given in the smallest dose it will operate in its own time.’

Second, ‘Cathartic, when given as an emetic, it is necessary to combine it with some article to restrain its cathartic effect, which is not required in croup.’” Now this is not in accordance with present experience.

First—it has always vomited within twenty minutes in my cases and never operated on the bowels; my doses are no larger than Dr. Tully recommends.

Thirdly—Deobstremment, in small doses.

Resolvent—A denagio, independent of its emetic or cathartic operation. It is destitute of any anti-phlogistic, reducing debilitating, or exhaustive power. “It acts on the peristaltic action of the stomach and œsophagus, and not in the diaphragm and abdominal muscles.” “If it does not operate in an hour, give ipecac to quicken it.” It possesses the power of astraining morbid secretion, suspending the effusion of coagulable lymph, and changing the action of the mucous membrane, being a powerful deobstremment.

The second or third act of vomiting usually brings up the membrane. It will frequently relieve the symptoms before vomiting is produced.

“This remedy will usually give relief if given in time; if not, give calomel in small doses and follow with *oil*.”

R. W. MATHEWSON.

Saybrook, May 1st, 1873.

To the Chairman of the Committee on Matters of Professional Interest in the State:

Dear Sir:—My excuse for the delay of this report is the tardiness of the members of our County Society in communicating

with me, although requested early in March to furnish me any information they might have to report on or before April 1st.

The year does not seem to have been specially characterized by fatality, though our physicians have as a rule been busily occupied.

Dr. D. H. Hubbard of Clinton refers to the decreasing fatality of tubercular phthisis, stating that whereas thirty years ago this disease was the cause in some years of one-third of the mortality, this year only two out of thirty deaths were caused by it. Cases of paralysis are, however, he thinks, decidedly on the increase.

Dr. A. H. Hough of Essex speaks quite strongly of the frequency and obstinacy of functional trouble in the secretory system, due as he supposes to the extreme ranges of temperature of the past year. He has never observed so much hepatic and renal trouble as occurred to him during the year. Speaks of the case of his grandson, in whom after scarlet fever there was entire suppression of urine for a period of eight days, but final recovery.

Accordingly, the remedies most in use with him have been such as tend to relieve engorgement of the glandular system.

Dr. C. H. Hubbard of the same town mentions influenza, sub-acute rheumatism and intermittent fever; the number of cases of the latter disease exceed the aggregate of the two preceding years. The cases were mostly in the immediate vicinity of low lands, are of the quotidian type, and yield readily to appropriate medication. He also relates two surgical cases, one a diseased testicle, supervening on an old hydrocele, which had required tapping several times. Castration was performed, followed by recovery. Also a ligation of posterior tibial artery for traumatic aneurism following a scythe wound, extending from without inward, directly through the upper third of the calf of the left leg. The difficulties of finding and ligating a deeply situated artery with the tissues already infiltrated with serum and blood were well exemplified; however, the patient made a good recovery, with but slight sloughing of the tissues of the heel. Both operations were performed by the late Dr. Levi Warren of Norwich. Quite an extensive epidemic of scarlet fever of asthenic type prevailed in December and January; prompt and supporting treatment was necessary and efficient in most cases, though a few resulted fatally.

Passing now to the northern portion of the county.

Dr. A. B. Worthington of Middle Haddam reports no epidemic. Less than the average number of fevers. No cases of intermittent

fever of local origin, but admits a greater tendency to diseases of the brain and its membranes among children. He also puts in a plea for the better instruction of young mothers, which on account of its importance I enclose for your consideration.

Dr. Hutchinson of Cromwell relates in brief a case of acute purulent synovitis of the shoulder-joint, in a boy eight years of age, attended with (so called) spontaneous dislocation of the head of the humerus, which was carried two inches outward and upward from its socket. Metastatic abscesses formed, and in spite of full supporting measures, death occurred in about six weeks.

From Middletown I have received no written report, but am informed that scarlet fever has been prevalent, and within the last few months cerebro-spinal meningitis. The slow convalescence from this disease was remarked upon by Dr. E. B. Nye, in a conversation with me a few days since.

From the other towns in the county, I have not been able to obtain an account of anything specially interesting. Deep River, however, has suffered somewhat from scarlatina, and a few cases of the cerebro-spinal affection have occurred, with one or two deaths.

From Saybrook I have to report as follows: Early last summer eight cases of a hybrid form of scarlet fever occurred. At first I regarded the disease as rubeola sine catarrho, the eruption being papular and semi-circular in form, but in a day or two it would become a purely scarlet eruption. The nervous center soon became involved. Delirium or stupor in some of the cases, and in one case opisthotonos, was developed. Four of the eight cases died. Of the four who recovered, three had mild albuminuria, which quickly responded to diuretics and tonics.

One case of tetanus, which if it had a traumatic origin was due to syphilitic disease of the bones of the nasal cavity (which could only be diagnosed by the history of the case, and peculiar fetor). The onset of the disease was gradual; first there was slight stiffening of the muscles of the jaw, followed by spasm of pharyngeal muscles on attempts at deglutition, afterward opisthotonos, and death on the eighth day. Also one case of cerebro-spinal meningitis, which died on the fourth day, from congestion of the lungs. In this case the question occurs to me, was not the congestion caused by pressure from inflammation or its products on the pneumogastriacs at their origin?

Hoping that next year you will have a more full and thorough report from our county, I am, sir, very respectfully your obedient servant,

J. H. GRANNISS.

DR. H. A. CARRINGTON, New Haven, Conn.

I fear I can offer but very little of "professional interest," as the past year had been so like previous years.

Within the circuit of my practice, there has been no prevailing epidemic, and perhaps less than the average of fevers. No cases of intermittent fever have originated here.

If there has been any increase of any one disease, it has been in that of meningitis. There does seem to be more tendency to disease of the brain and its membrane among children.

Now I want to suggest some work for our committee. And that is to devise some plan to instruct young mothers how to feed and manage their babes. What they may feed to them and what they must not. Also instruct the mass how to treat the sick. If we wish to have healthy men, it is very important that the children be nursed right. But the physician has not time to tell each new mother all she ought to know, and if he had, she could not remember all. Could not our committee select a book of instructions if there is one published, or if there is not, let them compile one, and have it published at as cheap a rate as possible, and furnished to physicians at cost; so that a copy may be put in the hands of every new mother at least, or in every house. Let it contain plain, full instruction for diet and dress, &c. And let it contain a long table of articles that must be prohibited.

Many children are carried to the table to be fed before they are six months old, and in other ways treated very improperly even in intelligent families. It does seem to me that something might be done in this way to prevent seeds of disease being planted.

Very truly yours,

A. B. WORTHINGTON.

ARTICLE XI.

HISTORICAL ACCOUNT OF THE
ORIGIN OF THE CONNECTICUT MEDICAL SOCIETY,
AND OF THE EIGHT YEARS' STRUGGLE WHICH AT LENGTH
SECURED ITS CHARTER.

BY HENRY BRONSON, M.D.

So far as I can ascertain, the first organized attempt to obtain legislative aid for our profession in Connecticut was made by certain eminent physieians of Norwich and vicinity, eleven in number, October, 1763. They petitioned that the physicians in each county of the colony might have liberty to meet quarterly, and to choose annually "a committee of three approved physicians" to examine candidates for the practice of physic, and to approve by certificate those found qualified, the rejected candidates to have the right to another examination at any quarterly meeting in the same county. Those without certificates, not already in practice, were not to be allowed to collect their fees *by law*. The prayer was refused. The memorial with the signers' names may be found in Dr. Sumner's excellent Annual Address published in the Proceedings of this society in 1851.

The movement which ended in chartering the Connecticut Medical Society, so called, was initiated by the New Haven physicians, and carried on till success was attained mainly by the "Medical Society of New Haven County." On the tenth day of December, 1783, Leverett Hubbard, Eneas Munson, Samuel Nesbitt, Levi Ives and Samuel Darling, all of New Haven, requested, by advertisement in the Connecticut Journal, the physicians and surgeons of New Haven county to meet at the Coffee house in New Haven, on the first Monday of January then ensuing, at two o'clock, P. M., "in order to form regulations within the line of their profession, of the utmost importance to the public and themselves." To the gentlemen who were called together by this invitation, January 5th, 1784, "the associated faculty in New Haven," as they styled

themselves, presented a formal "Address," in which they urged the formation of a county society which, "united in petition with other county societies," might, it was thought, obtain from "the honorable legislative body" an act of incorporation the "more effectually to regulate the practice" of physic. The same object is set forth prominently in the county society's declaration of "purposes" at its first meeting. To unite "with the several medical societies within the State in application to the legislature, praying them to adopt such measures for the future regulation of our salutary art as shall effectually support and countenance merit, and discountenance ignorance and presumption," was among the foremost of these purposes. An object which was beyond the reach of individual effort, might, it was supposed, be attained by associated action. When this most important end had been secured, the provisional organization of the county society was dissolved.

After the county society had adopted its regulations, and equipped itself for business, the committee of correspondence, consisting of its most distinguished members; to wit, William Gould, Eneas Munson, Jared Potter, Samuel Nesbitt, Ebenezer Beardsley and Edward Carrington, the first and third from Branford and Wallingford respectively, the others from New Haven, addressed circular letters to prominent physicians and societies in the different counties inviting them to send delegates to a general meeting to be held at "Mr. Butler's," in Hartford, May 19th, 1784. One of the replies (now in my hands) was from the "New London [county] Medical Society," dated New London, April 20th, 1784, John Barker, president, Simon Wolcott, secretary. It approves the object sought, and announces that Charles Phelps and Joshua Downer had been appointed delegates from that society. Jared Potter, Leverett Hubbard, Eneas Munson, Samuel Nesbitt and Edward Carrington, the two last as substitutes, appointed May 4th, were the delegates of the Medical Society of New Haven County. They were authorized "to agree upon and organize a medical society, and to join in a petition to the legislature for an act of incorporation," &c.; or "if the several counties were not sufficiently represented to move for an adjournment until the second week of the session of the general assembly, in October next, at New Haven," &c.

Of what was done at the "general meeting" we are not informed, but in August the New Haven county medical society appointed Drs. Munson, Beardsley and Carrington a committee

“to examine the doings of the committee at Hartford, and to make such alterations as they shall think proper,” and report. The same persons were elected “to represent the county at the general meeting on the 13th of October next, at the house of Mr. John Miles, in New Haven.”

The delegates appear to have met at the time mentioned, and to have agreed on a “petition and bill in form.” By direction of the New Haven county society, January 5th, 1785, these were forwarded to the several counties, and another general meeting solicited, the same to be held in Hartford, May 18th ensuing. Before this last date, however, the society appointed Drs. Munson, Beardsley and Nesbitt a committee to draft certain amendments to the “bill of form.” “In about half an hour,” a report was made embracing the desired amendments. These were forthwith approved, and the delegates to the approaching convention, Drs. Hubbard, Potter and Carrington, were instructed to urge their acceptance as a part of the proposed charter. Their object seems to have been to reserve in the incorporated institution for the counties certain rights or privileges similar to those exercised by the New Haven county society. They sought “legal sanction to the major part of the physicians and surgeons associated in the several counties,” and wanted for these local associations authority to choose their own officers, to fill vacancies occasioned by the death or removal of “any fellow or fellows,” to examine candidates for practice, and to issue valid certificates of qualifications, &c. One of the intended amendments (they are all spread upon the record-book) required “that the members composing the body corporate, or state society, [should] be equal in number from each county, and be chosen for life or during good behavior.”

The convention met in May, 1785, agreed on a petition and bill, and sought the aid of the general court. From a letter of a subsequent date, addressed to Gov. Huntington by a special committee, it appears that “the honorable house of representatives, in two successive sessions [in May and October,* 1785, I suppose], granted the request,” but the council, though favorably inclined, refused their “sanction.” The same letter complains that the motives of the petitioners had been misunderstood—“some ignorant and ill-minded persons having misrepresented their de-

* The general assembly then met twice in the year in these months, alternately at Hartford and New Haven, and the medical conventions were always held at the same times and places.

signs, and insinuated that the main object was to increase the pecuniary emoluments of the faculty." To meet the objections, the N. H. county society in January, 1786, appointed "Messrs. Hubbard, Munson, Potter, Beardsley and Nesbitt a committee to revise the medical petition and bill, lately preferred to the honorable legislature, and to transfer [transmit ?] the said petition and bill to the respective counties, requesting their farther efforts with ours for obtaining a legal establishment, and to meet a delegation from this county at Hartford on the 16th day of May next, at Butler's tavern." They were in earnest, and the same committee was selected "to prepare and publish in the Weekly Gazette a history of some of the medical corporations of Europe and America, to state to the public the ground and reasons which have induced the faculty of this State to request an act of the legislature incorporating a society, and to write to some of the principal characters requesting their assistance," &c. The draft of a letter (already alluded to) to Gov. Huntington, inviting suggestions and requesting his co-operation, is before me. It is of considerable length, and presents in vigorous but not elegant English such arguments as would be calculated to influence a statesman.

The revised petition and bill came up for consideration at the quarterly meeting in April. They were approved, and "the alteration in the bill increasing the members of the society from sixty to seventy" was adopted. A vote was also passed making "an addition of four more members from this county agreeable to a recommendation" forwarded to the several counties. At the same time, Messrs. Hubbard, Gould, E. Munson, Nesbitt, Potter, Beardsley, Carrington and Walter Munson were named as members (corporators) of the state society from this county. The same persons with the exception of Gould, Carrington and W. Munson were sent as delegates to the convention soon to assemble in Hartford.

The convention met at the designated time, and promptly preferred their well considered petition to the assembly. The petitioners argued in favor of "an uninterrupted succession of learned physicians." "In most of the neighboring legislatures of the United States, and in many other well ordered governments, [say they,] the incouragement of an accurate study in the theory and practice of physic and surgery are esteemed deserving the assistance and patronage of legislative authority, and the wisdom and policy of many enlightened nations have heretofore been happily

exercised in establishments for the promotion of medical knowledge, and for the same purposes medical societies have been heretofore instituted under the sanction of government, and incorporated with such privileges and immunities as were consistent with the utmost liberality of sentiment and practice, highly useful to mankind, and of essential advantage to the profession and its practitioners, and to the establishment and continuance of such societies so incorporated as aforesaid." They speak with satisfaction of the "many important and useful discoveries in Anatomy, Chemistry and Botany," and the "many accurate histories and cures of diseases" "which never would have been explained, methodized and publicly authenticated unless societies had been so established for the preservation and diffusion of medical improvement." At the same time, they "are sensible that all useful knowledge is promoted by a liberal toleration in sentiment and practice, and by allowing the mind free scope in its researches," and ask no "restrictive power or exclusive privileges," "but only such encouragement as will stimulate those who practice the art to investigate the nature and cure of diseases with accuracy and precision, and to communicate and demonstrate their methods of cure from such experimental facts and rationale as will clearly distinguish the skillful practitioner from the illiterate, unpracticed pretender—With such sentiments [they continue], your honors' petitioners respectfully approach your honors, with wishes that their profession may be taken under your honors' patronage and protection, and therefore pray your honors to decree that there shall be in this State a medical society known and instituted by the name of the Connecticut Medical Society, with such charter, rights and privileges and act of incorporation as your honors shall in your wisdom judge best calculated to promote medical knowledge and improvement."

The memorial (see "Miscellaneous," Vol. III, Doc. 169, in the State Library,) is signed, in behalf of the convention, by Benjamin Gale, Leverett Hubbard, John Clark, Thaddeus Betts, Elihu Tudor, Thomas Coit, Ichabod Warner, Joshua Porter. Its consideration was referred, in the upper house, to the October session, then to the May session following, then to the October session, 1787, when it was referred to a joint committee, of which Pierpont Edwards, of New Haven, was chairman on the part of the lower house, with instructions to report by bill or otherwise. A bill was accordingly brought in authorizing the several county medical

associations of the State, to be known as the "Medical Convention of the counties respectively," to convene annually, to choose the necessary officers, to make regulations for the admission of members, to "anatomize" the dead bodies of criminals and capital offenders with the approbation of the court, &c. By the same act a state society was authorized by the name of the "President and Fellows of the Connecticut Medical Society," with Benjamin Gale, Leverett Hubbard, Thaddeus Betts, Thomas Moseley, Elihu Tudor, Joshua Porter, Charles Phelps, Thomas Coit, Philip Turner, Eliakim Fish, James Potter, Joseph Perry, Theophilus Rogers, Ebenezer Beardsley, John Clark, David Adams, Jared Potter, Samuel Nesbitt, Simeon North, Samuel Orton, John Osborn, Hosea Hurlbntt, Ichabod Warner, Jonah Hart, Elisha Lord, David Rogers, Philo Perry, Timothy Hosmer, Lemuel Hopkins, Elisha Perkins, Jeremiah West and Daniel Sheldon for corporators. They were to meet in September annually, alternately in New Haven and Hartford; might admit members at their pleasure, the whole number not to exceed seventy; might appoint examining committees in the several counties who should certify, in letters testimonial, to qualifications for practice; might make bye-laws relative to admission, expulsion and "disfranchisement"; might "annex reasonable fines and penalties to the breaking" of bye-laws, not exceeding twenty shillings for one offence, but could not abridge the rights of any practitioner, &c. Dr. Benjamin Gale was to be president of the first meeting, and to be sworn into office.

These were the important characteristics of the bill. It passed the lower house, but was negatived in the upper. During the pendency of the petition, strenuous efforts appear to have been made by the New Haven county society and the physicians of the State to secure its favorable consideration. When the bill finally failed, its friends were sorely disappointed, feeling that a great calamity had befallen the profession and the people. Why honest labor in the cause of humanity and science should be thus requited was to them a mystery. Though experience in the way of voluntary effort has taught their successors a different lesson, they seemed to think that nothing great or durable could be accomplished without the aid of legislation. In explanation of the hostile action of the assembly, it may be said that it was not then customary to make laws for the benefit, or seeming benefit, of particular classes. There was a well-grounded apprehension of dan-

ger which might come from special privileges and monopoly. In 1787 a few cities had been recently incorporated, but what may be called a private charter did not (I believe) exist in the State. Very naturally, the legislature was reluctant to change its policy. More than this, there were provisions in the rejected bill calculated to excite the jealousy of a suspicious people. I refer particularly to those parts of the act which gave to the corporators and members the right to choose their associates and successors, and to the society the power to disfranchise (professionally) and impose pecuniary penalties, &c.

While all were disappointed by the action of the assembly, many were discouraged, becoming apathetic or indifferent. The eastern counties, wrote Dr. Jeremiah West, of Tolland, "have become very remiss, and fallen into a lethargy." But the New Haven county society did not lose courage, nor did they neglect the advantages which they already possessed. Though one of the means of improvement had been denied them, there were others which could not be taken away. As early as January, 1787, they had directed their committee to open a correspondence with other societies in this country and in Europe, and to forward to them some of the most interesting cases which had been communicated to the society. They received in reply complimentary letters from distinguished individuals and societies. They now decided to publish the more valuable papers in their possession, and appointed (in January, 1788) a competent committee to superintend the work. Their object was apparently to make for themselves a reputation at home and abroad, and increase their influence with the public, and if need be with the legislature. An interesting pamphlet of eighty-six pages, entitled "Cases and Observations," was issued in the summer of 1788, and widely distributed. It was a great work for that day, and long the pride of those whose names it perpetuated. Several books having been received in exchange for this publication and from other sources, a library was established and a librarian appointed, when the society was ready to renew the effort for a charter. Approvingly or adversely, the people of the State watched intently their proceedings. Yale College partook of the excitement, and on the 15th of July, 1788, the seniors discussed the question "Whether it be safe to grant the proposed charter of the Connecticut Medical Society?" and on the 6th of January following, the question "Whether the institution of medical societies be useful?" (Stiles Diary).

This time the county society asked to be itself incorporated. To give importance to the movement and weight to the appeal, early precedent was neglected, and several distinguished and influential physicians from other counties were admitted to membership; namely, Nathaniel Perry, of Woodbury, James Potter, of New Fairfield, Amos Mead, of Greenwich, Samuel Mather, of Lyme, Joseph Trowbridge, of Danbury, James Clarke, of Stratford, and Josh Poor. Several of these, it will be noticed, were from Fairfield county, where no medical society existed previous to the chartering of the Connecticut Medical Society. (See Blakeman's Address, p. 40, Ct. Med. Soc., 1843.) As early as January fifth, 1791, a "bill for incorporating the Medical Society of New Haven County" was "before the Assembly." At the same date, James Potter, Samuel Mather, Amos Mead, Jared Potter and Eneas Munson were appointed a committee to revise the bill. At the next meeting in April, Drs. Eneas Munson and John Spalding were chosen "a committee to engage an attorney to attend the petition and get it through the assembly," which movement shows that our unsophisticated ancestors knew how suitable appliances facilitated legislation. I do not believe, however, the "attorney" was expected to buy votes as he has been known to do in our day. Nor do I suppose that any reputable lawyer in 1791 would have consented to act as a "lobbyist" with money in his hand.

In Dr. Sumner's "Address on the early Physicians of Connecticut," already referred to, it is stated that the members of the Medical Society of N. Haven County, petitioned for a charter in May, 1791.* They "do not presume to ask for any powers, privileges, exemptions or immunities, but they humbly pray that your honors will take their case into your wise consideration, and decree that your petitioners shall be formed into a body corporate and politic, by the name of the Medical Society of New Haven [County], for the purpose of collecting and preserving a collection of useful papers relative to the practice of medicine." According to the same authority the prayer, signed by Eneas Munson, James Potter, Samuel Mather, Eneas Munson, Jr., Levi Ives, Theodore

* I can find no such petition in the state offices in Hartford; but on a list of those persons having petitions before the assembly in October, 1790, I find the names of "Eneas Munson" and others. This petition, continued till the next year, is, I presume, the one referred to January 5th, 1791, in the paper quoted from the N. H. county record-book, and also the one spoken of by Dr. Sumner, as presented in May, 1791. For want of the original which has probably been removed from the files, I have been obliged to depend on Dr. Sumner's extract.

Wadsworth, Amzi Hall, Elnathan Beach, Jared Potter, John Spalding, Horace Beardsley, was granted in the lower house, but the upper house, according to its practice, referred it to the October session. Determined to do every thing possible to secure the object, the society early in October, "voted that Messrs. Eneas Munson, Jared Potter and Levi Ives be a committee to revise and make such alterations in the bill now before the honorable general assembly, and take such measures to pursue the same to effect, and expend such moneys, as they shall think necessary."

The appliances which have been named were not without effect. The pamphlet and the reputation it gave, the array of celebrated names, the lawyer and his arguments, the money which paid expenses, the determination of the suitors, and the increasing pressure on all sides proved too much for the Solons of the State. Such action was obtained as made success certain. In January following (1792), the committee of correspondence, in obedience to the instructions of the society, addressed "circular letters to the several county societies* informing them," &c. Thus they continued: "After long perseverance we have at length obtained a general act of incorporation [There is some mistake here. No act of the kind had then been passed if the statute-book tells the truth] according to our first efforts and expectations. * * *

We once more solicit your assistance by delegation at Hartford on Wednesday of the second week of the session of the assembly in May next at the house of landlord Bull's, opposite the court house, then and there in convention to deliberate and devise such bill in form for an incorporation of the physicians and surgeons of this State as shall be most conducive to the honor and dignity of the profession," &c. The circular, a copy of which is in my hands, is signed by three of the committee, Drs. Munson, (sen.,) Hubbard and Potter. The same persons with the addition of Levi Ives were the delegates from New Haven county.

The medical convention and legislature both met in Hartford in May. The elements of discord were hushed, and after a seemingly short and peaceful accouchement the Connecticut Medical Society was born, while the "faculty" were in raptures. The venerable Benjamin Gale having in the mean time (1790) died, the name

* These were apparently formed to give assistance in the movement which New Haven had begun, and were used as a part of the machinery which at length secured the victory.

of James Potter, an eminent physician of New Fairfield, stands at the head of the corporators, forty-six in number, six of whom were from New Haven county; to wit, Leverett Hubbard, Eneas Munson, Jared Potter, Elnathan Beach, John Spalding and Levi Ives. Dr. James Potter's position was probably given him in consideration of more substantial honors to be conferred on the acknowledged fathers of the society in N. Haven county.

The charter obtained was free from the objectionable provisions of the rejected bill of 1787. It gave no authority to impose pecuniary penalties. It gave none to tax members, though an attempt was soon made to use that power. It has often been amended, but down to a recent period it has undergone no fundamental change. The bill of 1870 introduced new features, perhaps improvements.

In conclusion, the members of the Medical Society of New Haven County felt that they had done a memorable work, and deserved the gratitude of the profession throughout the State. They did not doubt that they had given an important impulse to medical science, and secured not only for themselves but for the public the greatest benefits. At the usual time in July, they met, listened to "the reading of the act of incorporation," made "some observations thereon," and then "thought proper to adjourn," too much elated perhaps to do more. The people at large had taken great interest in the movement, and believed that now signal improvements in medicine must be made. In recognition of the distinguished services of the physicians of N. Haven county and of the body to which they belonged, three of the most eminent of their number were immediately elected to the highest offices in the new society. Dr. Hubbard was chosen president, Dr. Munson, vice-president, and Dr. Jared Potter, secretary, at the first meeting of fellows in October, 1792. After Dr. Hubbard's death in 1794, Dr. Munson was chosen his successor, and continued in office till 1801. Dr. Jared Potter, the foremost medical man in the State, would probably have followed Munson had he not peremptorily declined the honor. After Dr. Munson's retirement, New Haven county did not have a president till 1856.

ARTICLE XII.

REPORT OF COMMITTEE ON VACCINATION.

Read before the Annual Convention, May 29, 1873.

BY P. M. HASTINGS, M.D., OF HARTFORD.

Your Committee do not deem it necessary to adduce statistical information showing the results, nor offer any argument proving the importance, of vaccination, as a means of preventing the spread of small-pox; this point we regard as long since settled in the minds of the medical profession. We propose to offer on this occasion a few brief remarks on some matters of practical interest connected with the general subject of vaccination.

In reviewing the history of this subject, after a period of three-fourths of a century, during which vaccination has been practiced most extensively in all parts of the world, one cannot fail of being surprised to find so little modification of the views advanced by Dr. Jenner in his original essay entitled "An Inquiry into the causes and effects of Variola Vaccina," proposed or maintained at the present time.

The publication of this paper in June, 1798, attracted the attention of the medical profession at once, and although it contained a record of only eight cases, so carefully and conscientiously had these been studied and all sources of errors avoided, that the more intelligent physicians of London were prepared to accept its conclusions and commence the experiment of cow-pox inoculation. Little seems, however, to have been done for several months, as Dr. Pearson states that in January, 1796, unable to procure matter, he made extensive inquiry and found the cow-pox existing in two stables in the vicinity of London, and that no other source was then known. Large numbers of persons were soon after inoculated with cow-pox; very many of these were inoculated afterward with, and otherwise exposed to, the contagion of small-pox—the result confirming most conclusively Dr. Jenner's claims.

Mr. Simon's estimate of this original essay, as a "master-piece of medical induction," has never been successfully called in question. Dr. Lettsom, a distinguished London physician, in 1805 published a paper designed to meet the objections urged against cow-pox inoculation. It is certainly curious to find many of these objections identical with those met with at the present time. One point calling for extended argument, that the new process was designed to engraft a "bestial disease" upon mankind, seems to have lost its force; so also, the prevalent idea that it was tempting providence and interfering with its manifest tendencies. Dr. L. further states that he thoroughly investigated with care all the cases accessible, where it was claimed other diseases had been communicated by vaccination, and asserts that in no instance was the charge sustained. He complains that vaccination had been more readily introduced and more highly valued upon the continent than in England, and assigns as the reason the opposition and pretensions of empirics. Two physicians made themselves peculiarly prominent in opposition to the new doctrine, Drs. Morehouse and Squirrell: their writings now would not be considered worthy of criticism.

In 1799, Dr. Jenner communicated his discovery to his friend, Dr. Waterhouse of Boston, who entered enthusiastically into his views, and at once introduced the practice of vaccination into this country. He seems to have met with much opposition and ridicule; the practice of variolous inoculation having been generally adopted. Dr. James Stringham of New York, writing in 1801, says the obstacles to cow-pox inoculation were so great among his patrons, that he was obliged either to abandon the effort or have recourse to a "pious fraud," and when called upon to inoculate for small-pox introduce the vaccine in place of the variolous virus; and that by afterward exposing those vaccinated to small-pox contagion by inoculation and other ways, he was able to convince his friends of the superiority of the new process, and that many could converse intelligently upon the subject. Dr. S. further states that Dr. Seamens first experimented in New York the previous winter, and alludes to the introduction of vaccination in the eastern States by Dr. Waterhouse a short time previously. It would appear that vaccination became rapidly extended after this period, and that variolous inoculation was soon discontinued.

The mode of transmitting cow-pox at first was from individual to individual, selecting the eighth day of the disease as the only

certain period. In urging upon the government the necessity of sending the cow-pox virus to the East Indies, Jenner proposed to select a number of recruits, who had not been subjects of small-pox, in charge of experienced vaccinators. The lymph was also dried upon glass and inclosed for transportation. The employment of crusts was of later date; it being observed that these commenced to form as early as the fifth day, and to be composed of pure lymph thus early secreted—that they could be preserved for a considerable period of time, and were convenient for transmission, they became generally used. It has been only at long periods that new stocks from original sources have been introduced. Quite recently it has become the fashion to laud animal virus, transmitted from heifer to heifer, as the only safe method of vaccination. The advocates of animal vaccination, generally engaged in propagating virus, urge its importance on the ground that diseases are often transmitted by inoculating, an old idea, and one which has been often and, we believe, successfully exploded. Syphilis, it is claimed, is often communicated in this manner. The present state of opinion, with those best informed, we think, is this: that syphilis cannot be successfully inoculated except as it exists in a state of activity, and even then with difficulty. A syphilitic taint cannot be transmitted by inoculation unless it becomes developed in some visible form. Direct experiment in test of this point has generally, if not always, failed, and the cases claimed in support of such transmission have proved far from being conclusive. No conscientious practitioner would ever commit the error of using virus from a subject presenting any form of skin disease. It certainly seems a fair inference, that if the damage from this source is as great as is often claimed, the experience of thousands of intelligent practitioners during a period of seventy-five years ought to have settled this question beyond doubt.

While it is safe to admit the possibility of syphilitic inoculation by means of vaccination to insure every precaution, we do not share the fears of the advocates of animal vaccination. The principal objections to animal virus we conceive to be its greater uncertainty of inducing the disease; that troublesome ulcers more frequently result from its use; the greater expense and difficulty of obtaining it, especially in our country districts; and lastly, that it cannot be preserved for a longer period than ten or twelve days in a state of activity. On the other hand, well selected crusts

can be kept for a much longer period, are convenient of use, and if only the outer and central parts are employed, no danger need be apprehended from purulent inoculation or other accidents. Doubtless most of the unpleasant results following vaccination, and its failure to protect the individual from attacks of small-pox, giving rise often to well founded prejudice, are due to carelessness on the part of the practitioner, in the selection and preservation of vaccine crusts. We hold that no virus should ever be used unless it be taken from a subject, where the progress of the disease has been carefully watched,—the condition of the patient noted from time to time by a competent observer. Any aberration from the normal progress in kind or degree should deter us from the use of the resulting crust, even if it meets the requirements of color, size and form. The too common practice of vaccinating a child, and at the end of three weeks taking the crust, wholly unmindful as to the character of the disease or state of the patient, is to be strongly reprobated. Treating the operation as trivial, and carelessness in the selection of virus, has led to much lax vaccination and consequent loss of life. If, as we believe, vaccination is of the utmost importance to the individual, we ought in conscience to so perform the act that all the protection it is capable of affording should be secured. Even re-vaccinations should be subjected to one or more inspections afterward. If greater importance is given to this matter by the profession generally, we are confident that better results could be claimed, and public confidence be more thoroughly secured. In respect to the necessity of re-vaccination, we think it settled, that after puberty or any other marked change in the condition of the individual, or where the signs of previous vaccination are imperfect, it should be performed. While only a small percentage of those once thoroughly vaccinated will pass through the successive stages of the true disease, we often have no other method of testing its protective power.

The mode of performing vaccination is a matter of considerable importance. The most certain and most approved method is that of scarification, making a number of longitudinal, crossed by a similar number of horizontal, incisions upon the arm, with a clean lancet, and introducing the virus from prepared points or charged lancet. We have long practiced making the primary incisions with a lancet charged with lymph from the crust, with most satisfactory results.

Compulsory vaccination has not and probably never will be as general in this country as it is among many nations of Europe. Gratuitous vaccination by those in authority has reached many who otherwise would be neglected, and in many of our towns and cities has been practiced with good results, though, we fear, sometimes sufficient care and subsequent oversight has been neglected. If the name, age, period and results of vaccination in every case could be made a matter of record, similar to that now required of marriages, births and deaths, we should be able better to resist the spread, and perhaps ultimately to realize Jenner's confident hope, of banishing small-pox from the list of diseases. This is perhaps too much to expect, and we would urge upon the members of the profession the importance of making a suitable record of all cases of vaccination and re-vaccination, embracing the name, age, and as far as may be the results in each case, to be kept for future reference. If some such plan could be devised and carried into successful operation, we might expect in the course of a few years very valuable results. The committee, however, are not prepared at present to propose any definite action, but would suggest the idea for future consideration if it should be deemed feasible.

P. M. HASTINGS, M.D., }
 C. A. LINDSLEY, M.D., } *Committee.*
 A. W. NELSON, M.D., }

ARTICLE XIII.

THE PHYSIOLOGY OF SLEEP.

Read before the Annual Convention, May 29, 1873.

BY ELIJAH BALDWIN, M.D., OF SOUTH CANTERBURY.

We should find a definite, adequate cause of sleep. There is a close analogy between the phenomena of sleep and those that belong to the secretions. Have we a secreting organ to which we can rationally refer, as liable to produce and producing sleep?

Physiologists have left us the thymus gland, not having assigned to it any important office, although it is evidently fitted to perform some important duty both from its size, its guarded position and its anatomical structure. Let us first consider the development of this organ.

For a few months after conception the foetus is incapable of motion. Anon muscles form and bones on which the muscles act. With this ability to move, and to some extent in the proportion of this ability and development, this gland presents formality and distinctive character as capable of secreting something important in the animal economy. No secreting organ is so largely developed at this period of foetal life. The secretion of this organ passes to the circulation and imbues the foetal system. If my future explanation of the *modus operandi* of producing sleep in the adult is correct, the sleeping of the foetal system with this secretion is rather a typhoid condition than sleep. Neither at this time is the demand for this secretion limited to the foetus. Until conception, the female, either brute or human, has been active, too active for the safety of a being requiring limited motion for its safety in utero. The thymic fluid passing with the blood through the placenta exerts its peculiar quieting influence on the mother, so she is also held by this chain to more than ordinary sleep and rest; hence the gland should not be in proportion to the requirements of the child as sleep-producing, but large enough

and active enough to control the mother also. The elimination of this fluid is also the part of the mother. Its peculiar quality and flavor is imparted to her. She breathes the foetal atmosphere literally. So that we may reasonably conclude that after birth she recognizes the breath of her young. The cow and ewe know their own young among herds and flocks by a peculiar flavor—not only immediately after birth but for some time succeeding. The cow having hid her calf among brush and brambles, and his place being changed, she still acknowledges something he gives to the air as belonging to herself, a something the rest of the herd, though they may be mothers, care nothing about. Sir Astley Cooper noticed the large and increased development of the thymus gland in the calf for some time after birth, and there seems a natural necessity for this, for in the wild state he should quietly sleep when the mother conceals him, but should surround himself with a cloud she alone can penetrate. So this organ is not only sleep-producing but suggests definite ideas. The period of infancy is from the necessity of the case, more than any other period of life, sleepy, and the size of the thymus gland corresponds to this; also we have reason to suppose there is less periodicity as to time of action which nature or habit of action will ultimately give.

The most careful anatomists say it does not become extinct in after life. It is not strange the importance of an organ accustomed to periodic action should escape the consideration of anatomists when found in collapse in the dead body. Scarcely any organ when viewed in this condition would indicate its office. Besides periodicity, a sleep-producing organ should admit of delay in its action on the individual. A traveller who usually sleeps at ten, if his journey is delayed to eleven, should have an extension of time even though the organ has commenced action at the usual time. The reservoir attached to the thymus gland affords this grace. But the safety of animal life demands such administration of soporific secretion as will admit of immediate suspension of its action by violent disturbance of any of the organs of sense—i. e., the secretion must be continuously administered and so that the soporific power should instantly cease. I have mentioned that in the foetus the secretion of the thymus gland was carried through the system in the blood. By this the system is steeped in it. When the foramen ovale is closed, the blood thus flowing is turned to the lungs, and carries with it the thymic fluid. Now have we

reason to suppose the possibility or probability of the evolution of a soporific aura by the lungs when the blood in the lungs contains a soporific fluid? We need not go far for analogy. The best chemists say, and no one denies the evolution of carbonic acid from the lungs at all times. Nobody has thought its evolution mysterious compared with the vital or organic phenomena. Carbonic acid duly administered will produce symptoms which will so simulate sleep that we may easily mistake the one for the other. Even this very carbonic acid from the air passages confined and concentrated will do this.

If then, nature in the evolution of effete matter produces a fluid that causes effects similar to sleep, why may she not, by placing a secretion purposely created in the blood, evolve a soporific aura? How then does this vapor reach the brain! It has ever been assumed, and I doubt not correctly, that the nervous distribution on the ethmoid bone is for the perception of odors. Is the perception of odors the limits of its capacity. Certainly not, if we are to judge by comparison with other senses. Every other organ of sense has a multiplicity of offices; for example, the tongue, being an organ of taste, is not less an organ of deglutition, of articulation, producing musical vibration, and having in its posterior parts elective power as to what shall pass the fauces. I magnify the office of the ethmoid bone. If by this door we admit the perception of odors to the great sensorium, may not this angel-bearing sleep come in at the same entrance? What Wells with the nitrous-oxide, what Morton with the ether have done violently, the thymus gland has been doing since the creation of animal life. I have before mentioned the security of the position of the thymus gland. The ethmoid bone is more securely guarded, and more sensitive than any other of the organs of sense. Its security to a certain extent indicates its importance in the animal economy.

Moisture is all that is essential to perceive odors. The pituitary secretion, as an absorbing agent, is essential to sleep. A corresponding secretion is expectorated. Any one accustomed to notice laborers called directly from their slumbers, cannot have failed to observe the sniffing and hawking in voiding the secretion attending the sleeping orgasm. The nasal discharge after sound sleep is frequently streaked with blood indicating perhaps the fulfillment of its office. Patients often speak of this morning evacuation as in the form of a pellet with considerable solidity, which would seem to show that by some process this coating is with-

drawn from the extensive superficies of the ethmoid bone, still holding to some part from which it is discharged *en masse*. The close sympathy of the eye-lids in sleep, is explained by the close connection of the ophthalmic ganglia. Gaping ceases to be meaningless; the soporific aura having come up from the lungs, being unwelcome to one designing to keep awake, is quietly put out. Snoring is not simply inspiration and expiration through relaxed parts, but Nature firmly seizing and urging the reception of that she enjoys so much.

There is a hyperæmic condition of the membranes about the nares at the commencement of sleep. This is especially evinced in children in whom the nasal passages are not widely developed. Having admitted that a soporific aura is exhaled from the lungs and absorbed by the nervous expansion on the ethmoid bone, the controlling influence of nitrous oxide, ether and chloroform demand the same explanation. Diluted carbonic acid acts much like the soporific aura. Pure carbonic acid acts on the sensorium by immediate deadly effect. The closing of the larynx is its *modus operandi*. So of chlorine, and fluoric acid; so also while some contagious fungi are absorbed by the surface when simply moist, as measles and small-pox; others require the pituitary secretion, as typhoid fever, yellow fever, and certain malarious exhalations; and we are not forced to adopt the indefinite explanation that "the system is relaxed by sleep," but that during sleep the proper nidus is provided for the germs of disease to rest in. We may even find an explanation of the Asiatic cholera by assuming the presence of a most powerful poison in the air, taken up and carried through this channel to the brain. Even the spore of a fungus may be equal to this effect; the cramps, the vomiting, stools and the prostration being but its mode of action. Also, if we continue the thymic secretion and impair the ability of the mucous surface of the lungs to evolve the aura, the fluid being retained in the blood, the whole system is imbued with it, and we have a typhoid state. Suspend the thymic secretion and we have a sleepless state corresponding to some of our nervous fevers. Suspend the power of absorption in the Schneiderian membrane and we have a sleepless state sometimes without fever, a symptom in Egyptian ophthalmia, and some forms of nasal catarrh, and in measles. Also, if we admit the evolution of a soporific vapor, we admit, by analogy, an epileptic exhalation, that is, noxious matter from a diseased brain or from a disordered stom-

ach, passing to the lungs and reaching the brain by the same course, may create the sensations preceding and convulsions attending epilepsy. And so of hysteria, ronchus and suffocation manifested may depend on a congested condition of the mucous membrane of the lungs, which does not obtain resolution and allow the discharge of the vapor, or being evolved in a vitiated state, may occasion the convulsions or mania which are frequently witnessed in medical practice. We have before mentioned, there is a definiteness of ideas suggested in the maternal relation which does not seem to depend simply on a perception of odors, which shows a connection between the exhalation from the lungs and absorption by the Schneiderian membrane. There is also a definiteness of impression in the sexual relation of animals, also distinct impressions in game animals both for pursuit and escape. Very many medicinal agents, besides a narcotic quality, seem to produce, when repeatedly used, similar mental impressions on the same subject, and on different subjects analagous ideas, visions or dreams, as illustrated by the use of opium, hashish—Indian hemp—nitrous oxide, and alcoholic potations. These have also their counter depressing effect when long used or being omitted after long use, as is shown in *delirium tremens*. There are also homogeneous trains of ideas in certain diseases, of which the melancholy attending certain disturbances of the liver is a marked example.

We mention these phenomena because there is a close relation between a soporific and a dream-producing agency, and in magnifying the office of the ethmoid bond, I make it not only a sleep-producing medium, but also a medium of communication between the physical organs and the great sensorium.

It has never been my pleasure to witness any manifestations of clairvoyance, animal magnetism, or spiritualism, but I believe the report of many persons who have seen them. Of course, I am very incompetent to speak of what I have not seen, but it seems we come very near a development of the mystery of this connection. If certain exhalations excite analagous ideas, which we have shown in animals have a definiteness in them, why may not the so-called medium surround herself or himself with a cloud whercin the subject and medium by reciprocal vibration dream the same dream or two persons within the limits of this vapor receive simple impulses, have the same visions, and the one hear the sound the other imagines. I speak abstractedly. But so considered, I can believe two persons whose nervous centers are connected by a vapor should

see the same sights or suffer the same consensious action, as that the combustion of zinc in New York, creating vibration in a connecting wire, should produce fire and light in San Francisco, or that perpendicular reciprocal vibration between the earth and sun should give light, heat, and chemical influence. It is certainly more easy to believe the stuff that dreams are made of affects the sensorium through the medium of the Schneiderian membrane rather than through the ordinary channels of the blood.

Hybernation, which has so troubled naturalists, receives an easy solution, by supposing an organ producing sleep for the period of time during which a reasonable allowance of food is not attainable, cold acting as an exciting rather than a definite cause. With a more rudimentary arrangement, we explain the torpidity of serpents and certain insects. We find neither hybernating nor torpid animals overtaken by cold or heat and put into a seasonable sleep by those causes alone. No one can better appreciate than myself the importance of facts to prove the theory I have attempted to establish by analogical argument. But few opportunities to prove the connection of an enlarged thymus gland with excessive sleep, occur in the lifetime of extensive practitioners. But one case where the patient slept herself to death has come to my knowledge. She was well in every other respect, would wake and eat, and transact business, and had a correct appreciation of affairs, but exhausted her vital force by sleep. No dissection was made. Cases of the absence of sleep frequently occur with the apparent drying up of all the secreting organs. The absence of sleep in certain affections of the ethmoid bone is more easily shown. In Egyptian ophthalmia, I should refer to what I have before stated, and assume the malarious fungi are originally absorbed by, and the original disease in, the Schneiderian membrane; the local manifestation being in the conjunctiva.

Constitutional diseases have local determinations, local diseases remote local determinations, conception in the womb occasions congestion of the breast, too much sack in the stomach gives the Bardolphian nose, and mustard on the tongue and the odor of onions excite the lachrymal gland. So nature, not willing to risk the possible accidents of Egyptian malaria on the ethmoid, has given the chances to an organ less essential to life. In the desert, if we allow a mechanical cause, the Schneiderian membrane must be subject to dryness and loaded with the minute particles with which the desert air is filled. However it may be, surgeons and

travellers confirm the distressing absence of sleep. The absence of sleep in the earlier stages of measles shows the close connection of sleep with the perfect condition of the Schneiderian membrane, and the disturbed dreams that there is a close relation of this part with dreaming. The cases I can show to prove the absence of sleep from occlusion of the ethmoid bone picked up for the occasion are something like enlisting servants from the plow or the stable to wait at a State dinner, and perhaps it would be better to omit the ceremony. But poor folks must be allowed some parade, and so, a country practitioner, I offer a few examples to show my reasoning not without evidence.

C. A., under my observation, fourteen days with a disease he called catarrh, a laboring man, would retire at ten or eleven, and get up at two; besides would give evidence to those in the house by his clattering that he was not dreaming meanwhile.

J. P., having suffered dislocation of the facial and palatal bones by a blow so that deglutition was impossible for sixteen hours, on reduction of parts and evacuation of mucus, slime and blood, went immediately to sleep.

J. A., having taken what was called a cold in the head, suffered loss of sleep for over fifteen days, during which anodynes only seemed to aggravate his restlessness.

I have thus, at length, ventured to call attention to what seems to me the true explanation of one of the most important of the phenomena of animal life. You cannot fail to see its bearings on physiology, pathology, and physical education. I trust your love of science and of humanity will induce you to give it such consideration and to offer such evidence on this subject as your practice may place in your hands. The cases I have offered show the direction our investigations should take, and at least are conclusive proof that sleep is not the result of weariness or exhaustion, or a contest of organic and vital forces.

ARTICLE XIV.

THE HOT PACK IN PUERPERAL ECLAMPSIA, DUE TO
ALBUMINURIA.

Read before the New London County Medical Association, April 11, 1873.

BY F. N. BRAMAN, M.D.

Mrs. —, aged 19, of slender build, primipara; in the seventh month of pregnancy; was taken at 5 P. M., Dec. 19th, 1872, with a convulsion. A messenger came for me, but being absent from home I did not see her till 9.30 P. M. I learned that the day previous she walked more than two miles, encountering a southerly storm. She awoke on the morning of the 19th with a severe pain in the head, which lasted through the day; had been troubled for some time with constipation; pulse 90, and weak; there was pallor and puffiness of the face and neck, the œdema general, and the surface of the body presented that shiny appearance so often observed in puerperal eclampsia, due to albuminuria. First noticed the swelling of the feet and limbs during the third month of pregnancy; she asked no advice, her friends thinking it was nothing unusual. With some difficulty succeeded in procuring a specimen of her urine, which on being tested with heat, and subsequently with nitric acid, was found to be heavily loaded with albumen, no more than two-tenths clearing up on cooling, the specific gravity 1.012. At the recurrence of each convulsion there seemed to be slight labor pains, but on examination I found the uterus high up in the pelvis, the neck nipple-shaped and the os undilated; listened carefully for the fœtal heart and uterine souffle, but could not discern them.

Previous to my arrival she had taken 10 gr. pilulæ hydrargeri, and 15 gr. chloral hydrate; at 10.30 P. M. gave ol. ricini \bar{z} j; 11.30 P. M. ordered an enema, which was voided without feculent matter; in half an hour another was administered, which produced free discharges from the bowels, but neither the full alvine evacuations nor the administration of anodynes resulted in the slightest amelioration of the spasms, but they increased in frequency and severity.

Dr. I. G. Porter having been called in counsel, arrived at 1 A. M. of the 20th, and on making an examination recognized the same condition of the neck which I have mentioned. Ether or chloroform was administered from time to time, but after repeated trials it was evident that instead of being beneficial they were doing harm; they produced profound sturtor, depressed the circulation, without any relaxation of the spasmodic action; at 9 A. M., fifteen hours from the first, she had passed through 31 convulsions; from 3.30 A. M. to 8.30 A. M. they occurred every fifteen minutes; gave calomel 10 gr., to be followed in two hours with *ol. tiglli crotonis* 9 *ttij*.

All our efforts thus far having proved unavailing, we decided to treat it as a case of Bright's disease, without reference to its complication with pregnancy, or as we would in the male. To the back over the kidneys applied a large warm mustard poultice, and to relieve the hydrœma determined if possible to produce profuse diaphoresis, and by suggestion of Dr. Porter proceeded to place her in a hot pack in the following manner: wrapped her first in a sheet wrung out of hot water and then rolled her in woolen blankets; to her feet and sides placed jugs of hot water; in less than thirty minutes she began to perspire and in one hour showed signs of slight improvement, her sleep becoming more natural; two hours and a half from the time she was placed in the pack she had the thirty-second and last convulsion. Saw her again at 3 P. M.; there was considerable jactitation, had urinated, but not having had an evacuation of the bowels ordered 10 grains *pulvis jalapæ*, also sweet spirits nitre, teaspoonful doses every two hours, and cold applications to the head. At 9 P. M. no signs of labor; concluded to let her remain in the pack, and for the restlessness which continued ordered 15 gr. bromide potassa to be given every two hours; was called again at 3 A. M. of the 21st, the attendant thinking she was in labor; on making an examination found the neck as at first and the os undilated; complained of great thirst; her desire for water could not be satisfied; ordered acid drinks. At 12 noon the neck was considerably softened and the os slightly dilated; during the afternoon and evening she had light labor pains. We saw her again at 11 P. M.; the os was dilated about the size of a half dollar. From this time the pains came on with more regularity and force, and at 1.45 A. M. of the 22d she was delivered naturally of a still-born female child; in a short time she fell into a quiet sleep, the thirst gradually subsided, and the pulse, which had ranged from 90 to 120, fell to 88;

though feeble, there was no retarding of her convalescence. In four weeks she was able to take gentle exercise. April 2d, urine examined found a slight trace of albumen, specific gravity 1.020. Her general health is good, and she has no remembrance of anything that transpired from the first convulsion up to twelve hours after the birth of the child, a period of sixty-eight hours.

Treating this class of cases with the hot pack, was at the time new to both Dr. Porter and myself, but we have since learned of seven or eight cases from a foreign source. Without doubt a certain proportion of cases of puerperal eclampsia, due to albuminuria, require the same treatment as Bright's disease in the male, without reference to its complications. If this be a fact, external diaphoretics should receive our profound respect and confidence, they being the most reliable agents for relieving anasarca at our command.

For this purpose we have the hot pack, hot air and vapor baths, my choice being in the order named; the pack is more convenient and quite as efficient as either of the others, the jactitation is more easily controlled, and there is less liability of injury to the person; the bed clothing can be retained in position with less trouble, consequently protecting the patient from sudden changes in temperature. It can be continued any desired length of time without inconvenience, relieving the system of the hydræmia and urea and the consequent pressure upon the brain; its effects are more lasting than anæsthetics, because it relieves pathological conditions; we may drown our patient with chloroform, compelling the system to be quiet, yet the cause which produced the irritability remains.

And in this class of cases, when induction of labor seems called for, external diaphoresis should be resorted to, previous to any effort at dilatation. In albuminous nephritis, complicated with puerperal eclampsia, I can conceive of scarcely any mode of treatment in which external diaphoretics, especially packing, would be inadmissible, and by the use of them mechanical interference would be dispensed with in a large number of cases, for by relieving certain pathological conditions, nature would be enabled to perform her own work.

It has been said by one, there is no procrustian bed in the practice of medicine, neither is there in obstetrics; but the great desideratum of the accoucheur should be a thorough understanding of the principles which govern him in the use of all the remedial agents at his command.

REPORT OF
DELEGATE TO NEW JERSEY MEDICAL SOCIETY.

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

As one of your representatives in the delegation appointed to attend the meeting of the Medical Society of New Jersey, in 1872, I beg leave to report that I was present on the first evening of their Convention, and a part of the following day. It was the one hundred and sixth annual meeting of the Society, this Society being the oldest organization of the kind in this country. The meeting was called at Paterson, a city distinguished alike for its manufacturing enterprize and for the beautiful, picturesque, and romantic natural scenery of the vicinity.

Although this place is the most northern city in the State, and therefore most remote from its center, I was surprised at the number in attendance at the opening of the Convention, and not less so at the interest and even enthusiasm manifested in its approaching proceedings.

The Convention assembled in the large Court House at 7½ P. M. After the usual ceremonies of organization were performed, the presence of delegates from the States of New York and Connecticut was announced, and we were most cordially received, and on motion invited to seats as corresponding members of the Society.

As is the custom in New York and several other State medical societies, before proceeding to business prayer was offered by one of the clergymen of the city; a practice somewhat neglected by us, but not, it is believed, because of our excessive *scientific* attainments, although Tyndall has lectured in Connecticut. The chief feature of the evening was the annual address of the President, Dr. Chas. Hasbrouck, who entertained the audience for an hour with a very instructive and able address, on "The Popularizing of Medical Knowledge as a means of correcting the popular tendency to quackery in Medicine."

After adjournment, the members of the Convention were invited by the "Medical Society of the County of Passaic" to a social reunion at the Franklin House. An hour was delightfully spent in the spacious parlors of the hotel, in renewing old acquaintance and forming new ones, and in pleasant converse, and then the exhausted energies of the body were most agreeably refreshed at the bountiful tables provided by our host in the dining rooms. Your delegate was faithful to his duty in this part of the exercises.

On the following morning the Society convened at 9 o'clock. Several interesting and well written papers were presented and read.

Standing Committee.

A prominent element in the work of the N. J. Medical Society is the "Standing Committee." This corresponds to our "Committee on Matters of Professional Interest in the State." But with them it is a practical working organization, contributing largely to the interest and the value of the meetings of the Society, and adding vastly to the practical information of its members.

As an illustration of the wide spread and active interest which connects the various county societies throughout the State with the parent Society, it is a fact, that from as many different counties fifteen full and copious reports were furnished to this Standing Committee, giving full information of all matters of medical interest in their respective localities, with illustrative cases. These reports are sent to the Standing Committee some weeks previous to the meeting of the Society. It is not difficult to believe that by a careful analysis of this mass of information from every section of the State, and by classifying and condensing it, the whole can be summed up by the Standing Committee in an annual report to the Society, replete with matter of the most valuable and practical utility. In no other way is it possible to obtain so accurately and thoroughly a general survey of the hygienic condition of the whole State. In no other respect does a State Society so fully comprehend its true character and discharge its proper function of broad supervision over the general interests of the whole State, as when it thus includes within its observation and its fostering care the separate professional interests which attach to every portion of it.

We have the theory of this process incorporated in the by-laws of our own Society. We have not yet made it as successful as could be desired. I am sure it is not for lack of energy or effort on the part of the Society's Committee. They are powerless to act without the material which must be supplied by the reporters of the County Societies, and I would most respectfully make this the occasion to urge greater attention to this object during the ensuing year. It will amply repay the effort.

Your delegate is glad of this opportunity to express the gratification derived from his visit, and the grateful sense of the cordiality and kindness shown him both in his official capacity and individually.

Respectfully submitted.

C. A. LINDSLEY.

BIOGRAPHICAL SKETCH OF
CHESTER HAMLIN, M.D.,

BY S. R. BURNAP, M.D.

Dr. CHESTER HAMLIN was born at Farmington, Conn., March 14th, 1795. He was the second of seven sons of Lemuel and Mary Hart Hamlin. His father was a farmer, in moderate circumstances, and unable to give him more than a common school education. At the age of sixteen, he became a member of the family of the late Dr. Eli Todd, at that time residing in Farmington, afterward in Hartford, Conn. While living with him, he obtained a knowledge of the Latin language, and qualified himself for teaching, in which he subsequently had a short but successful experience; at first in a common school, then in an Academy at Farmington Center. About this time Dr. Todd proposed to him to read medicine, and offered to take him as a student into his office. To this proposition he assented with alacrity, and entered at once upon the work of preparation for the profession. He afterward attended lectures at the Medical Institution of Yale College, and received a licence to practice medicine from the Conn. Medical Society, in March, 1823. He commenced practice in Haddam, Conn., in 1824, having spent the previous year in a drug store in Hartford. After practicing about three years in Haddam he removed to Burlington, where he remained about five years; finally removing to East Granby, Conn., where he remained in practice up to the time of his death, Oct. 5th, 1872.

In 1825 he married Miss Evaline Butler of Haddam. As a result of this union four children were born, one son and three daughters. Two daughters only, Miss Kate Hamlin and Miss Maria Hamlin Withrel, survive their father. His son, Lemuel Hamlin, a young man of promise, and the intended successor to his father's profession, died in 1849, of typhoid dysentery, at the age of twenty years, when about to commence his first course of medical lectures. His eldest daughter, Miss Mary Hamlin Dewey, died of fever in 1864, at the age of twenty-nine.

Dr Hamlin had a thorough preparation for the work of his calling, being well read in all the standard works of the day, and having enjoyed extraordinary advantages of personal instruction in the office of an excellent and eminent physician. He also kept himself well posted, during all the more active years of his practice, in the current medical literature; being a regular subscriber to such periodicals as the "Monthly Journal of Medicine," "Braithwaite's Retrospect," and the "American Journal of the Medical Sciences." He was likewise a good botanist, and had an extensive knowledge of the plants in his vicinity, particularly those possessing medicinal virtue, many of which he occasionally employed in his practice.

His practice, though for the most part not very extensive, was successful in an eminent degree. He was careful and thorough in his investigation of disease, and a good prescriber. He was naturally conservative, not prone to hastily adopt new remedies or new theories of disease. In the latter years of his practice he used very few medicines, those always the best and most reliable. He was an honorable, upright and strictly conscientious man, not only in his professional relations, and in his intercourse with his brethren, but in all the relations of life; also a man of great firmness and decision of character. It were superfluous to add, that he despised quackery in every form. He was a firm believer in the truths of the Christian religion, and from early manhood a consistent and exemplary member of the Congregational Church, in which he held the office of deacon at the time of his death.

Dr. Hamlin had naturally a slender and delicate constitution. He suffered twice from hemoptyses, while a student in the office of Dr. Todd, and once several years later, and was always subject to a cough. Yet notwithstanding these facts, by an intelligent care of his body, he was enabled to reach the ripe age of seventy-eight years, and to continue, with scarcely any intermission, in the discharge of the toilsome and wearying duties of his profession nearly half a century. He began, however, to fail, markedly, about a year before his death, and to suffer much from chronic diarrhœa, by which his strength was much reduced; yet he continued occasionally to answer sick calls, until July 20th, 1872, when there occurred a great aggravation of his former complaint, which speedily reduced him to an extreme degree. At this time I was first called to see him. I found him fully impressed with the fact that his life was drawing to a close, and entirely recon-

ciled to the event. He said that his usefulness was at an end, and that a longer continuance of life in his case was hardly to be desired, in view of the increasing infirmities of age. Some time afterward, when I called in to see him, having left him in a very low condition the day before, he said, somewhat disappointedly, "You see I am here yet, Doctor; I had thought to have been off before this, but it seems I am to stay longer." His wife, a very estimable woman, dying about this time somewhat suddenly, he seemed to have a sort of romantic wish to be buried with her; and thinking himself very near his end, he intimated a desire to have her funeral postponed for this purpose. He lingered, however, after this, in a state of extreme feebleness, for several weeks, and finally sank and died, without pain or suffering, on the 5th of October, 1872, as already stated, in the seventy-eighth year of his age. He was finally buried beside his wife in the old village burying-ground in East Granby. Here let him rest. Peace to his ashes.

BIOGRAPHICAL SKETCH OF
LEVI WARREN, M.D.

BY PATRICK CASSIDY, M.D.

Death has entered our ranks; the grave has forever hidden from our view all that was mortal of Dr. Levi Warren. Beloved and honored in his profession, universally admitted by all classes of his fellow citizens to be an able surgeon and physician, his skill and goodness of heart is told in tears by those whose misfortune it was to be afflicted with contagious diseases, as his position as Chairman of the Board of Health brought him in close contact with disease of this character; the poor mourn his loss with an aching heart, as his professional services were equally given with as much cheerfulness to the bedside of the poor sufferer in the damp and cheerless basement as to those in the magnificently furnished apartments of the rich. So great is the esteem and veneration in which his memory is held in this community, I fear this short eulogy to his memory will do him but imperfect justice.

Dr. Warren died Feb. 22d, 1873, aged 42 years. Thus he passed from us in the prime of manhood, from his field of usefulness, from a loving and devoted wife, from affectionate brothers and sisters, from a large and sorrowing community, among whom no man justly owed him ill will, from his professional brethren, where his brilliant talent and great professional skill was fully acknowledged.

The cause which led to the doctor's sickness and death illustrates more forcibly his great magnanimity of heart than any effort of my pen. He had for a patient a young servant man sick in a chamber of his employer's house; a sister was his only nurse. This disease was sloughing erysipelas of the arm, extending from the wrist into the axilla. During several days his life was in great jeopardy; the sister in her distress appealed to the doctor to save, if possible, the life of her brother. The sympathy of the doctor was aroused, and three times daily did he visit this patient and assist in washing and poulticing the arm.

The morning of Jan. 20th, while preparing some kindling wood, he accidentally received a slight abrasion of the cuticle of the middle finger of the right hand. He afterward made his usual morning visit to his patient; fully conscious of the danger, he endeavored to protect the wound from coming in contact with the poisonous matter. It soon proved these precautions were not sufficient, as the virus came in contact with the wound. The following morning he had chills; pain commenced in the finger, which increased rapidly in extent and severity, so much so that in a few hours the absorbents were inflamed half way up the arm. For a few days his life was in great peril, but by the efficient and judicious treatment of his physieian, Dr. Lewis Tracy, these grave symptoms quickly subsided, and the inflammation was confined solely to the finger first attacked, where pus rapidly formed, which was evacuated by free incisions. Friends and physicians were hopeful that all danger was past; but alas! they were doomed to disappointment, as, during the night of Feb. 4th, without premonition, metastasis to the brain took place, delirium, subsultus tendinum facial paralysis, with stupor, came on in rapid succession, which gradually increased in severity until death ended his sufferings eighteen days from the time the brain became involved, and thirty-three days from his first attack.

Dr. Warren was born in Patterson, New York, in the year 1831. He was the youngest of nine children, seven of whom, three brothers and four sisters, still survive him. His father was a minister of the Baptist denomination, from whom he received in early youth those lessons of piety and zeal for the Christian religion, truth, honesty and philanthropy, which were so characteristic in his after life. At the age of fifteen years he entered the academy of his native town to prepare himself for the liberal profession which he chose; and four years later he entered the office of Dr. Wheeler of Carmer, New York, the most eminent physieian and surgeon of that region; from there he proceeded to the Medical University of New York, where he graduated as doctor of medicine in 1854.

He first established himself in the practice of his profession in the town of Lyme, Conn., where he continued with great success until 1862, when he gave up his lucrative practice to give his services to his country. He joined the 24th Conn. Volunteers. The climate of the south not agreeing with his constitution, he was compelled to resign at about the end of nine months' serviee. On

his return home he established himself in Norwich. His success here and the rapidity with which he rose to be among the most eminent of the profession is unnecessary for me to recapitulate, as it is known to each and all of us.

He married, in 1869, Miss Martha Belden, of Walton, Conn., a lady in every respect worthy of his love.

My first acquaintance with Dr. Warren was nearly eight years ago, a few days after my arrival in this city. I was sitting in my office, a stranger, without a single friend or acquaintance; my prospect indeed looked gloomy and dark. A stranger entered; I rose to greet him; he took my hand and introduced himself as Dr. Warren; he encouraged me and pledged his friendship and support. A friendship was there formed that was never severed; and as I stood by his dying bed, watching him struggle in the last moments of his existence, then, as the memory of our first meeting came to my mind, I could not suppress an involuntary tear from rushing to the eyes; and should I, in rendering this short biographical sketch, disappoint the expectations of his friends, I plead that the memory of those eight years of friendship has alone prompted me to undertaking the sacred task to assist in perpetuating the name and memory of Dr. Levi Warren.

MEDICAL COMMUNICATIONS.

ARTICLE XV.

MEDICAL USE OF ALCOHOL AND ALCOHOLIC LIQUORS IN THE PREVENTION AND CURE OF DISEASE.

Being the Annual Address to the Convention, May 23, 1874.

By the President of the Society,

IRA HUTCHINSON, M.D., OF CROMWELL.

Gentlemen of the Connecticut Medical Society:

Once more assembled in annual convention, intent, as I trust, on advancing the interests, the usefulness, and the respectability of the medical profession of our State, the position with which you have been pleased to honor me imposes on me the duty of addressing you on some subject not inappropriate to the occasion. In the performance of this duty I pledge myself in advance to occupy but a small portion of your valuable time, but shall content myself by submitting for your consideration a few thoughts on the medical use of alcohol and alcoholic liquors in the prevention and cure of disease.

It would be manifestly out of place, and quite foreign to my purpose, to discuss here the question of the utility or utility of the common use of the articles as a beverage in health,—a question that has deeply agitated and divided society the last fifty years, and one that has become a disturbing element in the politics of our day. I pass it therefore, with the single remark, that I regard these articles as practically belonging to Cullen's class of *Medicamenta*, and not to his class of *Nutrimenta*, and as it is the design of medicines to change the action of some or all the organs of the body, when that action is normal it cannot be changed but for the

worse. The whole need not medicine any more than they do the physician, but they that are sick.

For all practical purposes, I say these articles are to be regarded only as medicines, for I am aware that although the commonly received opinion has been that alcohol when received into the stomach is absorbed into the circulation as alcohol, circulates in the blood as alcohol, and is finally eliminated from the body by the various excretory organs as alcohol, Leibig and others who have accepted his views have ranked it among the heat-forming aliments, capable of replacing the fatty, starchy, and saccharine elements of food.

On the other hand, MM. Sudger Sallemand, Maurice Perrin, and J. S. P. Duroy, published as late as 1860 the result of a series of experiments, from which they believe themselves justified in deducing the conclusion that alcohol is neither transformed nor destroyed in the living body, but that the whole of what is ingested is excreted unchanged, so that they have no claim to be regarded as true food, but must be put in the category of those medicinal or toxic agents whose presence in the living body exert a most important influence on its functions, though they do not themselves enter into combination with any of its component parts.

These conclusions were not, however, suffered to pass unchallenged, for M. Edmond Baudot published, in November, 1863, the result of some experiments of his, from which he concludes that alcohol is destroyed in the organism, and that it fills the office of respiratory food, as asserted by Leibig. To this M. Perrin published a reply, December 22d, 1863, reiterating his assertion that alcohol is neither transformed nor destroyed in the organism. That it is eliminated by the various excretory organs, and that it offers none of the characters of food.

Now amid all this varying and conflicting testimony, (and I might cite much more of the same sort,) I shall not attempt to decide which side of the question is the right; nor is it very important that we arrive at a definite conclusion in regard to it. Since whatever the physiological fact may be, it is perfectly safe to assume, indeed, it is the only safe rule to work by, that they are not food; that they do not furnish the requisite pabulum for promoting the growth or repairing the waste of any of the tissues of the body; or create permanent nervo-muscular power.

It is doubtless known to most of you that Dr. Benjamin W.

Richardson, of London, has been for some years engaged in investigating the chemical composition and the physiological effects of the various kinds of alcohol, as methylic, ethylic, amylic, &c., and has published to the world the results of his researches in the form of annual reports to the British Association for the Advancement of Science, year by year, since 1864.

Professor Silliman, in his published lecture introductory to his course for 1871-2, has quoted liberally from these reports, and among the several paragraphs so quoted I find the following :

“Speaking honestly (says Dr. Richardson), I cannot, by any argument yet presented to me, admit the alcohols through any gate that might distinguish them as separate from other chemical bodies. I can no more accept them as foods than I can chloroform, or ether, or methylal. That they produce a temporary excitement is true, but as their general action is quickly to reduce animal heat, I cannot see how they can supply animal force. I see clearly how they reduce animal power, and can show a reason for using them in order to stop physical or to stupify mental pain; but that they give strength, i. e., that they supply material, for the construction of fine tissue, or throw force into tissues supplied by other material, must be an error as solemn as it is wide spread.

The true place of the alcohols is clear; they are agreeable temporary shrouds. To search for force in alcohol is to my mind equivalent to the act of searching for the sun in subterranean gloom until all is night.”

Equally untrustworthy are they, as I apprehend, as a means of shielding us from the attacks of disease. In my opinion, the only prophylactic to be relied on is the normal condition and harmonious action of all the organs of the body, and such condition and action is best maintained by perfect regularity of habits, and the observance of all the hygienic rules as to diet, exercise, sleep, &c. In that condition, the body is best prepared to resist all the morbid influences that may be brought to bear upon it, and whatever tends to break up the balance of healthy action invites disease.

It is therefore mainly as a therapeutic agent in the treatment of disease actually existing, that we, as professional men, are concerned.

What then is the true therapeutic value of these stimulants? and how far may we be justified in prescribing them in our practice? These are important practical questions, and questions that it is

the province of the medical faculty to determine for itself; but I hold that the decision should be made only after patient and candid investigation, and with a conscientious regard to the interests of our patients, and of society.

And here may we not with propriety and equal force of truth apply the language of Dr. Bennett, of Edinburgh, in regard to another leading article of the *materia medica*, and say :

“In the present state of science and art of medicine, there is no point in therapeutics which so utterly requires re-investigation, as the real value of the therapeutic effects attributed to” the article under consideration.

Says Dr. Richardson: “As yet alcohol, the most commonly summoned of accredited remedies, has never been properly tested to meet human diseases. I mean by this that it has never been tested as alcohol of a given chemical composition, of a given purity, and in given measures. Wines, beers, spirits, are mixtures—compounds of alcohols, and compounds of alcohols with ethers and other organic substances. It is time, therefore, now for the learned to be precise respecting alcohol, and for the learned to learn the positive meaning of one of their most potent instruments for good or for evil.”

From time immemorial these articles have been held in high estimation by a large portion of the community, as a kind of panacea for very many of the diseases that afflict the human family. Nor can it be concealed that these extravagant and unwarrantable estimates have received much countenance and support from the prescriptions and recommendations of those physicians who prescribe them as leading articles, or at least as adjuvants in treating most diseases.

On the other hand, some zealous reformers outside the profession, and some worthy names within it, have proscribed and denounced them altogether, declaring that in their opinion they may be banished from the shelves of the apothecary without public detriment. With these extreme views probably very few, or none of us, are in full sympathy. Their highly solvent and anti-septic properties make them articles of necessity to the pharmacist, while I think it must be conceded that as diffusible stimulants, in the present state of our *materia medica*, they are indispensable in the treatment of certain forms of disease.

Those in which they are believed to be more specially indicated are fevers of a low grade of action, or as more generally expressed,

fevers attended with depression of the vital powers. A large proportion of these may be safely trusted to other remedies, as carbonate of ammonia, camphor, serpentaria, quinine, beef tea, milk, and other supporting agents, and if these prove insufficient, a little pure wine or wine whey can be added.

But cases do often occur in which the vital force is so much depressed as to demand a more potent stimulus, such as brandy and the like, and sometimes in considerable quantities.

Dr. William B. Carpenter of London, author of a standard work on physiology and also of a prize essay, "On the Use and Abuse of Alcoholic Liquors in Health and Disease," and who, therefore, can not be suspected of any undue bias in favor of their use, informs us that "a severe epidemic of typhoid fever which he witnessed in Edinburgh in the years 1836-7, afforded him an opportunity of seeing the decided efficacy of alcoholic stimulants in one form at least of this fever; the opposite methods of treatment, followed by two physicians whose practice he watched, being attended with such different results, that as the cases were of the same class, and the other conditions identical, there was no other way of accounting for the difference. By neither physician were any active measures taken during the early stages of the fever, for none seemed called for; but in one set of cases, the same expectant practice was continued to the end; whilst in the other, the administration of wine and spirit was commenced, as soon as the weakness of the pulse, and the coldness of the extremities, indicated the incipient failure of the circulating and calorifying powers. The quantity was increased as the necessities of the patient seemed to require; and in one case (that of a woman whose habits had been previously intemperate, and on whom a more potent stimulus was therefore needed to make an impression) a bottle of sherry with twelve ounces of whiskey was the daily allowance for a week or more,—the patient ultimately recovering. Now the result of this wine treatment was, that the mortality was *not above a third* of that of the simple expectant treatment; the patients dying under the latter from actual exhaustion and failure of calorifying power, and no local lesion being detectible on post-mortem examination.

Now in an epidemic of typhoid fever like the one above described, and in other forms of acute disease attended by prostration of vital power, I suppose there is a pretty united sentiment in favor of a judicious administration of alcoholic stimulants; although there may be considerable discrepancy of opinion as to

the extent of their application, the quantity necessary to be given, and the *modus operandi* of their action.

When restricted to those cases in which the pathological condition of the system requires their use, they may be administered in considerable quantities, and in some cases in large amount, without producing any of the usual phenomena of intoxication, without being followed by reaction or corresponding depression, and, as is believed, without any tendency to create a fondness for them in after life; but many cases are followed by a positive aversion to them.

Far different is it when administered in cases where no such condition exists, including, as I believe, almost the entire catalogue of chronic and nervous diseases. On this subject Dr. Anstie, senior assistant physician to Westminster Hospital, in a paper "On Indiscriminate Stimulation in Chronic Diseases" published in the *Practitioner*, July, 1869, holds the following language:

"There is no statement which has ever surprised me more by its entire want of correspondence with the facts of my own experience, than this very common assertion, that stimulation in *acute* disease is apt to create a subsequent tendency to drinking. The case is vastly otherwise, however, in *chronic* or *nervous* diseases, especially those attended with much mental depression. The great majority of these patients, either at once, or very readily, develop a strong liking for alcoholic beverages." And again he says: "There is no true physiological tolerance for it in these cases; even in the instance of severe and agonizing pain, in which large quantities of brandy may be swallowed without any apparent drunkenness, the appearance of considerable quantities of unchanged alcohol in the urine, and the occurrence of after headache, &c., show that there has been true narcotic poisoning. And the relief of such pain (e. g., angina pectoris, severe ovarian neuralgia) may be better and more speedily accomplished by the use of ether, or of morphia or atropia subcutaneously injected. And as for the whole series of chronic convulsive disorders, and of the mental states which hover between hysteria and insanity, I am convinced that everything which can be done in a more special direction than that of careful improvement of nutrition can be far better effected by bromide of potassium, than by the most liberal use, or as I should call it abuse, of alcohol."

But it is not so much my object to point out specifically all the diseases and states of the system in which these stimulants are indicated or contra-indicated, as to call the attention of the members of our society to the importance of a more cautious, discriminating, and restricted use of them than has hitherto prevailed.

I think it would be a good rule to dispense with their use altogether in all cases where we have other and equally efficacious, and safer remedies at our command; and in those cases where they seem to be indispensable, to administer them in such quantities only as in the judgment of the practitioner the exigencies of the case under treatment absolutely require. I might offer as a valid argument in favor of such restriction the acknowledged difficulty of obtaining them free from adulterations. But a much more cogent reason for restricting their use lies in the fact of the imminent danger of creating a morbid thirst for them in after life, whether they are vile compounds of alcohol with various other deleterious ingredients, or whether they contain nothing more poisonous than alcohol itself.

I think it cannot be denied that no inconsiderable portion of the intemperance that disgraces our country is the legitimate result of the unnecessary, and therefore improper, use of these articles as medicines. We can claim but little gratitude from either our patient or his friends, if in curing him of a malady, perhaps insignificant in itself, or one which might have been removed by other and more appropriate remedies, we have entailed upon him that terrible disease dysomania or either the forms of alcoholism. Especially should we be on our guard when prescribing for those who have a hereditary predisposition to a love of these stimulants, and also those who already have an acquired fondness for them.

Professor Eli Ives related to my class the following anecdote of Dr. Benjamin Rush. One of the latter class of patients, a young clergyman, came to consult him in regard to some dyspeptic affection, when the doctor told him he must take bitters. "What!" said the patient with illy concealed satisfaction, "you are not going to give me spirits, are you?" "No," replied the doctor, "*it shall never be said at the day of judgment that I made you a drunkard*; you must take your bitters in aqueous infusion." Happy will it be for each of us, if, at that decisive day, none can accuse us of having led them, by our careless

and inconsiderate prescriptions, into the paths of inebriety—into physical and moral degradation—into temporal and eternal ruin.

We cannot as Christian philanthropists (and verily every member of the profession should be such an one) ignore or feel indifferent to the ultimate results of our practice on the future well being, both physical and moral, of our patients, or willingly throw obstacles in the way of a much needed reformation.

ARTICLE XVI.

REPORT OF THE COMMITTEE
ON MATTERS OF PROFESSIONAL INTEREST.

THE communications received this year for publication by the Committee on Matters of Professional Interest are only three; but it is evident that the only reason for such a state of things is only due to want of "professional interest" in such matters; at least, so far as reporting them for the pages of the annual volume of our State Society publication is concerned. Doubtless many cases as interesting in themselves as that reported by Dr. Wilcox have been observed in the practice of other physicians. The small amount of labor necessary to prepare them for the Society would be as beneficial to the observer as their publication would be to others. Your committee hope that their successors may be more fortunate in awakening the interest of their brethren to this subject, and in securing the fixed results of such interest in papers that shall be at once an honor to the contributors and to the volume of communications.

Last year your committee called attention to the subject of a State Board of Health, and suggested a form of organization for such a Board. In consultation with friends of the measure, it has been thought best to have the Legislature take the initiative, by the passage of an act authorizing the Governor to appoint a commission, who should consider the subject in its entirety, and report the result of their labors to the next session of the Legislature. As it seems desirable that this Society should express its opinion on the subject, the following preamble and resolution have been prepared; and we trust they may commend themselves to your judgment.

CONNECTICUT MEDICAL SOCIETY, }
New Haven, May 28, 1874. }

Whereas, this Society is informed that a resolution is about to be introduced into the Legislature, requesting the Governor to

appoint a commission, whose duty it shall be to enquire as to the necessity for new legislation in regard to sanitary matters, and vital statistics, and to report thereon at the next session of the Legislature; therefore,

Resolved, That we cordially approve of the object of such resolution, and respectfully hope it may meet with your favorable consideration.

H. A. CARRINGTON, *Chairman*.

Middlesex County.

RÖTHELN. RUBELLA.

R. W. MATHEWSON, *Reporter*.

German or hybrid measles, or hybrid scarlatina, has prevailed as an epidemic in this and the adjoining towns for the last six months. It seems to be moderately contagious, to manifest a preference for girls, and to be of little or no danger. It commences with pains in the back and limbs, and nausea, which are soon followed by an eruption resembling measles, extending to the mouth; this afterwards becomes more confluent, and of a lighter color, resembling scarlet fever. The throat and tonsils are inflamed, and the tongue has the strawberry appearance common in that disease.

There is no great heat of the surface or febrile evening exacerbations, the patient sleeps well, and complains of little but the throat, which next to the eruption is the most common and persistent symptom, and the only trouble requiring medication. The patient complains of stiffness of the eyelids, but no cough or catarrhal symptoms. The difficulty the physician has to encounter is the diagnosis of the disease in the first cases; if called in the early stages of the eruption, he decides the case to be a mild form of measles, when he is told that the patient has had measles, and the person from whom it was taken was being treated by a physician for scarlet fever; if called at a later stage of the eruption, he decides it to be scarlatina, when he meets with similar objections. When two physicians see the patient at different stages of the eruption, they are very apt to disagree, and one thinks he has got the advantage of the other, when neither are right.

The disease seems to be located on the confines of measles and scarlatina; attacks equally those who have either; does not protect the system from either, and not even from its own recurrence.

Durham, Middlesex County.

Hartford County.

A CASE OF LEUCOCYTHÆMIA.

L. S. WILCOX, M.D., *Reporter.*

The patient, a young lady twenty-five years old, came under my observation, the twenty-seventh of last October—in person, tall, slender, and much emaciated from disease and suffering of long duration; in mind, strong and accomplished; in character, marked, well-balanced and reposeful.

Her history was somewhat as follows: Two or three years before, she had been under treatment by a prominent specialist, for some disease of the pelvic organs, probably uterine. Again, in April of last year, she had received similar treatment, rather precautionary, however, as she was told, than because there was any existing disorder. Her menses (and they were her last) followed in due course, and about the twentieth of the same month, April, she took steamer for Europe. To prevent sea-sickness she spent much time on deck, and by such exposure became early in the voyage thoroughly and distressingly chilled. In this suffering state she continued her journey to Berlin. From this cause alone, or in connection with a severe strain she received on the way, or possibly as following or in connection with her former disease and its treatment, severe inflammation of an indefinite character, so far as I could learn, was engendered in the pelvic regions. She wrestled with this dangerous condition several weeks, and fell, at last, into a weak, painful, helpless state. At this stage of her illness, about midsummer, she was advised by her eminent medical attendant (Siegmond) to return home, since her convalescence would doubtless be slow, and she could be made more comfortable among her own friends.

On her arrival home she was placed under the medical direction of a specialist again, by whom she received skilled and appropriate treatment.

Her appearance at my first visit suggested some fatal malady. I can hardly describe it—the transparent anæmic countenance, with its moving shadows, and pallid, lead-white lips, and distant, beseeching eyes, and the hands wan and waxen to the bloodless finger tips. Any movements from the fixed dorsal posture were attended with pain, particularly in the left ovarian region and along the line of the inguinal glands. And yet she could be helped into an easy chair every day to sit an hour or two, with a

degree of comfort and rest. The abdomen was flat—over the pelvis, basin-shaped, and its muscles rigid, and the whole surface lifeless to the touch.

On vaginal examination, which was excessively painful, partly from an hyperaesthetic condition of the external parts, the uterus was found to be shrunken and very hard, while its appendages, likewise hard, spreading out from it on either side, formed with it a projecting ledge, fixed and immovable. To the eye the neck of the uterus was white, almost glistening, and a drop of transparent serum was exuding from its mouth. Nothing was discovered by a rectal examination, except an unusual sense of weight and bulk to the finger carried hard up behind the rigid uterus. The tongue was clean, pale through its central portions, and rising up a little puffy, and too light red towards its borders. With the exception of this too delicate redness, which extended all over its surfaces, the mouth, with all its secretions, was pure and healthy. The pulse was small, weak, rapid, and very variable, 80 to 108 and often higher.

The temperature, though generally natural, yet frequently and at irregular intervals during the twenty-four hours ran up to 104° – 5° . These fevers were transient, mere jets at times, but always preceded by chills, and attended with headache and restlessness, and followed by perspiration.

Indigestion, or weariness, or a little exertion, was sometimes an apparent cause for these feverish states, but more frequently the cause was evidently more profound. The stomach acted quite well, receiving quite as much food as in health, and more. But the very offensive dejections showed that the remaining process of digestion was more a chemical than a physiological action, having in them, moreover, every few days a small variable amount of pus, two or three drops to twenty, and mucous shreds. Some small portions, too, were generally clayey.

The daily action of the bowels, whether too free, as it often was, or too slow, was easily regulated by medication. The urine was small in amount, and heavy, yielding a free brick-dust deposit before cooling.

By analysis: reaction acid; specific gravity, 1031; no albumen; no sugar; no casts; amorphous urates in excess; uric acid very copious, and depositing very quickly; phosphates in excess; stringy mucus; a trace of bile. The mind was clear, easily wearied, sometimes depressed, but usually surprisingly cheerful and even merry.

This was the history given, and these the symptoms noted during an attendance of three weeks. What was the disease then existing?

The inflammation in the pelvic regions had burned out, and left there its ruins; must the sacred temple smoulder down over them? After a careful observation of these three weeks, and a good degree of investigation, it became evident that the system was held under a more profoundly malign influence than any existing local lesion would account for; that the local lesion, as a cause, would not account for the existing disease as a legitimate effect, the supposed effects differing in kind as well as degree from anything the existing lesions would produce.

On the assumption that that theory should be accepted, and only that one, which would fully account for all the facts in the case, the conclusion was reached, by the process of exclusion, that the lurking enemy here was leucocythæmia. That theory fully met all the rational symptoms; but there did not exist, to answer to it, any enlargements, either of the spleen or of the external lymphatic glands. There was, however, good reason for believing in a substitution for these enlargements, by multiplications and new creations of lymphatic tissue in and about the internal organs.

To this meeting of theory and facts, there was brought cumulative and confirmatory evidence on another line, viz: the microscopical examination of the blood. A drop of blood from the finger exhibited, when taken, the peculiar characteristics of leucocythæmic blood; the color between a chocolate-brown and brick-red, and the troubled disintegrating action, an action well represented (subtracting color and quantity) by that well known toy, Pharaoh's Serpent, during its ignition. It almost told its own story before it reached the microscope. On examination by two competent observers, the ratio of the white to the red corpuscles was found to be one to sixteen. Two weeks later it was found to be one to ten.

Meanwhile the symptoms were increasing in severity and intensity, and the patient was emaciating and growing weaker, even though she was taking more and more food daily, and with good relish. On one or two occasions the cervical glands had enlarged very much, seeming to yield to active treatment after two or three days. There had been, also, several attacks of slight epistaxis. There had been several periods, during the course of the disease, of apparent convalescence.

At this stage of the disease, now far along in December, I made known its nature to the friends of the patient, stating also its probable termination. On the first of January a physician from abroad saw the patient in consultation. He pronounced the disease pyæmia, having its origin in a recto-vaginal abscess, the abscess being a degeneration of an hæmatocele, and the hæmatocele produced by retro-version of the uterus, the primary changes having taken place on her voyage to Europe. He also assured the family with great confidence of the patient's early recovery. I could not assent either to this diagnosis or prognosis, and about the middle of the month was dismissed from attendance.

The physician from abroad thereafter conducted the treatment, not in person, but through skilled and competent reporters. The patient continued to sink, a diarrhœa adding to the downward course, and at six o'clock on the morning of February 14th passed away—her mind being bright, clear and even sportive to the end, filling up the intervals of sleep during the last night of her life with playful remarks, such as begging her friends to excuse her for being so discourteous as to fall asleep in their presence; thus exhibiting, if not a happy delirium, yet a kind of euthanasia, which is characteristic of certain forms of this disease.

Autopsy, nine hours after death. Rigor mortis, not well marked. Body much emaciated. There was no evidence of amyloid degeneration of liver, spleen or kidneys by iodine test, nor appearance of fatty degeneration. Liver: Convex surface everywhere firmly adherent; weight and size about normal; borders well defined, not rounded; substance somewhat soft, but not granular, presenting on section a brownish mottled appearance, interspersed with minute greyish-white spots with well-defined outlines, and somewhat firmer than the surrounding portions. There were also circumscribed nodules, apparently of lymphadenoid tissue, of moderately soft consistence, more numerous near, and upon the convex surface, which was thickly studded with them. Similar nodular masses were scattered over the surface of the stomach and in the gastro-splenic omentum.

Spleen: Size and weight about normal. It was of a hard leathery consistence, and on section presented a dark, brownish-black surface, copiously sprinkled with white spots resembling sago grains and of firmer consistence than the surrounding tissue. The mesenteric glands were much enlarged, one $1\frac{1}{2}$ inches long. Gall-bladder flaccid and partly filled with a viscid

secretion, exceedingly tenacious, but not bile. Vena-cava partly filled with soft clots, yellowish-white in portions. The lower loops of the small intestines were adherent to the uterus, the right fallopian tube and ovary, and to one another. The lower border of the omentum was also adherent. The uterus was contracted, hard, and misshapen somewhat, by pressure. The right ovary and tube were degenerated into a cartilaginous mass. The left ovary and tube were apparently dilated into a suppurative sac, communicating with the uterus through the opening (which was almost closed) of the fallopian tube, and with the large intestine (which was adherent to the sac by a convolution) about twelve inches, axial measurement, from its anal extremity, through an orifice half an inch in diameter. The examination, for sufficient reasons, was continued no further.

It is pertinent to a clearer interpretation of this autopsy, to remark that there was no evidence of any inflammatory action, except in and about the pelvis, the adhesion of the convex surface of the liver having been probably produced by the very free deposit of lymphadenoid tissue in that locality, akin to the adhesion of the leucocythæmic spleen.

This autopsy exhibits,

First, as a local lesion, pelvic-peritonitis and peri-uterine abscess, which fully account for the basin-shaped pelvic walls, the severe pain, the dorsal decubitus, and the cartilaginous hardness and fixed position of the uterus and its appendages.

Second. The liver in a state of partial degeneration by lymphadenoid deposits.

Third. A proliferation of glandular tissue within the spleen without increased bulk of that organ.

Fourth. Free deposits of adventitious lymphatic tissue in unusual localities, and existing glands largely increased in size.

Fifth. Leucocythæmic blood as seen in the yellowish white clots of the vena-cava.

*New Haven County.*C. A. LINDSLEY, *Reporter.*

But one epidemic has prevailed in this county during the last twelve months of any professional interest. It has been limited to the members of the State Medical Society, but has been universal and unsparing, not one escaping its influence and only an exceedingly small number having it mildly. The diagnosis is, complete paralysis of the organs concerned in the power of communicating anything of interest to each other. It is a disorder apparently of long standing, though its wide-spread prevalence has been only recently discovered, viz: since the Committee on Matters of Professional Interest in the State has been appointed, and attempted to arouse the parts into activity. Very active stimulants have been employed, but as yet without effect. The cases have been under treatment two or three years, chiefly by means of emollient and irritant applications. Thus far, however, no symptoms of vitality are manifested.

Twice, at consecutive meetings of the County Association, in council assembled, your reporter has made direct personal applications to the mento-nervous system of the patients, and once afterwards he sent a prescription to each individual outside the city. The recipe was designed to operate as an *eliminative*—a sort of emetico-expectorant—and he had the fullest confidence that it would draw out *something* from some of them. But it was a total failure; not the slightest response to the remedy was made by any of the patients, nor did any of them seem to feel as if it was going to operate. The only result of treatment obtained was from the first dose administered at the fall meeting of the County Association. A singular case of placental formation, occurring in the practice of Dr. M. N. Chamberlin, and communicated by him. No other written communication whatever has been received from any one in response to the several direct and personal requests for information of any sort of medical interest.

Your reporter regards this total apathy, this entire deadness to any active interest in such a subject, as really a pathological state of the professional mind. Surely, if the mind of the profession as a whole was in the exercise of a full, vigorous and healthy activity, as a watchful, observing, enquiring intellect, such utter indifference would not be possible. Your reporter, therefore, would most respectfully suggest, Mr. Chairman, that your committee earnestly

invite the attention of the Convention to this most serious loss of a highly important and useful function, the full exercise of which is only consistent with its perfect organization.

Depending, therefore, as you see I must, on my own limited experience, and that of my immediate professional neighbors, my report will relate to only that portion of the county in and about New Haven.

The past year has not been marked by any unusual amount of sickness. The citizens of this county have been favored with a period of more than average health. The more fatal forms of disease to which we are liable have not been exceptionally prevalent or distinguished by any special malignity. *Intermittent fever*, which began to re-prevail in this region with conspicuous frequency about ten years ago, and steadily increased during the greater part of the last decade until it acquired an importance in many localities second to no other disorder, has during the year very decidedly diminished both in frequency and violence. The characteristic influences which developed it are, however, still sufficiently prevalent in various irregular disorders of periodic type.

Typhoid fever has been less prevalent and more manageable than for some years before. As contrasted with the year immediately preceding, the mortality is thirty-nine against forty-seven. In both years, by far the greatest fatality occurred during the autumn months.

Pneumonia has been more destructive, as measured by its fatal results, than typhoid fever, but still presenting a more favorable record than the previous year. The deaths during the last year numbered forty-five, and in the preceding year fifty-six.

Cholera infantum prevailed with much fatality in the city during the past summer, but still with a smaller harvest of death than in 1870, since which time it has been steadily decreasing. During the year ending May 1st, 1874, there are recorded seventy-six deaths; for the year preceding, one hundred and twenty-four. In New Haven city the exanthematous diseases in all varieties have appeared through the year, but have not been noted by any remarkable mortality. New Haven has been exempt to an unusual degree, as compared with other places, from the ravages of *small-pox*.

Measles has occurred with more than average frequency during the fall and winter, but I am not aware that it has been charac-

terized by any special conditions. There were five deaths during the year, against two the previous year.

Scarlet fever has appeared only in a sporadic way, but has not claimed its usual percentage of victims. There have been only six deaths the past twelve months in the city.

Roseola Rubella, which for many years has been a comparative stranger in our communities, has aspired during the winter and spring to the dignity of an epidemic. At no time in the memory of the present generation has it prevailed so extensively. Its sudden appearance in families, often, at first, excited the most anxious alarm; it being mistaken for its kindred exanthem rubeola, or the still more dreaded scarlatina, and the family physician was hastily summoned to confirm or dispel their fears.

It was not confined to children, but was very frequent among adults. The eruption bore so close a resemblance to that of measles that until its prevalence was recognized as a distinct disorder, it was unhesitatingly diagnosed as such, by physicians of long experience. It was not usually preceded by any cough or catarrhal symptoms. In a few cases your reporter met with, it was identical in all its characteristics with scarlet fever as regards the eruption, but was wanting in the sore throat and febrile action. In one case the eruption was preceded by vomiting; which delayed the diagnosis. In a few instances the roseola eruption was noticed to have preceded a genuine rubeola. In others it accompanied an attack of influenza. In the latter case the cough and catarrhal symptoms made the diagnosis a little more dubious. Your reporter saw one case in which the roseolar eruption accompanied an acute gonorrhœa. The eruption period seldom exceeded three days and was often of shorter duration.

Influenza has been very prevalent during the present and last month, and also an unusual amount of bronchitis. The cause of these disorders, many think, is to be found in the peculiar meteorological conditions of the season.

Several of the more formidable acute diseases have exhibited less malignity in this city than for several years past. Those already mentioned illustrate this fact, in part. And on reference to the death records at the registrar's office it appears that there were only twelve victims of diphtheria; that croup destroyed only sixteen, against a mortality of sixty-four in the previous year; and dysentery was rarely fatal. The same records show that the mortality during the year ending May 1st, 1874, was only 1126,

while during the year immediately preceding it was 1344—a notable difference. A very crude analysis shows that this disparity is to be found in the acute disorders, and that those afflictions which are not dependent upon temporary causes were as fatal, or more so, the last year than previously. This fact could be fully illustrated, if desirable; I mention but one example. Consumption claimed 161 of the 1126 deaths last year, while it counted only 150 of the 1344 deaths of the year before.

These results suggest the enquiry, whether the popular belief of an antagonism between Phthisis and Intermittent Fever is thereby sustained. It would be worth while to institute some careful investigations to determine if this increased mortality from consumption has any relation to the decline of malarial diseases.

In conclusion, Mr. Chairman, your reporter would suggest the inquiry if the diseases of the nervous system are not conspicuously increasing? He does not allude merely to the chronic and milder forms, but to those which are liable to fatal results, such as paralysis, spinal and cerebral inflammations, eclampsia and the various convulsive disorders.

ARTICLE XVII.

REPORT ON OVARIOTOMY.

BY CHAS. M. CARLETON, M.D., OF NORWICH.

THE legitimacy of the operation of ovariotomy is so fully established that it is unnecessary for me to advance any argument in its favor. The diagnostic signs of ovarian tumor are familiar to you all. It, therefore, devolves upon me simply to give you my views of the proper selection of cases for operation, the time and best method of performing the operation, and the most appropriate after-treatment. In the selection of cases it must be ever borne in mind that the operation is a most formidable one, always attended with excessive shock. The general condition of the patient must receive our careful attention. Each case should be critically examined to ascertain whether there exist important complications. I would particularly urge upon you the importance of ascertaining if the uterus is movable and comparatively healthy; if it is not, I would most decidedly advise against an operation. Great importance is generally laid upon the existence of adhesions between the sac and the abdominal walls—too much, in my opinion. If they can be torn, I am inclined to think them of little importance. It is a well known fact that blood vessels which have been crushed or forcibly torn apart seldom bleed, and clean wounds, when not exposed to the air, usually heal readily.

I well remember the first operation I ever witnessed, where there existed strong and extensive adhesions, and the remark of the operator, T. Spencer Wells of London, as he broke them down. He said: "Gentlemen, adhesions are of little importance unless they oblige you to use the knife." I was one of three assistants who held the patient upon the table, and can testify to his having used a goodly amount of strength in liberating the tumor. The knife was used only in making the incision through the abdominal walls and severing the pedicle. Eight days later I saw the patient sitting up; and three weeks after the operation she was walking in the open air.

I have since had one case in my own practice in which, on account of the extent and strength of the adhesions, I was advised by some of the surgeons present to abandon the operation. It was, however, successfully completed.

The most favorable time for operation, during the progress of the disease, is a point upon which there exists great diversity of opinion. My own experience has been too limited to be of much importance in deciding this question; but from careful study of reported cases, I am inclined to favor delaying operative interference until the tumor has become burdensome to such a degree that the operation may be considered as a relief, rather than an extra tax upon the system.

An important question arises in this connection: Should tapping be resorted to before extirpation? I think it should, and for these reasons: it sometimes, although rarely, produces a cure, and in cases where it does not cure it gives temporary relief, and enables us the better to prepare the patient for the radical operation. It is also a most valuable aid to diagnosis in doubtful cases. Mr. Wells once told me that he would not consent to operate in any case that he had not himself previously tapped. He also stated that in his opinion extirpation was more generally successful in cases where tapping had been once resorted to; the lesser operation apparently preparing the system for the greater.

Before operating, make sure that the patient is in the best possible condition. In most cases the administration of moderate doses of the muriated tincture of iron at meal times, for ten days previous to the operation, is of great service. To ensure solubility of the bowels, give four or five grains of *fel bovini*, in pill, every night for a week. On the morning of the operation empty the bowels thoroughly with a clyster. The temperature of the room, instruments and hands of the operator is of great importance; it should not be below 75° F.

The operation is ordinarily simple. Its successive stages are detailed at length in our text books. I shall, therefore, dwell only upon a few of the more important, which are the subject of controversy at the present time.

The incision should be a *clean, smooth cut*, any separation of the different layers of the abdominal walls increasing the danger. It should be nearly in the median line and immediately above the pubes; at first it should not exceed two or three inches in length: this will be sufficient for exploration, and in many cases for the

removal of the tumor. The exploration having proved satisfactory, the incision, if found too small, may be extended upward as far as judged necessary, keeping in mind the fact, that, other things being equal, *the danger increases in direct ratio with the extent of the wound in the upward direction.*

The tumor having been exposed and its adhesions broken down, the fluid portion should be drawn off to diminish as far as possible its size. Wells' trocar will be found a convenient instrument for this purpose. The tumor is then to be turned out, care being taken to exert the least possible traction upon the pedicle.

The treatment of the pedicle and drainage are the principal points of controversy. I will not weary you by enumerating the various methods of treating the pedicle, but will content myself with calling your attention to the instrument which I prefer for this purpose—the spring ligator, first invented by Dr. H. H. Hill, of Augusta, Maine, for the removal of uterine polipi, and afterward modified and improved, for the treatment of ovarian and other tumors, by Prof. Wm. Warren Greene of Portland, Maine. A full description of the perfected instrument, which I now show you, may be found in the Boston Medical and Surgical Journal for March 2, 1871.

The platinum wire cuts its way gradually through the tissues, the healing process following immediately in its track *without suppuration.* Its advantage over all other methods of ligating is best appreciated in a case of a short, thick pedicle. In my last case, in which both ovaries were removed, the whole mass weighing fifty-three pounds, one pedicle was considerably less than an inch in length, while it was two and a half inches in width, and nearly an inch thick. The ligator held it perfectly and the patient recovered without an untoward symptom.

The instrument may be applied either through the lower angle of the wound or the sac of Douglass. I think the former situation preferable. In ordinary cases it furnishes good and sufficient drainage, and is far less liable to be followed by phlegmsia dolens. Much has been said of late in favor of drainage through the sac of Douglass. I feel confident, for the reason above mentioned, that this practice must be short lived.

Before closing the wound, great care should be taken that no clots of blood or any portion of the sac contents be left in the abdomen. The cavity must be carefully but thoroughly sponged out, warm water being freely used if necessary.

The wound should be closed by interrupted sutures, and for this purpose I prefer silver. *Each end* of the sutures should be armed with a strong sharp needle, which should in all cases be passed through the entire wall *from within outward*, in order to avoid the possibility of separating the peritoneum from the adjacent tissues. No adhesive straps are needed, but the value of a thick pad of cotton batting, held firmly in place by a swathe, cannot be over-estimated. The bowels having been previously stimulated to action, I think it well to give the third of a grain of morphine, subcutaneously, immediately after the operation. Beyond this the treatment must be expectant. If there is pain repeat the morphine, otherwise not. In short, treat symptoms as they occur.

ARTICLE XVIII.

ABORTION :

WITH CASES ILLUSTRATIVE OF PATHOLOGICAL CONDITIONS
IN EMBRYOLOGY.

BY ISAAC G. PORTER, M.D., OF NEW LONDON.

CASE I.—A lady, eight or ten weeks pregnant, in the early part of March last, accidentally gave herself a severe strain, which was soon followed by the usual signs of abortion. Only a few months prior she had suffered a miscarriage, and was the mother of four living children, two of them twins. As hemorrhage became profuse, a tampon was resorted to, which, acting efficiently, was suffered to remain twelve hours. On its removal, a firm mass protruded from the os uteri, which gave the sensation to the finger of being fibrous. Under the impression that it might be the ovum and secundines, the os being at the time considerably dilated, an effort was made to dislodge it. A portion only was removed, which consisted of a clot very firmly compressed by the contraction of the uterus. Behind this, there was detected within the os something which was naturally regarded as the ovum, still retained.

Thus far we have only the history of frequent occurrences. On removing clots, and disrupted fragments from the bed, I discovered a body the size of a robin's egg or larger, translucent and fawn-colored. Numerous spots of pure white rendered one portion opaque, but they were insusceptible of reduction by a powerful microscope. It was nearly filled with a pellucid fluid, without fœtus, or anything else. Every physician has met with cases where a fibrous mass, known as a mole, or false conception, is thrown off with flooding, which, on examination, is found to be only a solid, homogeneous mass, or, it may be, with a cavity containing fluid, and this, with, or without an embryo. The inquiry naturally arose in my mind, what is the nature of this body, not described certainly in many of our authorities, even the most recent? The presumption was that it was an ovum, but where

were the placenta and membranes and fœtus, the presence of either of which would have solved all doubt. Another query arose, viz: Was this an hydatid?

Leaving this point undecided for the present, we go on with the history of the case. Something being apparent to the touch within the partially expanded os uteri, resembling in its firmness and tufted covering the placenta and membrane, a full dose of ergot was exhibited, but with no other effect than that of stopping all hemorrhage and causing a narrowing of the os uteri and a retraction of the uterine contents. But their presence was evident to the finger for three weeks; the patient, in the meantime, passing into a delicate state of health, with chills, quickened pulse, almost daily fever resembling hectic, and loss of appetite. The uterine discharges were slight and not offensive, although vaginal injections, containing carbolic acid, were freely used. Quinine in full doses was found beneficial in sustaining the strength and reducing the fever.*

Previous to the occurrence of the foregoing septicæmic symptoms, there was the additional question: 'Can this ovular body be one of twins, the fellow remaining within the uterus and coming within reach of the finger?' a possibility suggested by this lady's former twin-pregnancy.

It need not be said that Prof. Jacobi of New York has a well-merited reputation for his attainments in embryogony. To him, as a valued acquaintance, I submitted the problem of the nude and empty ovular body and also the septicæmic symptoms, which had then developed. This will account for his masterly *résumé* of the pathology of uterine moles, the history of which, more or less extended, may be found in such works as *Churchill* or *Thomas on Females*. Before enriching this article with his views, I would say that the older practitioners were not entirely ignorant of empty ova. Smellie, who lived more than a century since, says: "Should the embryo die (suppose in the first or second month) some days before the ovum is discharged, it will sometimes be entirely dissolved, so that when the secundines are delivered there is nothing to be seen. In the first month this dissolution will be performed in twelve hours; in the second month, two, three, or four days will suffice." The light of modern science does not

* Aug. 1st, 1874. As furnishing later intelligence respecting this case, it may be proper to say that the patient enjoys good health, attends to domestic cares and duties, and has traveled an hundred miles a day, without fatigue. Nothing resembling a mole, or foreign body, has yet made its appearance.

annul, or render obsolete these views, the experience of each one of us confirming their truth—so far as sometimes finding nothing but fluid *within the ovum and secundines*.

The following are the opinions of Prof. Jacobi: "When the development of the embryo has ceased, it seldom remains intact. Frequently it shrivels, or changes its color and consistency; sometimes when very young (say two or three weeks old), or even older, it undergoes a retrograde metamorphosis and disappears. Meanwhile the chorion, or placenta, may, and often does, grow. Its fate depends on its connection with the uterus. When the uterus is in a normal condition, or nearly so, and the cause of the death of the fœtus was not due to endometritis, the chorion and placenta may develop. I have lately exhibited a specimen of a fœtus of three weeks, and the accompanying placenta of eight weeks. When the cause of death is in the fœtus, or the small umbilical cord, the fœtus will die first, and it may be long before the placenta is thrown off. What you felt after the removal of the ovum was part of the placenta firmly adhering to the uterus. The uterine mucus membrane granulates quite down to the depth of the utricular glands, from the moment of the entrance of the ovum into the uterus. The size and number of these granulating elevations and tufts differ according to circumstances. On these differences depend the various difficulties we meet with in miscarriages. You remember cases of such up to the third or fourth month, when the removal of a whole placenta was an impossibility. When in such cases the ovum is expelled, the interior of the uterus undergoes a retrograde metamorphosis. The tufts contract and undergo granular degeneration and gradual absorption. Sometimes they remain and give rise to hemorrhages, in time even to polypus excrescences. This gradual absorption, corresponding with its rapidity, gives rise to fever, as in the absorption of any foreign material into the blood. Sometimes the process is not so simple. In place of simple fever, you may have, as the immediate and local results of absorption, lymphangitis and parametritis even to suppuration. Such a process will be the cause of renewed fever and a fertile source of chronic pelvic inflammations, infiltrations, malpositions, neuralgias, &c. A very frequent effect is insufficient involution of the uterus, with permanent enlargement and sterility."*

* As cognate to this subject, the following case, elicited from an eminent obstetrician of New York in reply to my query whether my patient could have been pregnant of twins, one of them retained, is here brought forward :

Far be it from me to imagine, for a moment, that I am the first to make this observation, and yet *how* frequently an unbroken, uncovered and nearly empty amnion may be discharged, I am unable to say. The union of the three conditions is probably quite rare, as I assume from the fact, that in a practice of more than forty years I have never, until now, met with it.

And now that its character is explained, I might spare the infliction of further remark, were it not that, when found in practice, it suggests probable retention of the chorion and membranes as likely to follow, and which, if thus retained for a length of time, are transformed into uterine moles, saying nothing of worse results as possible. This rupture, whether by uterine action, or extrinsic force, is to be dreaded. Hence, the complications and accidents which so frequently follow the work of the abortionist, and also in other cases where the death of the fœtus is not referable to constitutional causes. After briefly detailing a typical case, I shall condense the history of others, that we may understand this subject in its practical bearings.

Aug. 5, 1873. Called to a case of abortion at the eighth week, superinduced, as the mother of the patient charged, by instrumental interference. After prescribing, I left her, expecting another summons if necessary, but heard no more for nearly seven months (Feb. 28th last), when I found her suffering severely from pains and flooding. Her health in the meantime had been delicate, with slight flowing. After a labor of ten hours, a uterine mole was expelled, as large as the fist, firm, fibrous and homogeneous. Its size shows that where the growth of the ovum proceeds after the death of the embryo, its dimensions increase very rapidly, chiefly because the nourishment, previously collected by the absorbing power of the shaggy chorion, appears now to be directed to the chorion itself, which puts on a fleshy growth.

“A lady had an abortion, such as you describe, in November last. An entire ovum came away, membranes, villosities, &c., but the amniotic sac contained no trace of the fœtus. At the present time she is at least seven months pregnant and expects to be confined in June. Here was undoubtedly a twin pregnancy, in which one ovum became blighted at an early date and was rejected, while the other ovum is progressing regularly to maturity.” I will only add that an important difference between the foregoing case and my own, and also, the novelty of the latter, consist in the fact, that in my case the amnion, or inner membrane of the ovum, with its fluid contents, was discharged *without* the usual investing chorion, its placenta, villosities, &c. When its nature is understood, the solution of the problem seems as simple as that of the traditional enigma of Columbus and the egg.

Some years since, a case occurred in my practice, at the eighth week, the placenta coming away at the end of a month from that time, while the patient was walking across the room, engaged in household occupations; and another at three months, the placenta retained five weeks with constant flow, and then thrown off while she was vomiting from sick headache; and another, at $4\frac{1}{2}$ months, with excessive hemorrhage. The ovum entire was retained and was thrown off at the end of the ninth month of pregnancy, after $4\frac{1}{2}$ months of wretched health, fever and anæmia. The fœtus had ceased to exist at the time of the flooding, and was now condensed and mummified, the placenta resembling a flattened tumor. I am cognizant of a case of severe flooding, following abortion, which was referred to supposed ulceration of the os and cervix uteri, and for which months of rest were prescribed, when the introduction of the uterine probe showed the existence of a foreign body, doubtless a uterine mole, the size of a large walnut. This was removed, and the hemorrhage ceased at once.

“Teaching,” as I am, “by example”—that I may present two more phases of retained placenta, I must refer, for illustrative cases, to (Hays’) American Journal for July, 1871, p. 207. A miscarriage occurred at $4\frac{1}{2}$ months, placenta retained. It was carefully, but unsuccessfully sought. As no hemorrhage followed, the physician in attendance departed from the usual line of practice and decided to leave the case to nature. Two months elapsed before the placenta, which was quite undecomposed, came away, the patient in the meantime having returned to her domestic avocations, in every respect quite well.

The success in the foregoing case cannot but be regarded as exceptionally fortunate, and as furnishing a ray of hope rather than as indicating a safe line of treatment, when the placenta has become voluminous, as at this period of pregnancy.

The following case shows the danger which may exist, even when the abortion occurs at the seventh week. The patient, for another period of seven weeks, had a constant drain of blood, culminating in a profuse discharge, while walking the street. This was checked by rest, and at the tenth week after the abortion a body was found protruding from the os uteri. This, which was placental, was removed. A chill, however, followed, with nausea, diarrhœa, pain in the head, back and limbs, and great heat of skin, pulse exceedingly rapid, but there was no abdominal or uterine pain, or tenderness, until five days later. On the seventh day she died, probably from pyæmia.

The fatal issue in this case invites to a discussion (but for which we have little room) as to the proper treatment in cases of abortion, when the placenta, &c., are retained. The authorities, which were in vogue fifty years since, incline to an expectant, conservative course, while many at the present day advise early removal. Much must depend on the fact whether abortion occurs at two, or three months, or at four and a half, or five months. In the former (say $2\frac{1}{2}$ months) it is chiefly in exceptional cases, as in the last cited above, that serious results follow. Discomfort, delicate health and occasional hemorrhage may supervene, and if these be extreme or threatening from the outset, interference is imperiously demanded. Otherwise, and in the earliest months, when the cervix is narrow and not softened, physiologically, as at the full time, perhaps more risk is incurred by the use of mechanical means, in unaccustomed hands, than in leaving the retained secundines to nature. But it may be said: 'with the enumeration before us of evil consequences, resulting from such retention, especially as furnished by Prof. Jacobi, how can such an opinion be advanced without presumption, or self-distrust?' We reply, that we address *not* specialists, with every necessary appliance at hand, but the general practitioner at large. Judging from our own experience and reading, we infer that many of the morbid conditions named are legitimate and possible, rather than frequent, or probable, sequences of abnormal retention in the earlier months.

But when at the fourth and fifth month the placenta is retained, the case assumes an entirely different aspect, since the decomposition and absorption of so large a mass would be followed by marked septicæmia, phlebitis, and other signs of poisoned blood. After six hours' retention, the most active measures are, of course, called for. In such cases, I have followed the suggestions of Tyler Smith, who speaks warmly of active purgatives, such as large doses of castor oil and turpentine, with enemata of terebinth, claiming that they produce relaxation of the os uteri, while they cause contraction of the body of the uterus. But, if these fail, the use of the hand is now partially available, especially as occupying only the vagina, while two fingers gradually dilate and enter the uterus. Placental forceps, also, have their appropriate place. Ergot, in early abortion, has rarely in my hands proved true to its character as an oxytocic. It may aid pains already existing, but rarely institutes them. In the earlier months, it is true, it often checks hemorrhage, but in place of being a *partus accelerator*, it

has often seemed rather to cause a retraction of the unbroken ovum, and thus to ensure its safety.

In closing, we re-produce from the New York Medical Record * a remark of Prof. Barker, who says: "The immediate danger in abortion is not so great as in labor; but the after effects are worse. He has seen more deaths from abortion than from labor, if we except puerperal fever after the latter." And also, we add one or two statistical facts furnished by Dr. E. Harris, of the New York Health Department: "In New York and Brooklyn, in every ten and one half burials, there is one still birth, followed often by the death of the mother, most of them at the seventh month. This does not include those cases in the early months, where abortions have been *procured* in illicit pregnancy, or married life." He adds the warning, that this same evil (fœticide) existed in the Roman empire before its fall.

* 1868, pp. 152-164.

ARTICLE XIX.

SMALL-POX AT SOUTH WINDHAM, CONN.

BY ASHBEL WOODWARD, M.D., OF FRANKLIN.

THE small-pox which, with almost unexampled severity, scourged the village of South Windham, Conn., during the winter of 1873-4, was marked with features which commend themselves to the attention of the profession. In a community of barely three hundred inhabitants there were about one hundred and thirty cases. The disease was introduced from abroad early in December and became generally prevalent towards the close of January, the contagion having been diffused by the free commingling of the people before its existence was suspected.

The writer was first called in, Sunday, February 1st, and during the next six or seven weeks visited the village daily. A majority of the cases presented the ordinary symptoms only. The premonitory fever, accompanied by intense pain in the lumbar region and obstinate vomiting, ushered in the attack, and was followed in due order by the appearance of pimple, vesicle and pustule, and by the other symptoms which usually attend the malady in its progress. Some were predisposed to stupor, while others were restless and wakeful. Active delirium was not infrequent. Instead, however, of advancing in the ordinary way, we noticed many variations. One of the most common of the irregular forms was the "crystalline," in which the eruption continued vesicular. Deviating at first but slightly from the usual appearance, this variety afterwards became more distinctly defined by the unsymmetric shape of the pock and by the absence of color in the contained fluid, which did not pass on to purulency but left behind an immature and imperfect crust. The assumption that the pustule is an invariable accompaniment of the disease might lead to an error in diagnosis. In several instances the eruptive inflammation extended to the larynx, trachea, and to the larger divisions of the bronchia, producing hoarseness and sometimes complete loss of voice. This was a dangerous form, threatening death by

suffocation. Other modifications were observed, which indicated the great malignancy of the poison, furthered, perhaps, by subtle endemic influences which weakened the power of resistance in the system. The effect was seen in the quick and complete prostration of nervous energy, followed by an imperfect development of the eruption or even its subsequent retrocession. A still more striking proof of the potency of the poison is afforded by the fact that not less than eleven of the sufferers had previously had the disease.

It is well known that the small-pox is more malignant in cold than in warm weather. It may be, too, that the frequent and heavy fogs of last winter, coupled with rapid changes of temperature, favored the spread of the pestilence either by affording a surer medium for the diffusion of the germs, or by depressing the vital forces. The poison accumulates and becomes more searching and uncontrollable as the numbers stricken down in a neighborhood increase; conditions capable of resisting successfully the less energetic contagion of sporadic cases succumb helplessly as the epidemic spreads. Prophylactic measures, proved by abundant experience to be effective ordinarily, now disappoint with painful frequency the hopes of the physician. This shows the supreme importance of isolating every case at the outset and crushing the pestilence in its incipiency. The fire which, if taken in time, a single foot could stamp out, may, if given brief headway, sweep resistlessly through the forest or across the prairie.

As a preventive, vaccination is of paramount importance. Where the system is once thoroughly pervaded by the vaccine virus, the writer believes the protection to be complete. As the small-pox itself does not afford absolute indemnity against the subsequent recurrence of the malady, neither can vaccination claim to be an infallible safeguard. Zymotic diseases generally occur but once in the same person, yet certain constitutions present exceptional susceptibilities to the influence of specific contagions, which may thus affect them several times in the course of life. Ordinarily, if vaccination is performed within four or five days after the exposure of the unprotected to the variolous contagion, it gains precedence of the small-pox and affords complete security. But such, as might be anticipated from what we have said, was not the case at South Windham, at least after the pestilence had gained such headway that the air had become loaded with the poison.

The treatment of the small-pox at every stage of its progress demands from the physician the exercise of ceaseless vigilance and sound discretion. Erroneous and dangerous inferences were formerly drawn from the circumstance that the appearance of the eruption usually brings relief. It was thought desirable to produce copious pustulation, and for that purpose heat and stimulants were freely used. The exact opposite is the truth. The less the eruption, the better. The fewer the pocks, the less the peril.

The patient should lie in a cool and darkened room, under few bed clothes, with the access of an abundance of fresh air so graduated in temperature as to produce a sensation of agreeable coolness. Ice water and other refrigerant drinks are as salutary as they are refreshing. Persons of robust constitution should be kept on a light diet, while the feeble and aged require judicious support. The bowels and secretions are to be regulated by gentle medication so far as deviations from the normal standard call for interference. Inflammation, stupor, wakefulness, neuralgic pain, cerebral congestion, vomiting, and other symptoms, are to be controlled by the appropriate remedies. It is fortunate that measures which minister to the comfort of the sick are generally salutary.

In the advanced stages another class of perils menace the sufferer. The strength exhausted by extensive suppuration and by pain, now needs to be reinforced by the judicious use of tonics and stimulants. The cooling treatment indispensable during the progress of the fever should give place to a regimen of moderate and agreeable warmth.

The small-pox has a definite course to run and no remedy can cut it short. As its severity is, as a rule, measured by the amount of the eruption, the main indication in the earlier stage is to reduce the eruption to a minimum. Throughout, the treatment should be conducted on general principles, the materia medica offering no remedies which exert a specific control over the disease, and yet in few maladies does the treatment determine more frequently the issue of life or death.

ARTICLE XX.

SKIN GRAFTING.

BY S. C. BARTLETT, M.D., OF WATERBURY,

AND

W. LOCKWOOD BRADLEY, M.D., OF NEW HAVEN.



MARCH 29th, 1871. Miss Hattie Thomas* of Naugatuck, Ct., aged 19 years, had her hair caught by a revolving shaft, which instantly removed the entire scalp from the occiput to the supercilia, including the temporal regions, eye-brow, and most of the *left* external ear. I was immediately called and arrived in two hours. I cut the hair from the scalp and replaced it, but with unsatisfactory result, it being entirely removed by sloughing, in about two weeks. Suppuration being now fully established, I commenced skin grafting, as made known to the world by M. Reverdin of Paris, France, in 1869. I took skin from the patient until the excessive discharge from these additional wounds made it necessary to desist. Many of Miss Thomas' friends volunteered to furnish material rather than have the healing delayed. In this way I obtained sixty-four pieces of skin. Five months after accident, the wound being nearly two-thirds covered with new growth, the patient was affected with erysipelas, which destroyed all the growth from the margin and most of the transplanted growth, a few of the large pieces remaining uninjured. After four months' time, required to bring the ulcer again into healthy condition, skin grafting was resumed and continued without interruption until complete covering was accomplished, by the transporting of two hundred and fourteen pieces of skin, from the commencement to the cure. In little less than a year from the time of the accident Miss Thomas was again moving among her friends, wearing a wig of her own hair and rejoicing in health, which has remained good to the present time. The frequent enquiries I am constantly receiving regarding the application of this discovery have induced me to bring the case before you, with the hope of answering some

* This lady was presented before the Convention, by Dr. Bartlett.

of them, and increasing the interest and confidence of the medical profession in this method.

The unusually large surface to be healed afforded a fine opportunity to illustrate the virtues of skin grafting. The condition to insure growth must be a healthy granulating surface. It is a well known fact, that there is constant change going on in granulations. They are at first small, firm and active, then becoming overgrown, pale and flabby, much raised above the surrounding integument, and ending in sanious discharge. I have found the usual applications, viz: nitrate silver, sulphate of copper, alcohol, unavailing to arrest this change. The excessive granulations go on to degeneration under any treatment, afterward again assuming a healthy appearance. Any application of this kind in the region of recently transplanted skin is detrimental. Simply cleansing the ulcer thoroughly with water, covering plentifully with lint, and over this oiled silk, to assist in retaining moisture, I found the most effective means to keep the surface in good condition. It is of the first importance that grafts be applied during the first stage, as failures during the approaching second stage have taught me that the decaying granulations undermine the new growth. This I consider the cause of continual breaking up in marginal healing.

Manner of transplanting.—Seizing a piece of skin between the thumb and finger, raise it and at the same time cut with scissors. In this way the size can be easily determined. Only the true skin is desired, the epidermis alone being of no effect. The pieces being circular and a quarter of an inch in diameter, applied to the ulcer nearly an inch apart, should be covered with lint; over this thick cloth anointed with simple cerate; still another covering of oiled silk protects the portion of the ulcer upon which the grafts are applied. Four or five may be put on at once and near the margin. The object of limiting the number is that they may remain undisturbed several days, while it is necessary to cleanse other portions of an extensive ulcer. After five days, upon removing the dressings, we find the grafts have assumed a bluish tinge around the edges, and all the characteristics of growth from the margin. The epidermis has already become dark and somewhat elevated from the true skin. It soon disappears. We then find the grafts surrounded and often covered with laudable pus, which should be allowed to remain, as any attempt to remove it would prove fatal to their growth, they being exceedingly sensitive

to disturbance. They should be immediately re-covered as before, to remain the same time, or until the dressings become offensive. Probably upon the next examination the grafts will have attained nearly three times the original size. It is interesting at this time to notice the intersection of blood vessels from one to another. The marginal growth is more prominent near the grafts, and soon a union takes place between them. If, however, the grafts are too widely separated as the growth extends, the edges become broken as upon the marginal growth of skin, with which I consider this identical. It is governed by the same laws and has the same appearance. It consists of fibro-areolar tissue ramified with blood vessels, perhaps also lymphatics and nerves, but devoid of epidermis, sweat glands, sebaceous glands and hair follicles. In the case before you, you perceive the ulcer entirely healed: the skin, soft and pliable, presenting none of the hard, irregular, corrugated marks of cicatrization and contraction, as would have appeared had the ulcer healed as ordinarily. The grafts meeting and supporting each other, effectually prevent contraction before and after cicatrization; also the tendency to continual ulceration of the cicatrice. One fact may be mentioned. Healing commenced from the margin, before the scalp sloughed off and consequently before the new growth by the grafts. Owing to redundancy of the skin of the eyelids, ectropium was caused to such an extent as to produce much irritation and deformity of the eyes. Immediately upon the junction of grafts with this marginal growth, contraction was arrested.

Another interesting feature was the continual breaking up at this junction, owing to the strain upon the marginal growth. This strain was diminished by the retreating margin, as the growth from grafts filled up the gap and the ectropium became almost unnoticeable. I may add that there has been no breaking up at the junction of grafts alone. Another advantage of skin grafting is the prevention of extensive suppuration and its consequences, but more than all, the rapidity with which large ulcers may be healed. Considering these and the easy means of operating, is not the process of skin grafting the best known method of healing large ulcerated surfaces? It is certainly the only method of replacing a lost scalp, for nature alone is not competent to accomplish it in the same length of time, as this case fully demonstrates: the growth of skin from the margin during the whole time being not more than *two* inches.

S. C. BARTLETT.

The hair of a young woman, aged 28, was caught by a revolving shaft, which tore off the entire scalp: the tear extending below one of the eyebrows and down upon the right cheek. The pinna of the right ear was also destroyed, and the pericranium, covering the vertex, was injured to such an extent, that the outer table of the skull exfoliated for a distance of seven inches.*

The accident occurred August 8th, 1873, and the case came under the care of Dr. Bradley four months afterwards. Up to that time the surface of the wound had not been in a suitable condition for the successful practice of skin grafting. The application of the basilicon ointment was soon followed by the growth of healthy granulations, and, December 10th, 1873, several pieces of skin, removed from the patient and others, were successfully implanted. This was repeated, at varying intervals, during the following five months, and, although the progress of the case had been retarded by several attacks of erysipelas, the newly-found skin had (May 24th, 1874) advanced from one to two inches beyond the usual marginal cicatrization. The grafts employed were generally oval in form, and from an eighth to a quarter of an inch in diameter; they were removed by means of a pair of small fine-toothed forceps and curved scissors. Having been pressed firmly upon the granulating surface, which should always be of a florid color, the grafts were covered with oiled gutta-percha tissue, surmounted by a piece of cotton and supported by strips of adhesive plaster. The dressings were retained until the third day, and great care was required lest the grafts should be disturbed by the daily dressing of other parts of the wound. The marked dependence of the condition of the wound upon the state of the general health rendered necessary the almost constant employment of the supporting treatment. The extent of surface still remaining to be covered measures about sixty square inches.

W. L. BRADLEY.

* This patient was exhibited to the Convention by Dr. Bradley.

ARTICLE XXI.

REPORT ON HONORARY DEGREES.

BY GURDON W. RUSSELL, M.D., OF HARTFORD.

THE Committee appointed at the last meeting of the Convention, "to consider the propriety of discontinuing the practice of granting honorary degrees and licenses to persons who have not pursued a regular course of medical education," beg leave to report :

That they have given the subject such attention as its importance warranted; and find that licenses to practice medicine were given by the colonial assembly to such persons as were thought worthy by their standing and education, and that this continued to be the practice for many years. It is supposed that these were only the most worthy and distinguished of the practitioners of medicine, for the large majority were uneducated.

The "Act for liberty to erect a Collegiate School," passed in 1701, empowered the "undertakers and partners, and their successors," "for the encouragement of the students, to grant degrees or licenses as they or those deputed by them shall see cause to order and appoint." And the present charter for the more full and complete establishment of Yale College, granted in 1745, states "that the President of said college, with the consent of the Fellows, shall have power to give and confer all such honors, degrees or licenses as are usually given in colleges or universities, upon such as they shall think worthy thereof."

By this authority the college was authorized to confer the honorary degree of Doctor of Medicine, and it did occasionally, but rarely, exercise this power. This power is inherent in it as a university, and it is not to be supposed that it has ever parted with it.

When the Connecticut Medical Society was incorporated in 1792, it was authorized "to confer honorary degrees on such of the faculty as they may from time to time find of distinguished

merit," and the records of the society show that this power was often exercised.

But upon the union of the society with the Medical Institution of Yale College, this absolute power was parted with, and the society contented itself with recommending to the President and Fellows of the college such persons as they thought worthy of the honorary degree of Doctor of Medicine. This was "agreeably to the articles of union agreed upon" by the society and the college; and it was declared "as within the meaning and intention of this association that honorary degrees may be conferred by the President of the college upon those persons whom the Medical Convention shall recommend as deserving so distinguished a mark of respect."

This matter was discussed for some time in the Medical Society, before the union was effected, and certain "articles of union" are spoken of both in our own records and in the records of the college, and in 1811 it was *voted*, that "these be printed and compose a part of the Journal of the Society." We have not succeeded in finding a copy of these articles, but they were substantially embodied in the act establishing the Medical Institution passed in 1810.* It is a fair inference that when the Medical Society gave up its power of conferring honorary degrees, but reserved the right of recommending such persons as it thought fit for such honors, to the President and Fellows of Yale College, that the latter agreed to confer the honors upon the recommendation of the society. The society conceded some of its power for the sake of securing the authority of the college for its degrees, and the college acceded to the recommendations of the society for the sake of the support of the medical profession for its infant institution, then chartered.

Though this right remains in the college, it has not been disposed to assert it of its own will; it is held in abeyance, probably in accordance with the articles of union and agreement above mentioned, and also by the resolution of the President and Fellows that no honorary degree will be conferred unless it receives the recommendation of its special faculty. The college possesses the right to confer these degrees without the recommendation of the State Medical Society; it can and will do so upon its recommendation; President Woolsey thinks "that the corporation has not conferred the degree *proprio motu* since 1814." The case which

* For important documents referred to in this Report, see Appendix D.

occurred in 1867 does not appear to have been recommended by the society, though it is thought such might have been the impression.

That the college is in full accord with the society, is shown by the fact that it has followed the recommendations of the society; it has not gone beyond or fallen short. After its union with the Medical College, numerous honorary degrees were conferred; but when, in 1856, it was resolved that no more than one honorary degree should be conferred in each year, the college accepted the action of the society; and so the agreement entered into in 1810 has been kept in good faith.

It has been supposed by some that the ninth section of the act incorporating the Medical Institution was somewhat ambiguous inasmuch as the word "may" is used instead of the positive one of "shall;" "that honorary degrees may be conferred," &c. But we think it is considered in this place fully its equivalent, and the practice of the college would seem to sanction this interpretation.

It seemed to us desirable to ascertain the actual rights of the society and of the college in this matter of honorary degrees, and we are soon to consider whether the time has not arrived when the exercise of this right on our part should cease. Practically it has nearly ceased, for since the passage of the following resolution of the convention in 1856, the number of degrees granted has been very few:

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."

This resolution, and a previous one passed in 1831, "that the Committee on Honorary Degrees be directed to recommend none who have commenced the practice of medicine since the year 1815," were only resolutions, which may be repealed at any time, but as they have guided the action of the society for many years, may now be supposed to have the force of by-laws.

There were, in the earlier part of this century, many very respectable and well qualified practitioners in our State, members

of the society, who had never received the degree of Doctor of Medicine from any college. Some of them had attended one course of lectures; probably most of them had pursued the usual studies for the prescribed length of time, and had perhaps been licensed to practice, and had followed their profession usefully. They were men of character, good sense, and intelligent practitioners, in no manner inferior to their brethren around them. Some of them filled offices of the society, and were naturally desirous of a degree. For these the power of the society in its recommendations was specially designed, and was to them a source of ambition and honor.

But while honorary degrees were very generally conferred only upon members of the society, yet occasionally, though rarely, they were given to physicians from other States.

Whatever reasons existed for conferring these degrees in the past, may now be said to be inoperative, or nearly so. The opportunities for a medical education are so numerous and inexpensive, that anyone who has reasonable promise of usefulness can avail himself of them. It cannot be said now, that anyone is obliged to enter upon our profession without first devoting himself to those studies which are considered as absolutely necessary. While it does not become us to say that a genius might not arise, who by natural talents and force of application might be worthy of this honor; yet these cases must be considered as very rare, and should be closely scrutinized.

Such an one could easily afford to apply for his degree in the usual manner. The studies pursued and the information acquired for a long course of years, would enable him to pass his examination easily. We are confident in stating that no unusual pressure would be brought against such cases.

The resolution under which we were appointed desires us to report also upon the propriety of discontinuing the granting of licenses. In the act incorporating the Medical Institution of Yale College, in the seventh section, there is this power of granting licenses to persons who have pursued the usual course of study for three years, who are found qualified upon examination, but who have only attended one course of lectures. The Examining Committee were alone authorized to grant such licenses. The power was occasionally exercised in former years, but has now fallen into disuse, and is practically abandoned. Those who received licenses, frequently, in after years, applied for and received

the honorary degree; they thus supplemented, by the favor of the society, that which they should have obtained by their own exertions. If there were any reasons for such a course at one time, they have now passed away.

It would seem, therefore, that when we carefully consider the subject, there are no valid reasons for the society to retain its present power. It once was valuable, but now is less so.

But recollecting the right of Yale College to grant honorary degrees, and that that right is controlled by the Connecticut Medical Society, it is a question worthy of serious consideration whether we should now abrogate that right, and leave it with the college unquestioned. When we remember that applications for honorary degrees will occasionally be made, will not the Medical Society be better judges of the propriety of granting such degrees than the President and Fellows of the college? It may be supposed to be better acquainted with members of its own profession than those outside of it, and there is no reason to believe that injustice would be done to anyone who is worthy and deserving of honor. This idea is practically recognized by the college, when it declines to confer honorary degrees unless they receive the recommendation of the special faculty.

There has been much discussion and difference of opinion in our society on the subject of our report. After carefully considering it, however, your committee are of the opinion that at present there seems no reason for change, or for yielding any power which we now possess, and would only recommend a reaffirmation of the practical usage of the society by the establishment of the following by-law.

After the last paragraph in Sec. 2, Chap. III, insert the following :

“No physician shall be recommended to the President and Fellows of Yale College, for the honorary degree of Doctor of Medicine, until he shall have been in the practice thereof for twenty-five years, and no more than one shall be recommended in any one year, and such degree shall be conferred solely on the ground of distinguished merit and honor of the individual.”

All of which is respectfully submitted.

GURDON W. RUSSELL, }
 H. A. CARRINGTON, } *Committee.*
 CHAS. M. CARLETON, }

MEMOIR OF
WILLIAM HYDE, M.D., OF STONINGTON.

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

IN the fall of 1846 I was called to a lady in Stonington Borough, by reason of the ill-health and consequent absence of Dr. William Hyde, Jr. After attending the case for two or three weeks, Dr. Hyde, Jr., returned, and as my patient had become very sick he was called in counsel. Our prognosis was unfavorable, but the patient finally recovered and the family were firm friends of mine afterwards.

One or two years after this consultation a friend said to me that he had knowledge that this lady's father was dissatisfied with me because she had been getting worse constantly since I had attended her; that he asked to see Dr. Hyde privately at the time of the consultation (which I recollected was true); that he then freely expressed his dissatisfaction, and wished to discharge me and have him take charge of the case. But Dr. Hyde answered, "No, he is a young man; this is his first patient in Stonington Borough; he has given me an intelligent history of the case and the treatment; and though I think your daughter will die, I believe he has done as well for her as any one could. I will see her in counsel if you wish, but cannot consent to take the case."

Such manifest honesty, coming to me from a source wholly disconnected with the patient or the doctor and never alluded to by either, made me believe I had found an upright man in the profession, and I never saw anything to make me alter that opinion.

Dr. William Hyde, son of William Hyde and Rhoda Palmer, was born at Stonington, Conn., Oct. 27th, 1808. In his boyhood there was a sort of mesmerism about him which endeared him to, and gave him the respect and confidence of, his companions and associates.

Previous to the study of medicine, besides the common school, he was educated in a Mr. Kirby's private school at Stonington, and later in a military school at Middletown, Conn. He com-

menced the study of medicine in his father's office at the age of eighteen years, and spent his whole term of study with his father, except so much as was required for three courses of lectures at Harvard Medical College, where he was graduated in 1830, the subject of his thesis being Puerperal Fever.

After graduation he immediately commenced the practice of medicine as assistant and copartner with his father. March 2d, 1836, he married Miss Hepsibeth P., daughter of Hon. Ephraim Williams of Stonington, by whom he had four children. Three died in infancy or early childhood; the other, a son of much promise, lived to be twenty years old, then died suddenly in New York City, leaving his father childless. May 2d, 1841, his wife died of puerperal fever, which the doctor has since told me that he doubtless communicated to her from a case of erysipelas that he was at the time attending, ignorant, as all were then, of the possibility of such communication. Sept. 11th, 1843, he married Miss Ellen, daughter of Gen. William Williams of Stonington, for his second wife. She is now living, without having had a child to cheer her in her loneliness. Dr. Hyde died Sept. 25th, 1873, of tubercular consumption, having been an invalid for nearly thirty years, but was in his carriage for air and exercise the day before his death.

He was the second in a family of eleven children, six of whom (four sons and two daughters) lived to man and womanhood. There is no history of any hereditary tubercular trouble in the family, though one sister died of tuberculosis. His father died aged 78 years, and his mother lived to be 87. Both died of paralysis. One brother is all that now remains of the family to mourn his heavy loss.

In the spring of 1841, Dr. Hyde had pleurisy of the left side, from which he recovered with an imperfectly expanded lung and retracted chest wall. In the first part of the winter of 1843-4, he had severe pneumonia of the right side, which confined him to his house for nearly six months. When he did get out he was feeble and emaciated, had bad cough, expectorated large quantities of muco-purulent matter, and hemorrhages were not infrequent. He partially recovered from this sickness, but never fully regained his health. His stomach became diseased, causing indigestion, which troubled him long and sometimes severely; the ligaments of his liver relaxed in consequence of his long continued weakness, so that at last there was dislocation of the organ, and diabetes showed kidney trouble.

From the first, and all through his tedious sickness, he was particular to consult only first-class authority. Among his counselors at different times were Dr. Jackson of Boston, Drs. Alonzo Clark, Willard Parker, Jonathan Swett, Horace Green, Austin Flint, Dr. Camman and others of New York. All agreed that he had tubercular disease, and later he often had the positive sign in his expectorations. At no time did he receive encouragement for many years of life; but Dr. Hyde was a firm, consistent, unostentatious Christian; he ever wished to live prepared to meet his God. He was not a nervous man, and could look upon himself as calmly as upon his patients.

He was a man of great industry, courage and unflinching perseverance, which pushed him into the open air, and on visits to patients, when most men with less love for their profession, and with the worldly competence he possessed, would hardly have ventured from their doors. His wishes were to accommodate, but he was not afraid to say no, when he considered it necessary. He attended to but few calls during the night, or in stormy weather, and often did not visit patients for weeks together, sometimes remaining home during his sick turns, at others going to New York to get away from calls and to counsel with some physician. He possessed a strong desire to be useful, and as soon as he could get out again this singleness of purpose would stimulate his enfeebled constitution to bear his accumulated labors in a way that always astonished his friends.

I do not know what was done for him in the first few years of his sickness, but in later years he took but very little medicine except stimulants, to the amount of about one ounce of whiskey with each meal, and double that quantity at bed-time, with a little McMunn's elixir at night to quiet his cough, if necessary to get some sleep. This had been his habit for many years, without diminution or increase.

During the last year of his study before graduation, though very young, he began to show more than common tact in adapting means to ends; and having rare opportunities, which were beneficial to his father and useful to himself, he commenced a reputation for skill in the use of the catheter which often gave him consolation and credit in after years; succeeding sometimes after others had made false passages. He preserved an uncommon reputation in this regard to the day of his death.

After being in practice four or five years, his father, who was an active, driving business man, contracted to build the Stonington Steamboat dock and breakwater. Here he employed a number of men, and spent most of his time, leaving practice in charge of his son, refusing to go himself unless when not engaged on the dock. This gave the young doctor command of the field, and when his father had finished his contract and again took the saddle-bags, the son was preferred in so many families, and it was so common for the old doctor to be called second, that a frequent expression of his on entering a house under these circumstances was, "Old Jack at the pinch has come at last."

About this time the young doctor began to be called in counsel with other physicians, to whom he was always respectful, but examined the patient with thorough caution, leaving a favorable impression which kept growing with his years, until his consultation practice extended on the line of the Stonington Railroad half way to Providence and in other directions as far as he was known. So much was his travel on this road to visit patients that he kept a season ticket to go when and where he chose, and there were but few days when he was well enough that he did not have occasion for its use. His family influences by reason of both marriages assisted to introduce him early to the best society and tended materially to widen his sphere of labor.

Whether on account of his own lung trouble, or of associations in his own case with minds cultivated in this specialty, he certainly acquired an enviable reputation in diseases of the chest, and was a better auscultator than is often found except in the professed specialist. In the practice of gynæcology also he was well informed, and his reputation was nearly as extensive in this as in lung diseases. Chronic diseases generally gave him the larger portion of his practice.

He was a regular subscriber to several medical periodicals and was too prudent to pay for what he did not use. His frequent sick spells that laid him aside from work did not wholly prevent study; so that by his reading he kept better posted in the medical literature of the day than the average. He tried to keep fully up with the times, and with a fair memory he was fertile in his resources; in case his favorite failed, seldom at a loss for a new remedy. His prescriptions perhaps were generally too voluminous, and I have often, when seeing them, remarked that he considered himself a better marksman with a shot gun than with the rifle.

After his father's death, and especially after the death of Dr. Geo. E. Palmer, he was obliged to have an assistant with him to attend to night calls, and do such other business as his feeble health would necessarily give to others; and he also during this latter part of his life had constantly one or two students in his office, one of whom is now in Troy, N. Y., another in New York City, and two others in Stonington Borough. All, it is believed, are practicing their profession with credit to their preceptor and themselves.

In his intercourse with patients he examined for himself, taking no man's opinion until it was confirmed by his own. He examined closely, questioned plainly, answered, differentiated and diagnosed decisively; his whole attention being so fully absorbed in the case, if it was an intricate one, as to forget for the time being some of the common rules of etiquette, so that he was often called blunt, rough and harsh.* He did not mean to be severe; for his questions he had a reason, and his expressions were his honest convictions. He said just what he thought. If in doubt he spoke of it freely, or would say he did not know. But he knew enough to hold his tongue when he ought, and was not disposed to say much unless asked. When questioned directly, where he was obliged to answer adversely so that the friends would sometimes fear the consequences, he was in the habit of saying, "if they did not want to know they must not ask, for doctor's lies were no better than others."

When an opinion was arrived at, none other swerved him until he had full proof that he was in error: he would then yield most readily. In this regard the lion and the lamb were beautifully blended in his character, and his successful life proves that simple and honest speaking may be as popular as the most agile evasion. If his language was not as choice as some others might use, he was nevertheless a gentleman, and generally left a favorable impression wherever he was called to visit a patient. If he erred in prognosis it was commonly in being too hopeful, but he would have a reason for the hope that was within him.

He was not scrupulous for credit for himself, but if it was not given him and was so expressed, he was very apt to have a laconic

* I once called him to see a lady with me, who had been suffering a long time with a purely nervous disease. She asked him if he had ever seen any one like her before. His reply was, "Do you suppose I have been in practice thirty years and never saw a fidgety woman."

reply that silenced the future.* If any with whom he counseled complained, I believe they were generally the negligent or poorly informed, for he meant to treat the attending physician with all due respect and honesty. He neither courted nor flattered and disliked deception and all petty meanness in others, and those that trusted him were not afraid he would steal their reputation or stab them in the back. When consulted at his office by patients under the care of others, or who had been under the care of others in whom he had confidence, if he found that such patients had not followed directions, or had refused the necessary examinations, he would say, "Why do you come to me? go home to your doctor and do as he wishes: he will do as well for you as I can."

In all the relations of life he was universally respected and generally beloved, and I cannot close this sketch with words more fitting than those from the lips of his pastor on the day of his burial, when he said "the two great leading traits of his character were his sincerity and his truthfulness," and when I think of him in contrast with the world, I am reminded of the proverb, "Faithful are the wounds of a friend; but the kisses of an enemy are deceitful."

* Once, being called to a patient, about eight miles out of town, he diagnosed the case "cancer uteri" with of course an unfavorable prognosis. After the lapse of a few weeks a homeopathist of some celebrity was called, ten or twelve miles from his home, to see the same lady. He said the case was not cancer and the woman would get well. The latter charged twenty-five dollars for his visit. The patient complained of the fee, saying she was poor, and that Dr. Hyde charged her only five dollars. His answer was, "You can go to a tailor and get a coat for five dollars, or you can get one for twenty-five." Dr. Hyde hearing of this, remarks, "He says the patient will get well, I say she will die; wait and see who the twenty-five dollar coat is."

Again, being called to a first class hotel in Stonington to see one of the summer boarders, he found a lady suffering from dysenteric diarrhoea, who with the other members of her family professed strong preferences for homeopathy. The husband stated that his wife was subject to this disease in summer, was always sick a long time and recovered slowly, being a long time in getting well. In a few days, however, the patient was better, and in a week or two she was well, and the doctor dismissed the case, saying he did not see why she could not get well as readily as others. The husband acknowledged that she was doing better than ever before, but says "I do not believe your medicine did it." The doctor, being ready to go, answers "Your wife has got well; that is all I came here for; give God the glory. Good morning;" and departed.

MEMOIR OF
JUSTIN HAMMOND, M.D., OF KILLINGLY.

BY EDWIN A. HILL, M.D., OF EAST KILLINGLY, CONN.

DR. JUSTIN HAMMOND was born in Hampton, Conn., March 2nd, 1804, and died in Killingly, Conn., July 5th, 1873. He was the son of Col. Asel and Betsy Hammond of Hampton. Being the son of a farmer, his earlier years were spent in assisting his father in performing the duties usually attendant upon tilling the soil. His early education was confined to the district schools in his native town. These not affording the advantages that he required in pursuing the course he had marked out for his future life, he entered the academy at Monson, Mass. At this school he fitted for college and entered Brown University in 1823. Here he pursued the usual literary course, applying himself closely to study during his college life, and graduated, standing well in his class, in 1827. Having chosen the profession of medicine as being most in accordance with his inclinations for his future business in life, he immediately entered the office of Dr. Usher Parsons of Providence, R. I., as a student of medicine.

Dr. Parsons, it will be remembered, was naval surgeon during that ever memorable battle on Lake Erie, conducted by the late Commodore Perry, and was surgeon in the U. S. Navy until 1823, after which time he resided in Providence, and was a distinguished physician, surgeon and medical instructor in that city for a long time.

It was under such faithful instruction that Dr. Hammond pursued his medical studies, enjoying the rare opportunity, in those days, of witnessing much of the extensive practice of medicine and surgery of his distinguished preceptor. These advantages were used to good purpose, and told well on his success in after years, when he was engaged in the active duties of his profession. He spent the usual time prescribed for preparatory study in the office of Dr. Parsons, attending medical lectures in the meantime at Harvard University, from which institution he received his medical degree in 1830.

He commenced the practice of medicine at East Killingly, Conn., in 1830. In 1831, Nov. 25th, he was married to Susan Peckham, the daughter of Dr. Hazael Peckham, with whom he was associated in practice.

Dr. Peckham being advanced in years, Dr. Hammond naturally succeeded to his practice, and was the principal physician in that part of the town, and the adjoining towns of Foster and Gloucester, in the State of Rhode Island, for twenty years.

The arduous duties that devolved upon him here as a physician, extending over a large tract of country, in some places sparsely settled, with rough, uneven roads, at length made it necessary for him to decide to change his residence for some location where his professional labors would be attended with less wear and tear to his constitution. Accordingly in 1851 he removed to Dayville, in the western part of the town, where he continued actively engaged in the practice of his profession until the time of his death; and indeed the malady that terminated his life attacked him while he was away from home, attending to his patients in his regular routine of business.

His disease was apoplexy, which proved fatal in a few days. He had had premonitory symptoms of this disease for several months before the fatal attack, and had used the proper remedies to stay the progress of the fell destroyer. He had answered professional calls during most of this time of varying ill health, many of his patrons in various parts of the towns around him being unwilling to dispense with the services of the "good physician."

Dr. Hammond was a man of naturally strong, vigorous constitution, and in person above medium size. He took good care of his health, and made his habits of life as regular as the circumstances of his profession would permit. Having had the advantages of a good education, and being familiar with the current literature of the day, he was a good practitioner. He formed for himself decided opinions, based upon close observation, in relation to the therapeutic effects of remedies, and despised quackery in every form.

He was extremely careful in all his examinations of the sick, aiming always to ascertain the causes that were operating to produce disease, and was equally careful in his application of remedies to relieve suffering humanity.

This trait in his professional character all his patrons well understood, and made him the recipient of their full confidence. He

was always equally ready to attend to the sufferings of the rich and poor alike, and ever ready to sympathize in their afflictions. He was always cheerful and pleasant in the sick room, listening attentively to his patients' story of distress, and faithful in his attentions to their wants. These sterling qualities in the physician greatly endeared him to all those who were fortunate enough to come under his kind care.

Many of the families that he attended in his early practice always employed him during his entire professional life. He was not a person to seek notoriety in practice, but, quiet and unassuming in his manners, he made his influence felt in all the positions in which he was called to act. As a professional associate he was courteous and obliging, always acting the part of the gentleman in all his intercourse with the members of the profession. He took a lively interest in the county Medical Society, attending its meetings, and was frequently called upon to preside over its deliberations.

He was cheerful in his home with his family, and his genial smile was the sunshine of the household, where his loss is most keenly felt. He was actively engaged in all the moral reforms of the day, always lending the influence of his presence to forward every good work. He was a firm believer in the truths of the Christian religion, and an exemplary and consistent member of the Congregational Church, in which he held the office of deacon at the time of his death. His earnest efforts were constantly directed to promote the best interests of the church, and he always made special efforts to attend divine worship, so that as little as possible should interfere with the duties of the Christian Sabbath.

He was a man of great firmness and decision of character, ever to be relied upon in all places where honesty of purpose was required. He was often called by the votes of his fellow townsmen to places of honor and trust. He represented the town twice in the legislature of the State, and always had the best interest of his country at heart. One of his sons was a soldier in the Union army during the war of the rebellion, and yielded up his life there in consequence of wounds received in battle.

During the late war he was one of the board of selectmen in the town, and was most active in his attentions to the wants of the families of soldiers in the army, never allowing them to suffer, while their natural protectors were in the service of our common country, fighting for the perpetuity of the Union.

He leaves a widow and three children. A son and a daughter studied medicine, and received medical degrees, following the example of their father, and are now engaged in successful practice.

His funeral was attended by a large concourse of sympathizing friends, who came to pay their last tribute of respect to the memory of their lamented friend and physician. His remains were borne to their last resting-place, and the last sad rites were performed by members of the profession with whom he had associated many years.

Thus passed away our lamented friend and associate. The dark valley has been traversed by him, but the portals open upon life eternal.

MEMOIR OF
SAMUEL B. BERESFORD, M.D., OF HARTFORD.

BY JAMES C. JACKSON, M.D., OF HARTFORD.

DR. SAMUEL BARWICK BERESFORD, the subject of our obituary notice, was born in Surinam, Dutch Guiana, of English parentage, July 5, 1806, during the temporary occupation of that colony by the British forces, his father being a medical officer in the British service. His early years were spent in various of the British West India Islands, but he received the principal part of his elementary education in the Island of Barbadoes. In 1816, he was sent to England to prosecute his education, and was placed at Blemmel House Academy, Brompton, Chelsea, near London, under the charge of R. B. Pollard, Esq., of Cambridge University. Having completed his classical and academic course, he went to Edinburgh in the early part of 1823, and there immediately engaged in his professional studies. He spent three years in the university, under the instruction, in the various branches of "Medico-Surgery," of Hope, Monroe, the Duncans, Home, Alison, Graham, James Hamilton and Ballingau. He attended the lectures of Liston, Lizars, Allen and Barclay.

In April, 1826, he received his diploma in surgery from the Royal College of Surgeons of Edinburgh. In August of the same year, he received his degree in medicine from the University of Edinburgh, and a diploma in obstetrics from Prof. Jas. Hamilton. Dr. Beresford was admitted a member of the Royal College of Surgeons in London, and received a diploma from that body, Nov. 3, 1826. He subsequently visited the continent, spending some time in Paris, but returned to Great Britain, and sailed for British Guiana in the early part of 1827. He entered into active and extensive practice of his profession with his father and uncle at Bubico. In 1831 he was admitted health officer of the district, and continued to perform the duties of this office, besides an extensive practice, until April, 1834, when both he and his father left the colony for the United States, arriving at Hartford on the 12th of May, 1834.

In 1830 he married Mary Stuart Anderson, of Edinburgh, by whom he had seven children, only two of whom survive him. The doctor was a man of fine physical development, dark hair and brilliant complexion. He possessed an active, mercurial temperament, was immensely devoted to his profession and self-sacrificing to his patients in an eminent degree.

He was an unusually diligent student in his profession, always keeping at his hands all the more recent medical works, the current periodical medical literature of the day, and the best instruments that could be procured.

After his arrival at Hartford, both he and his father entered upon a successful professional career, practicing together, both visiting the same patient in company, thus securing to the sick the skill of both, and benefit to each other. He was gifted with a discriminating, logical mind, capable of seizing the salient points of pathological action, and a ready comprehension of the remedies suitable to the restoration of his patients.

Surgery was the department of his choice, and as an operative surgeon he stood preëminently high. Endowed with a retentive memory, his anatomical knowledge always guided him to a correct diagnosis and a clean, graceful operation. Few men in our profession possessed so wide a range of professional attainment, for in no department was he unprepared.

He was a deliberate operator, and used the knife with ease and uncommon skill in the most delicate operations; while he was equally skillful in obstetrics, practice of medicine, and even in ophthalmic surgery.

In the sick room the doctor was generally cheerful and assuring, always polite and affable, never forgetting the deportment of a gentleman or the dignity of his profession. He always took a deep interest in the welfare of his patients; the indigent as well as the affluent commanded his unwearied devotion, oftentimes to his great discomfort and even to the sacrifice of his health. Those most familiar with him wondered at his assiduity in business when his pecuniary circumstances rendered him entirely independent of such labor; he saw, however, his highest reward in duty faithfully discharged.

His intercourse among his friends was of the most cordial character, while his hospitality was as ample as his friendship was deep and lasting. His domestic relations were characterized by deep affection; although in the midst of ceaseless professional

care and anxiety, it was made manifest more keenly when occasion called it forth. Those who knew him best knew how he suffered under affliction.

A high sense of honor, especially among his medical brethren, led the subject of our sketch to regard all deviation from a proper code of medical ethics with abhorrence; in no instance would he allow himself to be betrayed into acts of injustice to any one of his medical brethren, however young or inexperienced they might be. Entertaining an exalted estimate of the importance of great intelligence in every member of the profession, and the great responsibility resting upon those who attempt to decide the nature of disease and conduct it to a favorable termination, sometimes rendered him obnoxious to pretenders and quacks of every description.

His political views were never very decided, and for some years he seldom went to the polls at all. Formerly, he was inclined to be a federalist, but latterly he could discern no very high motive among politicians, and he withdrew his support from all party alliance.

His religious preferences were formed in the same manner as most of us, I imagine, must acknowledge our own to have been, by his early associations and parental influence and instruction. Reared under English training, he adopted the national faith, and was a staunch Churchman. Conscientious in whatever opinions he entertained, his religious life was consistent and as devoted as our care-burdened and irregular lives ever allow. His belief in the fundamental principles of Christian doctrine and practice formed the framework of his life and gave symmetry to his private as well as professional character.

The doctor was one of the most assiduous laborers I ever knew: seldom leaving his sphere of duty on any account, except perhaps for some business purpose, and then for a very brief period. I never recollect an occasion when he took a pleasure vacation in all the twenty-five years of my acquaintance. Instead of relaxation from constant labor and care, he sought recreation in his love for works of art. He enjoyed a fine picture or engraving, of the merits of which he was an excellent judge. His collection was large, and consisted of several by the old masters and many of more modern schools. He took little interest in public enterprises outside of the absorbing object of his life. He was chosen president of the Connecticut Medical Society in 1868, a position

which he filled with dignity ; and closed his official relation with the Society by an able paper on the "Use and Abuse of Tobacco."

For some years the doctor began to be weary of the constantly increasing cares of professional life. He often expressed a hope that he might be released from so much care, and really entertained an almost childish anticipation of a period when he should be the possessor of a farm in some milder climate than our own, in the midst of flocks, herds and pet animals, of which he was passionately fond. He failed, however, to realize the object of his fancy, for it was only an infatuation, which he enjoyed exceedingly as an illusion, much more than was possible for a man of his habits and temperament to have enjoyed in actual possession. The doctor's health began to fail as early as the spring of 1869, when he suffered from a mild attack of pneumonia. He continued to labor beyond his strength, but was compelled to yield to the invasion of disease in the early part of 1870. Becoming weak in body, his mind became depressed, till the objects which stimulated his whole nature failed to inspire exertion and he ceased to labor in his profession. He spent the winter of 1871 in England and France, hoping to be restored in health. The hopes of his friends were not realized, and he returned only to spend his remaining sojourn in life with his family and friends in Hartford. The doctor died at his residence on Farmington avenue, of chronic cystitis, Oct. 19, 1873.

MEMOIR OF
ALBERT MORRISON, M.D., OF WINDSOR.

BY GURDON W. RUSSELL, M.D., OF HARTFORD.

THE death of Dr. Morrison was quite singular. Though the most careful of men, and often reminding others of their danger, yet in this particular instance he was very forgetful of himself. He had lain down after dinner, and was suddenly aroused by learning that some of his cattle were upon the railroad track, near his house. Knowing that the train was soon expected, he rushed out, and in his haste and anxiety either forgot its approach, or imagined it was not so near him as to be dangerous, or, which is quite as probable, was entirely for the moment absorbed in his endeavor, and so was struck by the engine and instantly killed. The good judgment which was his characteristic failed him at a necessary moment, and he died as many other extremely careful men have died, because he was not always careful. It was a great shock to me, for he was a dear friend, whom I was accustomed to meet often, professionally and socially, and whose good sense, acquirements and honesty had strongly impressed me in the many years of our acquaintance.

Albert Morrison was born at Hebron, March 13, 1820. His family afterwards removed to Willington, where he resided during his younger years. Like all New England boys, he was brought up to work, and helped his father upon his farm, and in his shop. His academical education was received at Wilbraham and Ellington, and during a portion of the time he devoted himself to teaching.

He studied medicine with Dr. Foote of Broad Brook, for three years, and attended four courses of lectures, two at Pittsfield, and two at the College of Physicians and Surgeons in New York, at which latter place he graduated in the spring of 1847. That he was a devoted student, I have every reason to suppose; he often referred to the teachings of his distinguished lecturers, remembering their cases and opinions with great distinctness.

He commenced practice in Mansfield with Dr. Norman Brigham, with whom he remained for four years, until his marriage with Miss Harriet Bartholomew of Hartford, in 1851. He then removed to Windsor, where, with a short exception, he remained during the rest of his life.

Having entered upon the practice of his profession here, he devoted himself to it with that energy which was characteristic of him, and soon gained the confidence of his townsmen. The death of Dr. Pierson enlarged his field, and up to the time of his death he was more extensively and laboriously engaged than most country physicians. His work was hard, often harassing, and he was so energetic and impulsive by nature, that he was not calculated to labor in the easiest manner. The twenty-two years which he spent in Windsor were years of hard work, but work cheerfully done, for he was kind, industrious, and in good physical health. His prosperity brought with it no undue elevation or self-importance, for he ever remained as considerate for the poor, and as anxious to do his duty faithfully, as when he commenced his practice.

The death of his wife in 1864 was a severe blow to him, for they were tenderly attached to each other, and she was truly a help-meet for him. Very likely he never fully recovered from it; for though he must needs go his rounds, and appear to be cheerful when bitterness was in his heart, yet there were times, as I know, when he was overcome by the recollection of his affliction. The death of his eldest daughter but a short time before him rendered him nervous and distressed; it was thought he was never afterwards fully himself again. A nature which, though tender, was generally resolute to the uttermost, now yielded to the intensity of its affliction; he was overwhelmed by his emotions.

During the many years of our acquaintance and friendship I had opportunities for learning his character, both professional and general. He was very generous and hospitable, quite frank, and unsuspecting, listening patiently and considerately to what was said, but stating his own opinions candidly, and sustaining them by authority and his own observation. Often he would say, "Well, now, let us see," and then relating the symptoms, would give the probable pathological condition, and mention the appropriate remedies. And here I might mention what was eminently characteristic of him, and should be of all of us—his strong desire, and his first effort, to discover the exact disease, its location and condition; here he was particularly strong, and directed his

special attention. This being learned, the remainder was comparatively easy. He was bold and courageous, when courage was necessary, and not easily disconcerted, or rendered timid.

There was often about him so much of impulsiveness and energy, that he had the appearance of being highly excited, and it was sometimes amusing to hear his assertions of coolness and equanimity, when others might have supposed the opposite. But it was all natural, and those well acquainted with him believed all that he said. Such a man has generally very pronounced opinions, and it was well known where our friend stood, whether in his profession, or in his politics or his religion. But there was nothing offensive or intruding, or wounding to the feelings of others.

He was decidedly literary in his tastes; fond of reading, both general and professional, and digested what he read. His feelings were markedly poetical, and, as his memory was good, he would often repeat long passages, with spirit, from the English classic authors. He had a special liking for Scotch ballads, and often exclaimed, truly I believe, that he was of Scotch descent.

He was a good friend of his town, and zealous for its interests. Once, and that was for him enough, he represented it in the legislature, wisely declining offers of other offices. Especially was he zealous in education, with which his early efforts in teaching had rendered him familiar. He was a member of the vestry of Grace Church and a faithful attendant at its services. In all matters of the town, such as schools, school meetings, debating societies, highways, &c., he felt an interest, and exerted an influence which was warranted by his practical character. His sense of right and justice were so strong that it is not wonderful that he was not always connected with the same political party.

So much has been said of our friend, that it might be considered as applying to a much greater man, but it could not be applied to an inferior one. There was a mingling of robustness and tenderness in his character that made him both positive and genial, and that endeared him to his friends. He was also extremely practical in his character, and was very little "given to nonsense." He directed the labors of his farm, so that it became remunerative to him, and enjoyed exceedingly the change and relaxation which it afforded. This did not interfere with his devotion to his profession, or in his efforts to keep up with its discoveries.

He died on the eighteenth of July, 1873, and was buried from the church which he so dearly loved. The attending crowd bore witness to the honor and respect in which he was held.

MEMOIR OF
SAMUEL T. SALISBURY, OF PLYMOUTH.

BY WM. WOODRUFF, M.D., OF THOMASTON.

DR. SAMUEL THURBER SALISBURY died at Plymouth, March 1, 1874. He was born at Providence, R. I., March 14, 1814, and was, consequently, near the close of his sixtieth year at the time of his decease. He was of a mixed English and Welch stock, and among the ancestral names were those of Owen, Dexter, Thurber and Salisbury. He early developed a taste for study, was a pupil in the common and high schools of Providence, and, as I am informed, was afterwards in some way connected with Brown University, though not, I think, in any regular course of study. He commenced the study of theology, but failing health under too close application compelled him to abandon it, and by the advice of physicians he adopted medicine as his chosen profession. The writer first knew him as a botanical physician in 1834 or 1835, when he first took up his residence in Plymouth. After practicing for a year or two in this irregular way, he became dissatisfied with the limited range of his professional acquirements, and placed himself under the care of Dr. Royal Cook, then a practicing physician in Plymouth, as a pupil, and subsequently entered the office of the late Dr. Chas. Hooker, of New Haven. While in the office of Dr. Hooker, he attended two courses of lectures in the Medical Institution of Yale College, and graduated therefrom in 1836. The year of his graduation he married Miss Harriet Penn, of Plymouth, by whom he had two daughters, both of whom died of dysentery in 1848. Mrs. Salisbury died two years subsequently, thus leaving him without family. In 1852 he married Miss Amelia P. Morse, of Cheshire, by whom he had three sons, all of whom survive him. After his graduation, he returned to Plymouth, and continued a resident of the place till the time of his death. Dr. Salisbury derived much of his professional enthusiasm and unselfish devotion to his chosen calling from his distinguished teacher, Dr. Hooker. He prac-

ticed medicine in the love of it. That love of the healing art grew with his growth and strengthened with his strength. With him it was something more lofty and ennobling than the means of acquiring a livelihood. It was a sacred calling, enlisting all his sympathies, and to it he consecrated his best energies. To furnish himself more completely and satisfactorily for the work of his life, he was a constant and systematic reader of the best and latest professional authors, and the ephemeral literature of the day was not permitted to invade the hours given to professional study, thus avoiding that mental dissipation which has shipwrecked many a fair and promising reputation. In this way he became acquainted with the progress and improvements of the art. As a result of such devotion and study, and as a legitimate sequence of it, he was eminently a successful physician, and enjoyed a large measure of the public confidence. His close and cautious observation was recognized at the bed-side, and his clinical experience rarely failed to bring him to a correct diagnosis. He had the happy faculty, not always enjoyed, of recognizing as by intuition the exact point of disease, and skillfully applying the appropriate remedies. Another characteristic of him was his honesty and conscientiousness in giving an opinion of the probable result of a case to those who by relationship or otherwise had authority to ask it, and no specious subterfuge of present advantage could swerve him from the full expression of his matured convictions.

The writer of this sketch was in the practice of medicine at the time of the doctor's advent into the place, as a competitor for public recognition and professional employment, and, although a generous rivalry and ambition always existed, yet, in the long years that have elapsed, there has never been any breach in our mutual confidence and good feeling. Did sickness or death invade our respective families, and such was our unhappy experience, the one relied on in every such emergency was his known and trusted competitor. How much that mutual confidence and trust had to do with binding more closely the bonds of affection together, you, who may have had a similar experience, can judge. In cases requiring consultation, that, except in rare instances, was usually selected at home, and no false ideas of imperilling or diminishing professional reputation ever barred this mutual confidence. Indeed, it had a very opposite influence, and the public recognizing this confidence, gave us more fully their own. One

result of this fraternal trust, and a very marked one, which I apprehend teaches a lesson of no uncertain meaning to the younger members of the profession, is this: quackery under various names and forms has never gained any permanent lodgment in the place. It came repeatedly, blustered of its high pretensions, breathed out its little life, and vanished. The doctors had something else to do than to throttle and belabor each other, giving the advantage to every wandering interloper who might have scented the tainted air of a professional quarrel afar off. The experiment of some more excellent way, under the guise of ignorance or credulity, was repeatedly attempted, but always signally failed. Thus "wisdom is justified of her children."

Some five or six years before his death the attention of the deceased was first drawn to those vague, inexplicable and anomalous symptoms, which proved the advance guard of that long and trying martyrdom which culminated in *loco motor ataxia*.

Finding no relief from ordinary remedies, he gave up business, and sought a more southern climate at Aiken, but returned after a protracted sojourn, but little benefited. He passed through the various phases of the disease as it slowly sapped the sources of life and social enjoyment, clouding his mind with the low-lying mists of melancholy and hypochondria, and finally ending the long-protracted conflict with paralysis and apoplexy.

It having pleased Almighty God to remove from the scene of his earthly labors Dr. Samuel T. Salisbury, stricken down by a long-protracted disease while in the full maturity of his power, and whereas a character like that of the deceased ought to be held in grateful remembrance, therefore

Resolved, That in the life of Dr. Salisbury we recognize one sensitive to the honor of his chosen profession, conscientious in the discharge of its laborious duties, intelligent and enlightened in his professional relations, and eminently worthy of imitation, by those who may come after him.

Resolved, That our sympathy and condolence are herewith tendered to his family in this their great bereavement.

The above resolutions were presented and passed by the medical gentlemen present at the funeral of the deceased.

MEMOIR OF
RALPH E. GREEN, M.D., OF LEBANON.

BY ASHBEL WOODWARD, M.D., OF FRANKLIN.

RALPH E. GREEN, M.D., died at Lebanon, Conn., May 20th, 1874, of typhoid pneumonia. He was son of Dr. Daniel Green of Auburn, Mass., and the seventh by lineal descent from Thomas Green, the first of the family in this country, who was born in England early in the seventeenth century, and on emigrating to America established his home at Malden, Mass. The family have been quite distinguished in the medical annals of New England, the celebrated Dr. John Green of Worcester, Mass., having been first cousin of the father of the deceased.

The subject of this sketch was born Sept. 22d, 1815, graduated at Amherst College in the class of 1835, and entered at once upon the study of medicine. After attending medical lectures in the schools at Pittsfield, Mass., and Castleton, Vt., and enjoying for a period the benefit of hospital practice at Lowell, Mass., he returned to Auburn and for several years assisted his father. He then moved to Lebanon, Conn., soon winning the confidence of the community and a successful practice. Not long after he was urgently invited by the citizens of his native town to return with the view of taking the place of his father, who at the age of seventy had determined to relinquish the active labors of his profession. The son, however, having become firmly and pleasantly established in his new home, though gratified by the confidence and esteem of those under whose observation the earlier portions of his life had been passed, declined. Meanwhile he had contracted closer ties with the home of his adoption, having married, July 30, 1845, Miss Sarah C. Dutton, whose ancestors for generations had been honorably identified with the interests and fame of that historic town.

Dr. Green was a thoroughly true man, upright and honorable, faithful in the performance of duty, punctilious in respecting the rights of his brethren, and kind and generous in all the relations of life. Modest and unassuming, with a strong love for reality and truth, he had no sympathy with pretension or sham.

Dr. Green was well informed both in medical and general literature and was also a good practitioner. Stricken down in the midst of his usefulness, he leaves behind a void not easily filled.

MEMOIR OF
GEORGE BLACKMAN, M.D., OF WESTPORT.

GEORGE BLACKMAN was born in Newtown, Conn., July, 1803. He was a son of Samuel C. Blackman and a brother of Judge Blackman of New Haven, and of Samuel G. Blackman, also of New Haven, but for many years a prominent citizen of Norwalk.

George Blackman received his early education in Newtown. He studied medicine at Yale College; was a fellow student in medicine with Judge Butler. He was licensed to practice medicine at Yale College in 1826, and received the honorary degree of Doctor of Medicine from the same college in 1845.

He commenced the practice of medicine in Redding in 1826. He remained there three years, and through the influence of the late Zalmon Sanford of Redding, who had located there, was induced to select Westport, then Saugatuck, as the scene of his future labors. At about that time Dr. Banks, the only prominent physician there, died, and the field thus left open was occupied by the subject of this sketch, to the perfect satisfaction of those who sought his services. Being a man of education, culture and refinement, he mingled with the best society, and became a prominent and respected member of it. Soon after his settlement there he married a daughter of the late Dr. Richmond,—a man whose goodness and virtue are yet tenderly remembered by the aged citizens. His association with public affairs was characterized by wisdom and prudence. As identified with the First National Bank in its organization and management, and as a director, his counsels had weight, and his opinions as a financier were sought. As a town assessor he expressed sound views and judgment, and the interest he took in the schools of the town and the education of youth has often been acknowledged to have produced no unmeaning effect. A man of literary tastes, he became familiar with authors and books, and he who chanced to pass an hour with him in conversation on those subjects, beheld a mind of vast resources capable not only of entertaining, but imparting.

He was a man of rare judgment, and of strong and clear perceptions of right and duty. He was a frequent and favorite counselor in matters outside of his profession, self-reliant and independent in all his modes of life and thought; a clear, cogent and logical thinker and writer, and a frequent anonymous contributor to various publications. Modest almost to shyness in his literary work, he nevertheless had been heard to remark that he never had had a communication declined. For many years our public school system engaged his special attention, and much of our most valuable educational legislation is attributed to him. He was never ambitious of an extensive practice—but *success* in what he did was the chief end and aim of his professional ambition. Charlatanism and quackery were his disgust, and honesty and truth always preeminently his distinguishing characteristics.

Connected with no church society, he yet had high regard for the feelings and opinions of religious people, and in his social and moral walks was beyond reproach. It is not too much to say that in will and in intellect he was strong, that he had refined tastes, and that his mind was enriched in large degree by the fruits of learning and experience. Though not exempt from the frailties incident to humanity, and who among us can claim to be, yet he was possessed of attributes which dignified the station in which he labored, and which tended to endear him to those who knew him best. There may have been those who differed from him in opinion, but none will doubt his purity of purpose, his firmness and truth in the performance of known duty, and the following on all occasion of that which he believed to be right. In these regards, the example he has set is worthy of emulation. Subject at intervals during the later years of his life to bodily suffering so acute in character as to have crushed many wills even stronger than his, he yet endured submissively, patiently waiting the arrival of that hour which should permit him to “fall on sleep.”

He died August 8, 1874. In his death the community loses another aged citizen, the medical fraternity a prominent member, a wise counsellor and able practitioner, and the people a friend and ready helper. May his vacant place be filled with equal modesty and merit.

MEMOIR OF

THOMAS O'FARRELL, M.D., OF NEW BRITAIN.



Thomas O'Farrell was born in Columbkille, Co. Longford, Ireland, A. D. 1832. Entered on the study of medicine at Buffalo, N. Y., and graduated at Philadelphia A.D. 1852 and soon after went to Mexico, and had a large and very lucrative practice at Matamoras and Monterey. In 1869 he returned from Mexico and practiced for three years in New York, and then removed to Middletown in this State, where he remained till some eight months of his death, and spent the remainder of his life in New Britain, where he died of bronchitis, April 8th, A.D. 1874.

Doctor O'Farrell was well read in his profession and a highly successful practitioner. He was very familiar with the Spanish language and translated from the Spanish a valuable official report to the governor of Ecuador, which was read by Dr. O'Farrell before the Medical Library and Journal Association of New York, January 12, 1872.

MEDICAL COMMUNICATIONS.

ARTICLE XXII.

THE PRESENT STATUS OF MEDICAL SCIENCE, AND ITS DEMANDS UPON THE PROFESSION.

By the President of the Society,

LOWELL HOLBROOK, M.D., OF THOMPSON.

Gentlemen of the Connecticut Medical Society:

The circle of another year completed, the Anniversary of our organization calls us again together.

Like the years which have gone before it, it has doubtless been to us all replete with anxious cares and exhausting labor, in the round of practical duty. That duty briefly relinquished, again we come to exchange our mutual congratulations.

With a sympathy more warm and generous than which no profession is fitted to inspire, we come to confer upon our common interests, and from our mutual councils to gather encouragement and cheer, with which we may go forth to future labors and conflicts.

In addressing you upon some subject in harmony with the occasion, I shall not weary your patience with an elaborate essay, discussing unsolved problems in science, or ventilating my own views upon vexed questions of the day. Had I been favored with leisure and opportunity suited to such effort, yet I am admonished of the impropriety of thus exhausting the short time of the Convention, of which so many important subjects demand a share.

I shall content myself, therefore, with only a few practical suggestions, touching the general interests of the profession.

Assembled on this occasion of the eighty-fourth annual convention of our society, we evince by the presence of goodly numbers the interest we feel in its prosperity, as the exponent of the thought and professional aspirations of our State, and the personal and general advantages it is designed to afford. We also bespeak our consciousness of the nobility of a profession whose high aims and exalted purposes give to it a rank above almost any other, which regards the best interests and welfare of the race.

The conservator of individual and public happiness, because the guardian of health, and in no trivial sense, also, of morals—the harbinger of joy to the distressed and sorrowing—the only hope of humanity in the hour of extremest need, to deliver from impending death, from accident, or disease—its claims to universal honor and respect are undenied and unquestioned.

To my mind it savors not of arrogance also to assert, that in distinction from other professions, it is its peculiar prerogative to discover truth and to practice it.

It may justly be said, “we are free as the churchman is not free, who must stifle all doubt to maintain the doctrines and discipline of his particular church.”

We are free, as the lawyer is not free, who must advocate the cause of his client, whatever his conscience tells him ought to be the verdict.

We are free as the politician is not free, who must often abandon what he knows to be right to attain that which he thinks is practicable.

The votary of our science, unbiassed in thought, untrammelled by old dogmas and theories, is free to apprehend truth and to apply it.

And thus the host of patient workers, in all departments of our field of knowledge, have brought truth after truth, cleared from the mists of hypothesis and conjecture, to build the fabric of a *correct* science, which, though yet incomplete, is fast assuming proportions, grand in symmetry, beauty, and stability.

To one familiar with the medical science of a few decades ago, and yet unfamiliar with the means of progress which have wrought the mighty changes of a quarter of a century, it would be difficult indeed to realize its present status, as representing the same profession.

By the aid of then undiscovered methods of investigation, and

then unknown therapeutic agents, all its departments have attained a development and perfection which seem well nigh miraculous.

We have come to a critical analysis of the "vital conditions and normal actions of organic beings, and a knowledge of the causes disturbing those conditions, and the phenomena of vital and structural changes."

We have come, also, to a clearer appreciation of the indications and means best suited to aid in the processes of recuperation and restoration.

Medicine, as a science, now rests on more clearly defined laws.

We know "how the *elements of matter* are combined, how organic compounds are formed into cells and tissues, and how the contingencies of disease affect these formative processes; and, finally, how the changes are regulated by which morbid states return to the normal conditions of life."

A few decades ago, it was only in few cases that accurate diagnosis could be reached.

A vague impression drawn from the general condition, and the noting of prominent symptoms, prompted the medication.

To eliminate the morbid cause, was the object sought.

This was to be accomplished by remedies designed to promote the secretions, after which tonics might restore the weakened vital powers.

In dropsy, for example, it was a routine of purgatives and diuretics, whether the trouble were of cardiac or renal origin.

Cases more obscure demanded the so-called "alterative" plan of treatment; and mercury, iodine, and antimony came to the aid of the physician, and often, doubtless, to the injury of the patient.

The study of their natural history has, in relation to many diseases, given to us sure grounds of prognosis and of treatment, through our knowledge thus gained, of their origin, laws, course, and termination.

"Thinking men out of the profession, as well as in it, now recognize a science much more direct in its applications—a science which if it progress as in the past few years, will, in the not distant future, have made much of the hitherto incurable the curable."

The multitude of new appliances used in diagnosis and pathological investigation have greatly advanced the curative power of modern medical science; and at the same time added to the

study of the profession many new subjects, modifying and perfecting our knowledge of Physiology, Pathology, and Therapeutics. And thus the demand upon one who would comprehend the present status of the profession is for long and patient application.

The microscope has given birth to cellular Physiology and Pathology, and a clear understanding of the precise character and seat of morbid changes in the structure of complex organs, of which we formerly had no true conception.

The laryngoscope, the ophthalmoscope, and the stethoscope, have revealed and aided in the cure of diseases hidden from former methods of investigation.

Anæsthetics in their various applications—Hypodermic medication, giving to remedies magic power, through the vaso motor system of nerves—and Electricity, restoring muscular power through its effect in controlling nutrition—these have opened new doors and are leading to long avenues of truth, which the student of to-day is called to explore; and without a knowledge of which honorable rank in the profession is impossible; and without which, indeed, he cannot comprehend or profit by the medical literature of the times.

Without a *thorough practical* knowledge of some of these means of diagnosis, no practitioner is deemed qualified to determine in many cases the true pathological condition; to arrive at a rational prognosis, or to institute a course of therapeutics which can afford reasonable hope of good results.

In thoracic diseases, for example, how little reliance, among intelligent practitioners of our day, is placed upon rational signs, to the exclusion of the physical? and who would endeavor to form a diagnosis in affections of the urinary organs, without the aid of analytical chemistry? But for the attainment of this knowledge, long and careful study, with good opportunities and faithful teaching, only can suffice.

The domain of Surgery, also, has been vastly extended. The great improvements in operative surgery, and the almost numberless appliances now used to relieve suffering, and cure deformity and disease, have given to it a prominence and efficiency which challenge our wonder and admiration.

So widely extended has the field of medical science become, that it is, of course, impracticable for any *thoroughly* to explore that field, for "no man can be an encyclopedist." He may embrace in his knowledge some general understanding of the whole;

but he cannot hope for practical acquaintance with every department, and all the varied methods of investigation. Hence we see, as a natural result, that "rapid divarication of practice," especially in great centres of population; many, after acquiring a *general* knowledge of the profession, preferring to devote their energies to some special division, and perfect themselves in some special department. And for the study of special branches in medicine and surgery, many of our graduates are betaking themselves to the great medical centres of the Old World.

The question, therefore, has recently elicited thought and discussion: "Has not the time arrived when, in this country, a school is demanded where our graduates may perfect themselves in the branches of their choice?"

Such being in brief an epitome of the wide field of study which the student of to-day must enter and explore, which is alike demanded by the status of the profession and an advancing civilization, it is the conviction of our best teachers, that no course of instruction, embracing a competent exposition of our science in its different departments, can be limited to the long-standing curriculum of our colleges.

In the great centres of medical education abroad, no such meagre limits are set to the course of study and instruction.

In France, the curriculum generally embraces six years, the first four of which are spent in obtaining the usual promotions—certain certificates of merit—and in the last two of which the student undergoes his examination for the doctorate.

It is a matter of congratulation that some of our colleges have boldly taken the initiative, in establishing a more extended course of professional studies.

The professors in our own college were among the first to recognize this necessity, and "extended their usual course throughout the entire academic year, thus giving prominence to subjects which could not well be included in the former yearly term."

In 1859, the Chicago Medical College adopted a three years' course, a system of graded classes, and a lecture term of six months.

In 1871, Harvard University adopted a similar course, "extending over three academic years, of nine months each, divided into two terms, each of which is more than equivalent to the former winter session."

May we not hope that this improvement in the methods and amount of instruction will soon be the rule, rather than the exception, in all our colleges, and that its good results may appear in the superior qualifications of those who enter the ranks of the profession?

There is another matter connected with this subject which has failed hitherto to receive the attention its importance demands, viz: the qualification of students preliminary to entering upon professional study.

Agreeably to a resolution of the National Association in 1871, our society, in the following year, recommended to the County Associations "the appointment of Censors, who should determine the educational qualifications of such young men as propose to commence the study of medicine, and the permitting of no student to be received into the office of any of its members, except with the certificate of those Censors, or a degree from some literary college."

In some of the County Societies that recommendation has been complied with; in others, I am unable to find that any such action has been taken.

The importance of elementary education, embracing some degree of classical, and, better still, a thorough classical course, cannot be too highly estimated; and every physician who has not enjoyed such preparation, has had to regret its loss, amid the serious embarrassments thus resulting to his early professional life.

It is made a necessity, by the rules which the Courts have adopted, that students of Law, before being registered, should pass an examination in all the elementary branches of an English education; and no student would be admitted to a school of Theology under rules less exacting in this regard. I would submit, whether it would not be an equally wise provision for the adoption of our medical colleges, that as a condition of matriculation, every student should give satisfactory evidence, at least, of a good English education.

Harvard University have just issued the announcement that, in future, "the conditions of admission to its Medical Department will be either a degree from some recognized college, or scientific school; or a satisfactory examination in writing, including the translation of easy Latin prose, or, as a substitute, French, or German; and, also, an elementary knowledge of Physics."

All care in elevating the standard of education tends directly

to promote the honor, the influence, and the usefulness of the profession.

It is thus that the true scientific practitioner obtains a decided advantage over the charlatan, whose ignorance is made the more odious by contrast.

The wide-spread prevalence of quackery, which has jeopardized the lives and health of communities throughout the land, seems, at length, to have aroused among the intelligent public a sense of the importance of legal restraints; and statutes have resulted, regulating the sale of medicines and protecting their citizens against empiricism.

The statute adopted by the Legislature of Kentucky, last year, makes it punishable with fine, or imprisonment, or both, to practice medicine in any of its departments, or surgery, without a diploma of some chartered school of medicine, or the certificate of qualification from a board of examiners provided for in the Act.

The Legislature of New York, at its last session, passed a law of similar import, and with like penalty.

In Canada, the working of such laws has been beneficial.

But, I think, less is to be hoped from "acts of legislation and rulings of courts," than from a high standard of education in the profession, and the proper education of the community in the facts and truths which involve the principles of sanitary science: and true medical science may suffer more with an intelligent public, through the incapacity of unqualified practitioners, than from the cunning devices and villainous practices of the arrant charlatan.

But there is a legalized form of quackery which is the greater opprobrium of the profession—delusion masked beneath a specious show of science, whose influence rests in the virtual denial in practice of its avowed theories, and the adoption to all intents and purposes of the therapeutics of our profession.

An avowed Homeopath recently said in my hearing, "It takes a good Allopathic physician to make a good Homeopath; when we get into a tight place, we give a little larger doses."

I think it is apparent to us all, that this false system retains almost nothing of distinctive character, having become merged in the Allopathy it affects to condemn.

It has long held its little share of mistaken public approbation, through the influence of graduates of our colleges.

Often, they have sought their diplomas as an introduction to public favor, and with the preconceived purpose of prostituting

their honors, in fostering such unreasoning folly; the base motive of sordid avarice being but too clearly apparent.

We must heartily endorse the action of our sister State Society, in the summary expulsion of members guilty of such dishonor.

The ethics of the National Association, which we honor as the exponent of professional duty, justly consign such violators of principle and obligation to merited contempt, as unworthy the sympathy and regard of all true men.

Our Society has ever shown itself equally jealous of its good name and of the honor of true science, for the vindication of which, we trust, no future occasion may again demand like action.

Finally, my brethren, let us cherish our organization, as the bond of a union by which we may the more efficiently maintain the principles and truths which it has been the glory of our age to elucidate and establish.

Let us justly appreciate the demands which the rapid progress of our profession imposes upon us; and let us desire no better memorial than the record of faithful labor for its advancement.

ARTICLE XXIII.

CHRONIC LARYNGITIS.

BY S. H. CHAPMAN, M.D., OF NEW HAVEN, CONN.

Too much time would be occupied were this subject dealt with in all its phases. I therefore pass over the class of cases that results from constitutional disease, such as gout and tuberculosis, and another that is produced by local disease, as, for instance, polypus or enchondroma, and confine myself to the condition of the larynx and its causes, which prevents the clergyman, the orator and singer from the performance of their professional duty.

The name "chronic laryngitis" is not perfectly applicable to this condition, because, as you will see farther on, it is not in many cases a true inflammation; but still the name has been selected for the want of one more comprehensive. For the same reason, a definition cannot be couched in scientific terms.

The condition of which I wish to speak may, however, be defined "a disturbance of the normal co-ordination of the several laryngeal elements."

Before proceeding to an enumeration and description of the causes, I beg your attention for a few moments to a consideration of the prevalence of the disease as thus defined.

It is not an exaggeration to say that every city and town of New England contain, at least, one clergyman who is struggling against it, and that every village choir has at least one victim to the same ailment. Some of our prominent speakers have from time to time been, by this, disabled from appearing on the public stage, and the same may be said of our professional singers.

Of course, a disease that affects the voice is most noticeable in those whose capital is the voice; but careful scrutiny shows that it is by no means confined to this class of persons.

A walk of a few minutes upon any of our public streets, with our attention directed to the subject, will be a sufficient dis-

claimer, and those of my colleagues who practice this speciality will bear me out in my statement, that at least 25 per cent. of the population of New England have some—greater or less—chronic laryngeal disturbance.

On account of its great prevalence then, the causes, treatment, and prevention become an interesting subject to the profession at large. In what I have to say, however, the professional voice will be more especially considered, as being both the most important and the most difficult to cure.

The causes may be divided into the general and anatomical. In dealing with the causes, I shall at the same time show the means of prevention as the most natural method, and afterwards speak of the treatment.

The first and chief general cause is climate. The great and sudden variability of temperature in New England, the cold dampness, the cold mists of the hill- and river-valleys, the east wind, are all causes which are insidiously at work. Cities of other countries have mists, but while the dampness of New Haven, for instance, is raw and cold, that of Barcelona is warm.

Cold moisture irritates, while warm moisture soothes the throat.

Vienna has, considerable variability of temperature, although not so great as that of our cities; but the difference between Vienna's in-door and out-door atmosphere is by no means so great as ours, since the Austrians heat their rooms by porcelain stoves, that seldom raise the temperature above 60° Fahrenheit, while our houses are heated by coal stoves or furnaces, which not only raise the heat to 70° or 80°, but also dry the atmosphere to a point where it becomes a source of irritation to the throat.

The saying is old but always true, that New England can produce no great singers, for the simple reason that the climate kills their voices; while, on the other hand, Italy has a population of vocalists.

Throat-troubles are almost unknown in Venice, whose atmosphere is warm, equable and moist, where the boatmen even have voices that would be envied by our own more pretentious professional singers.

The two elements in our climate, then, that render it so unsuitable for throats, are the extreme and rapid changes of temperature and the cold dampness.

The only natural preventives against them are the keeping the mouth firmly closed in the external air, and, in very severe

weather, in protecting the throat and lower part of the face by warm wrappings. The definite action of cold moisture as a cause will be explained in another section.

The second general cause of disturbance of normal co-ordination in the larynx is an unphysiological mode of life.

Continued nervous excitement and its resulting exhaustion, digestive troubles, and lack of proper exercise, are the principal sources of mischief.

In experimenting upon myself, I found that contracted constipation, or too hearty eating or drinking without constipation, had a decidedly weakening effect, so that my voice was not only not so strong but also lost a note at either end of its ordinary compass. The same but more decided effect was produced by the nervous exhaustion from late hours.

After sleep of half the usual length, it required considerable mental effort to reach notes that usually were easily sung.

At the same time, examination of the larynx disclosed no congestion or other abnormal condition; the trouble seemed to arise entirely from a want of nervous tone.

Those who train their voices for professional life are obliged to follow rigidly certain hygienic rules, and when first appearing in public are in danger of materially injuring their voices, simply from the nervous strain of the unusually late hours and the excitement of their first appearance.

A week's interval of rest is of necessity the rule with young professionals, in order to give the nervous system time to recover from the previous exhaustion.

What has been said of young singers is likewise true of young orators.

A case that was under my care in the summer of 1874 will illustrate this point. A Senior of Yale College had been practicing for two weeks under the direction of the Professor of Elocution, as a preparation for prize-speaking. At the same time he was busily employed in reviewing his studies preparatory to examinations, studying late into the night and rising for the same purpose early in the morning.

The day before the public speaking was to take place, he came to me because of entire loss of voice. On examination, he showed a slight congestion of the vocal cords and of the mucous membrane lining the larynx, a condition that would cause the voice to sound harsh and deeper than normal, but would not account for the loss

of voice. With effort, he was able to pronounce words, but was unable to read a complete sentence in a perfectly audible tone. I considered it to be a partial and temporary paralysis, due to over-exertion and exhaustion; and for treatment, he was ordered to lie quietly in bed until the hour approached for the prize-speaking; to take no food, but instead, frozen champagne in sufficient quantity to keep him slightly exhilarated: moreover, he was not to use his voice, but to remain perfectly quiet and unexcited. The frozen champagne acted in two ways; the cold reducing the congestion, and the stimulant toning up his system.

His voice in speaking for the prize was full and resonant, and afterwards he told me that he felt weary, but that his voice had quite recovered from the shock of its previous strain.

From the foregoing, it will be readily seen what the preventives against such accidents are: but, in addition to the usual hygienic precautions, I usually advise a mild stimulant, such as sherry and egg, or aromatic spirit of ammonia, with perfect rest, after prolonged exercise of a fresh and untried voice.

We pass now to the anatomical causes. I call them anatomical because they have reference to the disturbances arising from an incorrect use of the muscles of the larynx, chest, and diaphragm, from an incorrect position of the larynx and body, and from an incorrect method of inspiration.

First, as regards the position of the larynx. The larynx is a movable and not a fixed organ. The average mobility, from the lowest position, as when one intones a deep note with mouth wide open and head thrown back, to the highest position, as when one swallows or sings a loud nasal falsetto tone, is an inch in height.

In both positions, the ligaments connecting the larynx to the hyoid bone and trachea are either extended or contracted to their utmost extent. Hence arises almost complete immobility of the organ in these two positions. A point midway between the highest and lowest, is the proper oratorical and singing position: because in this position the ligaments are only so far extended as to support the organ and allow it great flexibility of motion; hence, the true voice-muscles, which in acting alter to some degree the position and shape of the larynx, are not embarrassed by its rigidity.

It will be readily seen what the effect of the former condition is. The voice muscles are obliged to overcome an impediment, therefore act with too much force, and, if this action be continued any

length of time, or constantly repeated, the voice becomes harsh, the muscles become heavy and stiff, the vocal cords are strained, the over-exertion produces a congestion which may run into an inflammation, to the permanent detriment of the oratorical power.

In illustration of this point, allow me to give a case. A clergyman who had been preaching for several years, with ever-increasing difficulty, consulted me about his voice. The larynx was in a fair condition, no inflammation existing, but a slight congestion of posterior halves of the vocal cords. This was not sufficient to account for his difficulty in speaking; I therefore observed him closely in ordinary conversation, and also in the pulpit. This observation disclosed to me the fact, that the larynx was held in the lowest position, producing thereby a deeper but, at the same time, a strained and unnatural tone.

He told me that his natural voice was not a deep one, but that he thought his sermons more impressive when delivered with a deeper tone, and had, therefore, for years followed this oratorical method.

After the physiological action of the different parts of the larynx was explained to him, he was sent to a professor of elocution, in order that he might receive the necessary training to enable him to speak properly.

I saw him a few days since, some months after his previous visits, and he told me that since following my advice of using the larynx in the middle position, he has gradually recovered, and now finds no difficulty in speaking.

Experimenting upon myself, I found that I could sing an octave and three-quarters with the larynx in the lower position, but that the tone was harsh, metallic, and that the vocal cords felt irritated and strained: while with the larynx in the middle position, I could sing two octaves clearly, and with no disagreeable after-effect. It is of the utmost importance, therefore, that, as one of the preventives to disturbance of proper muscular co-ordination of the larynx, those who make professional use of their voices should be taught how to control the position of this organ, and under no consideration should be allowed to continuously use unnatural tones.

A second cause is an imperfect use of the diaphragm and an improper use of the muscles of the chest.

To speak or sing with ease, and enjoyment to those who listen, the lungs should be filled to their greatest capacity, the chest

walls held perfectly rigid, and the diaphragm slowly contracted. The upper portion of the chest then acts like a sounding board, and adds resonance to the voice. It should never be allowed to become empty of air, nor should the chest-muscles be allowed to contract, for there takes place a simultaneous closure of the larynx which not only makes the voice thin, but irritates the vocal cords. Observation has shown that a majority of persons, in conversation and in public speaking, do not fill the lungs at each breath, but attempt to eke out their sentences by a forcible contraction of the diaphragm and chest-walls.

Experimenting upon myself, I found that a little practice enabled me to hold a tone from twenty-five to thirty seconds, but that during the last five seconds, the diaphragm having been previously contracted to fullest extent, it was necessary to exhaust the air in the upper part of the chest, and that there took place a simultaneous contraction of the larynx with thinning of the tone.

Again, in reading, seventy-five words of all lengths in three sentences could be readily pronounced, with a full stop after each sentence; but when I attempted to go beyond that point, the words were no longer pronounced with ease and resonance.

By contraction of the larynx an attempt is made to husband the air still remaining in the chest, in order that the end of a tone or sentence may be reached, and in this lies the injury to that organ.

A third cause is an incorrect method of inspiration.

The proper way is to close the mouth after a sentence or series of sentences have been spoken and inspire through the nose. I cannot lay too great stress on this point.

However warm the atmosphere may be, it still remains of a lower temperature than the air which is expired, so that the delicate membrane of the larynx—when inspiration is made through the mouth—is subjected alternately to streams of air of different temperatures, the one being warm, moist and slow, while the organ is in full action; the other cold and rapid, while the organ is in a state of rest. The result is a diffused congestion or inflammation.

Experimenting upon myself, by singing the scale in the open air for a few minutes, at the same time inspiring through the mouth, I set up an active congestion of the larynx from which it did not recover for a week; but I have been able to sing repeatedly in the open air with no bad effect, simply by following the rule here laid down.

Again, in order to test the action of a rapid stream of cold air on the larynx while in a state of rest, I ran a quarter of a mile at a moderate speed with my mouth open. The result was a slight congestion of the vocal cords, with a deepening of the voice three notes.

Irritating vapors have had the same effect. As, for instance, the inhalation of tobacco-smoke.

If so much harm can arise from inspiring through the mouth while the larynx is in action, how much greater will be the harm during the period of rest after prolonged use?

Take as an illustration the case of persons who exercise violently and then stand in a draught. Muscular rheumatism is pretty sure to follow such carelessness; and the same disease is also sometimes the result of omission to attend to the rule here given.

The usual result, however, is an acute laryngeal inflammation with infiltration, ulceration, or paralysis of some of the muscles, rapidly proceeding to a subacute condition, which may continue to trouble the patient for months or even years.

From what has been said, you will observe that the proper act of speaking is a complex process, any false step in which may be followed by more or less disturbance of the proper co-ordination of the larynx; and yet the process, though complex, is so simple that, were it properly carried out, I have no doubt that much of the discomfort now existing from weak throats would be removed, and much more would be prevented.

We proceed now to the subject of treatment.

If laryngitis, either acute or chronic, exist, it must be treated according to the methods usually adopted by throat-specialists.

If acute, the laryngitis is best treated by medicated-steam or vapor until a sub-acute condition is attained, when astringent and stimulant topical applications should be made, the best of which is nitrate of silver in solution, of strengths varying from ten grains to the ounce of water to a saturated solution. As the first action of this drug is to increase the capillary action of the parts to which it is applied, I usually order atomized ice-water to be frequently used after each application of the silver-solution.

Chronic laryngitis may be treated immediately with a strong solution of nitrate of silver, say sixty grains to the ounce of water, with the intermediate use of atomized ice-water.

This treatment, with attention also to the constitutional condition of the patient, is usually sufficient to relieve the worst laryngitis with induration in a period varying from three to six weeks.

From what has been said, however, you will be able to see that the inflammation is but one, though the most apparent, of the disorders occurring in such cases. In the majority of them there exists a partial or complete paralysis of the laryngeal muscles, due either to an affection of the nerves or to atony of the muscles themselves.

This affection may not be so extreme as to interfere with ordinary conversation, but quite sufficient to disable the patient from public speaking or singing. From this point, therefore, it is necessary to adopt a new line of treatment. It consists of the use of stimulating vapors, of which I consider camphor to be one of the best, and of the practice of a strictly graduated series of vocal gymnastics.

Singing tones are the best to begin with, because with each tone is always obtained the same muscular combination.

The patient should, therefore, be taught to intone the three notes most easy for his voice, at first not attempting to use expression or power, or to prolong them to the utmost capacity of his expiration. At the same time, he will be able to learn the proper use of the diaphragm and chest-muscles, the proper method of inspiration and the correct position of the larynx, if these are found to be faulty.

Each exercise should last not longer than five minutes nor be repeated oftener than every three hours; and after each exercise the stimulating vapor should be used, and then absolute laryngeal rest enjoined until the time for the next exercise arrives.

Gradually, according to the judgment of the physician, other notes may be added, above and below the original three, and the exercises prolonged. At the same time a reading or speaking exercise may begin, taking the place of an alternate singing-exercise.

Too great stress cannot be laid upon the necessity of strict obedience to the plan advised by the physician; for the progress of days may be lost in a moment by the too great eagerness of the patient or his desire to experiment upon his own voice. At the same time, strict attention must be paid to diet and exercise, and constitutional treatment should be adopted according to the require-

ments of each particular case. If the patient seem to be of a rheumatic diathesis, colchicum may be of service; if the trouble be an atonic condition of the laryngeal muscles with general debility, strychnia with or without a blood-tonic is indicated.

In conclusion, allow me to illustrate some of these points by a case. A clergyman, thirty-five years of age, came to me April 1st with this history. Ten years ago he sang with a voice-compass of two octaves, was a member of a singing club, and was in the habit of singing at least two evenings in the week, for several continuous hours, with no resulting fatigue; had what is called a natural singing voice. One evening, after the usual exercise, he remained in the raw external air for some time before going to his home, talking with some friends, and the next day suffered from a severe "sore-throat," as he expressed it, with swollen tonsils. He consulted no physician, but treated it himself. The disease, however, ran into a chronic trouble for which, some two or three years after, he consulted a physician of New York, who cut off the tonsils and treated the larynx, with partial subsection of the inflammation as a result. From the time of the first attack, however, to the present, he has been unable to preach or sing.

The conversation first held with him was conducted, on his part, in almost a whisper, and when requested to speak loud he did so with considerable effort and with huskiness.

An examination showed the pharynx in fair condition, but in the larynx was extensive infiltration, with deep and uniform congestion of the vocal cords and ulcerations at the posterior base of the epiglottis, while this latter organ was much thickened and inflamed.

The mucous membrane of the first few tracheal rings was thickened and of a dusky red color.

The larynx itself was normal in shape, very large, and naturally a fine singing-organ.

When called upon to sing a high note he was unable to do so, the vocal cords flapping about; not being put upon the stretch, as should have been the case.

The diagnosis made was atony of the laryngeal muscles, due to long disease arising from general chronic inflammation.

Between two and three weeks were occupied in reducing the inflammation, which was accomplished by the method of treatment already described. At the end of this time all that remained of it was a slight congestion of the posterior thirds of the vocal

cords. At the same time he was put upon general constitutional treatment. From this time to the present, he has been following the prescribed course of vocal gymnastics, with flattering results for so bad a case.

Finding his natural speaking voice, I gave him this tone and one above and below, as an exercise. At first the notes were sounded husky and uneven and without resonance. At present he is able to sing eight notes, clearly, evenly and with fair volume.

His speaking voice has also improved to such an extent that he can read for a variable time from fifteen to twenty minutes without fatigue.

Some of the errors of which I have spoken he was in the habit of making, as for instance, using the chest muscles instead of the diaphragm as an air-expelling force; and inspiring through the mouth. As he had been a singer as well as speaker, the position of the larynx was correct.

Although the case is not completed, yet the success already attained, combined with the fact that it is the most difficult case which has come under my charge, warrants me in using it as an illustration of the principles involved in this disease.

THE PATHOLOGY OF PHTHISIS PULMONALIS.

BY IRVING W. LYON, M.D., OF HARTFORD.



It is proposed in this paper to give a brief history of the morbid anatomy of pulmonary phthisis from the time of Bayle and Laennec, in the early part of the present century, down to the writings of Professor Niemeyer; thence to trace the subject with more detail until we reach the latest published views of such distinguished authorities as Buhl, Wilson Fox and Rindfleisch, the presentation of whose opinions is the chief object of this essay. Bayle, who lived from 1774 to 1816, was the real founder of the modern doctrine of tuberculosis. His most celebrated work, which was published in 1810, was the ground-work upon which Laennec, nine years later, constructed his pathological anatomy of phthisis pulmonalis. Bayle first applied the term *miliary* to the small tubercular bodies found in the lungs. These miliary tubercles he called *tubercula cruda*. He also found that in cases of pulmonary tuberculosis there existed simultaneously the same miliary tubercles, not only in adjacent organs, as in the larynx and trachea (where he was the first to discover them), but also in more remote organs, as the peritoneum, the intestines, the cervical and mesenteric glands, the liver, the kidneys, the spleen, etc. He believed phthisis tuberculosis to be a disease of the whole body, a cachexia or diathesis which he named tuberculous; and so the expressions "*tuberculous diathesis*," "*tubercular degeneration*," "*tubercular affection*," and also "*tuberculosis*" originated with Bayle. He defined tuberculosis to be a chronic disease of specific nature and not caused by inflammation; he said also that hæmoptysis was the result, never the cause, of phthisis pulmonalis. Bayle also made the changes which the crude miliary tubercle undergoes the subject of careful investigation, and declared, as Baillic and Portal had before him, that the opaque whitish-yellow metamorphosis was pathognomonic of tubercular degeneration. In addition to

the above, Bayle made another variety of phthisis, the granular, founded upon the now famous gray granulation, which he was the first to discover and to describe. These miliary granulations he considered an accidental production different from the miliary tubercle; they were transparent, bright, and from the size of millet seeds to wheat grains, of the nature and consistence of cartilage, never became opaque and never softened. They, like the miliary tubercles, do not occur in the lungs alone, but also in the peritoneum, intestines, heart, uterus, etc. Thus became Bayle, in the language of Waldenburg, the forerunner of Laennec.

The next most important contributor to the literature of our subject was the illustrious Laennec, whose brilliant discoveries in auscultation and accurate pathological researches have shed such lustre about his name as almost to eclipse the valuable labors of his less renowned cotemporaries. When Laennec proclaimed all lung phthisis tubercular, he referred particularly to the five species which Bayle described, in addition to his phthisis tuberculosis, viz., phthisie granuleuse, phthisie ulcéreuse, phthisie avec mélanose, phthisie calculeuse and phthisie canceruse. Of these Laennec said: "In respect of the species described by Bayle, under the name of granular ulcerous, calculous, cancerous, and with melanos, I may here remark that the first is a mere variety of the tuberculous, the second is the partial gangrene of the lungs formerly described, and the three others are affections which have nothing in common with the tuberculous phthisis, except that they have their seat in the same organ."

With the exceptions here quoted, it will be seen that the picture of tubercle and lung phthisis which has been left to us as Laennec's, corresponds very closely to that which has been shown to have been Bayle's, viz., a disease due to a specific accidental production called miliary tubercle and miliary granulation, not caused by inflammation, but by a dyscrasia; that hæmoptysis is never the cause but the result of phthisis, and finally, that the yellow, cheesy metamorphosis is pathognomonic of tubercle. It may also be said for Bayle that he differentiated his ulcerous, calculous, cancerous and melanotic species of phthisis from the tuberculous with perfect clearness, and that he deserves the greatest credit for his independent recognition of the gray granulation as something peculiar. Virchow, nearly half a century later, made its peculiarities those of the typical tubercle.

These doctrines of Bayle and Laennec were assailed with

vehemence by Broussais in 1821, who, true to his theories of irritation and inflammation, declared phthisis pulmonalis to be the result of an inflammation. He agreed with Laennec that tubercle caused the phthisis, but insisted that tubercle, whether in its incipient or cheesy form, was the result of a chronic inflammation of the pulmonary lymphatics. Gendrin, Lobstein and Lombard agreed with Laennec in the non-inflammatory origin of the miliary and infiltrated tubercle; but, with Bayle, considered the gray granulations quite different from the miliary tubercles.

But the doctrines of Laennec met their first most weighty and influential opposition from Andral, whose eminence in pathology arose no less from his remarkable powers of observation, than from his sound and impartial judgments. Andral declared that the yellowish white and friable tuberculous matter did not originate from the previously firm, gray, half-translucent tubercle, as taught by Laennec, but was at first a fluid secretion in the ultimate bronchial tubes, air vesicles, intervesicular and interlobular cellular tissue, which with time grew more consistent and became tubercle. The reason why Andral arrived at this conclusion, so opposite to Laennec, was because he had observed that fluid matter, particularly pus, could by inspissation go over into a white cheesy substance, identical with the so-called tuberculous matter. This process was called in those days "tuberculation of pus." Hence Andral concluded that tuberculous deposits were formed from inspissated pus, instead of originating in the miliary tubercle; the self-same doctrine which in after years, through Reinhardt and Virchow, became more popular, and finally reached its logical culmination with Niemeyer.

Besides this, Andral held that Bayle's gray granulations were entirely separate and distinct from the miliary tubercles, and referred their origin to an inflammation of individual air vesicles.

The dogmas of Laennec, which had suffered in no inconsiderable degree from the assaults of Broussais and Andral, were at this juncture most ably reinforced by the accomplished Louis, who not only accepted the teachings of Laennec in their entirety, but became their most powerful advocate, so that through his masterly and classical expositions of the pathological anatomy, symptomatology, and diagnosis of lung phthisis, the doctrines of Laennec triumphed over all opposition and became firmly established in France. From the time of Laennec and Louis down to Reinhardt, with the exception of Dr. Addison, so much was generally

conceded to the doctrines of Laennec as made phthisis pulmonalis a disease due to a particular product called tubercle, the result of a constitutional affection or dyscrasia, and that the most characteristic form of the tubercle was the opaque yellow; but the question concerning the nature of the tuberculous material, and particularly as to whether it was in any degree the result of inflammation, or not, continued to be discussed with the odds in favor of Laennec's non-inflammatory theory.

In the British Islands, the pathology of Carswell was very generally accepted. He believed the tubercular matter to be secreted directly from the blood and deposited chiefly in the bronchi and air vesicles; that it was due to a tubercular dyscrasia; that the yellow caseous tubercle was the typical form, and that inflammation had no genetic relation to the process. Drs. Alison and Stokes held that inflammation did enter into the etiology, but these gentlemen were distinguished rather as clinical observers than as pathologists, and the views of Dr. Carswell prevailed.

In Germany, Rokitansky taught that tubercle was an exudate of a fibrino-albuminous material, due to a tuberculous or scrofulous diathesis. As to inflammation, he said, "That tubercle, like other blastemata, exudes now almost insensibly in the act of nutrition; then again in the sequel to obvious hyperæmia, and, lastly, as a consequence of still more manifest inflammation."

The impulse to the microscopical study of tubercle was given by Gluge, in 1841, but particularly by Lebert in an essay published in Müller's Archives, in 1844. Lebert described with great precision minute microscopical bodies, the "tubercle corpuscles, or globules," which he declared to be the specific anatomical elements of tubercle, as pathognomonic of tubercle, as cancer cells are of carcinoma. The publication of this discovery reinvested for a brief period Laennec's theory of the specific heterologous character of tubercle with new life, and had the observations of Lebert been confirmed, one of the most difficult and important questions connected with the subject of phthisis would have been settled for all time. Lebert had, however, the merit of describing in accurate and explicit terms what he saw; and though his own interpretation of the microscopical appearances of tubercular matter was not confirmed, yet his labors in this field stimulated investigation, which, as we shall see, soon yielded valuable results.

In the year 1847, the tubercle corpuscles of Lebert lost their specific character through Reinhardt, who proved that these

bodies could originate from pus. In 1850, Reinhardt, in a memorable essay, proclaimed that tubercles were only products of inflammation, that the gray miliary tubercles or granulations and the gray infiltrations were products of a chronic inflammation, yielding a gelatinous exudation, and that yellow tubercles consisted chiefly of inspissated pus, that the shrunken and blighted globules of this metamorphosed pus were the tubercle corpuscles of Lebert. Reinhardt was compelled to concede that this chronic inflammation was due to a general cachexia or dyscrasia, and that a certain hereditability also belonged to it.

Reinhardt was more fortunate than Lebert, for his microscopical discoveries were largely sustained by no less an authority than Virchow, who in conceding priority to Reinhardt, uses the following language: "Upon examining the point which has been the leading one in the doctrine of tuberculosis recently advanced, viz., tubercular infiltration of the lungs, we readily arrive at the result which Reinhardt has set down as the final one, namely, that tuberculosis is nothing more than one of the forms presented by inflammatory products when undergoing transformation, and especially that all tuberculous matter (yellow tubercle) is really inspissated pus. In fact, what has been termed tubercular infiltration, can, with few exceptions, be traced to an originally inflammatory, purulent, or catarrhal mass, which has gradually, in consequence of incomplete reabsorption, fallen into the shriveled and shrunken state in which it afterwards remains. But Reinhardt was deceived when he thought he was examining tubercle; he was led astray by the false direction which had been given to the whole doctrine of tuberculosis from the time of Laennec until his own." This error, Virchow said, consisted in making the cheesy stage of tubercle the common generic characteristic of all tuberculous products, not merely as the principal aid in diagnosis, but as the starting point for the interpretation of the process in general. By examining this yellow tubercle, which Virchow declares to be really inspissated pus, Lebert committed the error of mistaking blighted pus globules for his peculiar tubercle corpuscles.

After thus stating his belief in the non-tubercular nature of the gray and yellow infiltrations, Virchow proceeds to designate the gray granulations of Bayle as the bodies to which the name of tubercle should be restricted. These tubercle granules he describes as new formations originating from connective tissue, and made

up of small uni- or multi-nucleated cells, which bear the closest resemblance to the corpuscles of lymphatic glands. The regular termination of tubercle in common with other pathological cell formations, is in cheesy metamorphosis, and in this stage it is impossible to distinguish it from other cheesy products.

These teachings, though emanating from such distinguished authority, were not so fully accepted by others as by the late Professor Niemeyer, who made them, together with the auto-infection theory of Buhl, the basis of his celebrated doctrines of lung phthisis. Niemeyer declared that phthisis pulmonalis was almost invariably the result of chronic broncho-pneumonia, ending in caseous infiltration, the caseous infiltrate consisting mainly of inspissated pus within the ultimate bronchial tubes and alveoli, and that all the extensive indurations formerly ascribed to tuberculous infiltration, or to infiltrated tubercle, "depended neither upon infiltration of the tissues with tubercular matter, nor upon diffuse development of tubercle," but upon the residua of chronic inflammatory action. He emphatically denied that this inflammation was in any sense peculiar, or due to a dyscrasia; on the contrary, all forms of pneumonia may end in cheesy infiltration, "and there is no form of pneumonia in which caseous infiltration is a sole and constant termination; in croupous pneumonia such a result is rare; in acute catarrhal pneumonia it is somewhat more frequent, while in the chronic catarrhal form it is almost the rule." Miliary tubercles frequently occur in lungs which are the seat of chronic pneumonia, but in such instances the tubercles are almost invariably secondary and caused by the preëxisting inflammation. Niemeyer says, "It is indeed rare for tubercles to form in a lung which does not contain products of chronic inflammation." This doctrine he again laconically expressed in his celebrated aphorism, "We have no hesitation in stating that the greatest danger for the majority of consumptives is that they are apt to become tuberculous." As to the relation existing between the inflammation and the subsequent formation of tubercle, Niemeyer says, "As the formation of tubercle occurs with equal frequency, whether the infiltration be a sequence to croupous, catarrhal, or to chronic inflammation, we may assume that there is no direct and immediate relationship or community of origin between tuberculosis and the inflammatory disorders which generally precede it, but that their connection is indirect, arising from the caseous metamorphosis of the pneumonic product." Niemeyer also made hæmoptysis a possible

cause of phthisis in the following well-known paragraph: "Bronchial bleeding may precede the development of consumption as its cause, the hemorrhage leading to chronic inflammation and destruction of the lung."

We have now reached the farthest limit to which the inflammatory origin of phthisis has been developed; we find it exceedingly anti-tuberculous and diametrically opposed to the doctrines of Laennec, to which Niemeyer in 1866 complained that the majority of physicians still adhered with incomprehensible pertinacity. With this German school of pathology the tubercle lost its originality and became a nodule of resorption; phthisis pulmonalis was made a disease primarily due to simple inflammation, to which tuberculosis was accidental and secondary; the doctrine of a dyscrasia was entirely rejected, and it was urged by Niemeyer that the adoption of his views would lead to a more rational and successful treatment, as the tubercular theory had exercised a baneful influence upon the prevention and cure of consumption.

The teachings of Niemeyer obtained a widespread acceptance and popularity; they were more or less endorsed, not only by many of the best practitioners and schools of medicine, but also by many of the most distinguished pathologists. There were two principal reasons for this: first, the groundwork of Niemeyer's doctrines rested upon the authority of Virchow, whom all admired and few ventured to encounter in the field of pathology; second, the auto-infection theory of tuberculosis, which had been taught by Buhl since 1847 and more recently apparently confirmed by the inoculation experiments of Villemin, had attracted many adherents. These two causes, together with the zealous advocacy of Niemeyer, and a soil rendered somewhat receptive by the historic and slumbering belief that inflammation was in some way related to phthisis, now coöperated powerfully to spread the new German pathology.

In 1865 and 1866 Villemin inoculated rabbits with tubercles taken from the lungs of patients dead of phthisis, and these rabbits, killed and examined from two to three months after, were found to contain tubercles in their lungs and other viscera; from which Villemin concluded that tuberculosis was a specific affection to be ranked with small-pox, syphilis and the glanders. His experiments were repeated by Lebert, Hérard, and Cornil and others, with the same results. But like the tubercle corpuseles of Lebert, the inoculation experiments soon lost the

significance which Villemin believed them to possess; for Andrew Clark, Burdon Sanderson, Wilson Fox and Waldenburg soon found that tubercles in rabbits and guinea pigs were produced by inoculating with pathological products other than tubercle, and finally Cohnheim and Frankel proved that it was unnecessary to inoculate anything—that tubercles would follow any inflammation or suppuration in rabbits or guinea pigs.

Prof. Buhl divides phthisis into two classes: first, Inflammatory phthisis; second, Phthisis from infection (acute miliary tuberculosis). Phthisis from infection bears to inflammatory phthisis the proportion of 8 to 100. Inflammatory phthisis, according to Buhl, is neither due to bronchitis, to croupous or to catarrhal pneumonia, either in their acute or chronic forms, as taught by Niemeyer: in these inflammations the mucous membrane of the bronchi and the inner lining of the alveoli are the parts chiefly involved; they are essentially surface inflammations, and their products, which are contained within the bronchi and alveoli, almost invariably disappear, partly by expectoration and partly through absorption, instead of remaining and undergoing inspissation and caseous metamorphosis (the cheesy pneumonia of Virchow and Niemeyer). Prof. Buhl insists with much emphasis that the above conception of cheesy pneumonia is entirely incorrect and based upon "the false supposition that because the products of these inflammations (puriform masses of mucous and croup exudation) can undergo cheesy degeneration in the alveoli and bronchioli, they therefore represent the condition of cheesy pneumonia, and lead through this to necrosis and formation of cavities." He points out that true cheesy pneumonia is marked by absolute anæmia; that not only the contents of the alveoli are dry, but that the alveolar parenchyma itself perishes through a cutting off of its capillary blood supply "(anæmic necrosis)," and undergoes the same dry, cheesy degeneration as the intra-alveolar contents. Now in croupous and catarrhal pneumonia the capillary circulation is not interfered with, and consequently anæmic necrosis and caseation cannot take place. If, for the sake of argument, the products of these inflammations should, in some rare instances, remain and undergo metamorphosis, it would not be the caseous, but a simple fatty degeneration, from which no ulceration and cavity formation need be apprehended, because the alveolar parenchyma has remained intact.

Prof. Buhl says, "The question always turns, not upon the

cause of the caseation of the bronchial and alveolar contents, but upon the necrosis and cheesy degeneration of the alveolar and bronchial walls, and of the lung framework. This question is either not answered at all by these authors (Niemeyer, Virchow, etc.) or it is entirely overlooked. The fact has been observed that it does occur, but no inquiry has been made to discover the reason; and so they have been content with the opinion—an opinion, however, in the highest degree irrational—that the pressure of their contents on the alveoli and bronchial tubes is the cause of their necrosis.” What, then, is the character of the inflammation which produces caseation and lung phthisis through destruction of the pulmonary capillaries? Buhl declares that there occurs in the lungs a form of inflammation which he first described in 1856, that he has since investigated it with great care, and that he is more and more convinced of its great importance and significance. This disease he calls *Desquamative or Parenchymatous pneumonia*; it is the local expression in the lungs of a constitutional disease, and has different grades of severity. Desquamative pneumonia is defined to be an inflammation of the tissue of the alveolar framework, which is rigid, friable, filled with blood and countless cell elements. The cells, which here are of the greatest pathological importance, have their origin in a proliferation of the normal connective tissue corpuscles on the one hand, and of the endothelium of the lymphatics on the other, chiefly of the lymphatics seated in the outer walls of the finest arterial branches. In mild cases of the disease, the cell growth is mainly in the connective tissue and leads to cirrhosis, etc.; in a higher grade of inflammation the lymphatics also participate, and in the highest grade the lymphatic cell proliferation in the adventitia of the terminal arterial twigs is so great as to compress these vessels and so shut off the supply of blood to the alveolar capillaries beyond. Desquamative pneumonia is therefore an interstitial inflammation, the products of which surround and strangle the blood vessels and so produce the anæmia which has been shown to be the necessary precursor of the alveolar necrosis and caseation. In all grades of parenchymatous pneumonia, the alveolar epithelium, or, as Buhl insists, the alveolar endothelium, desquamates with increased activity and fills the alveoli; no pus cells can be found, simply the thrown-off endothelium; and this marked peculiarity of the disease, not only gives it the name desquamative, but also furnishes the chief means of recognizing it at the bedside; for in no other lung affection will

a microscopical examination of the sputa show the alveolar epithelium in such excess. Prof. Buhl further declares that the highest grade of desquamative pneumonia not only occasions anæmic necrosis and caseation, but also a production of tubercle lymphoma, and that the tubercular growth is a direct and inherent result of the inflammation; so that the highest grade of desquamative pneumonia is not only a cheesy, but also a tubercular pneumonia, and corresponds to the tubercular infiltration of Laennec.

Concerning the tubercle lymphoma, Buhl says: "The structure of the lymphoma is essentially the same in tubercular inflammation as in miliary tuberculosis, except that the tubercles resembling the normal lymph follicles preponderate over those containing giant cells." He adds, that the production of tubercle lymphoma is not peculiar to desquamative pneumonia, but may occur in other inflammations, and that therefore "we must accustom ourselves to connect nothing specific with the name tuberculous inflammation." This is said to support the rather arbitrary distinction made between inflammatory and infectious phthisis, the argument being briefly as follows: phthisis pulmonalis, in a large majority of cases, is due to inflammation of the lungs; this may be a tubercle-bearing inflammation—tubercular pneumonia—but tubercles may also result from any other inflammation; therefore, a pneumonia producing tubercles should not be considered a peculiar or specific pneumonia.

The second variety, phthisis from infection, or acute miliary tuberculosis, is, according to Buhl, a disease due to specific absorption and infection, and not directly to inflammation. The specific virus is derived from cheesy masses, the constituents of which are taken up by the blood vessels and lymphatics, and occasion a secondary eruption of miliary tubercles in the lungs and other viscera. The advent of these infection tubercles in the lungs is attended by a desquamative pneumonia; but, says Buhl, "that the tubercles are either the cause or the result of the inflammation I am not so willing to admit; they are in reality synchronous, both the effect of the same cause." These are the two ways by which Prof. Buhl explains the pathogenesis of phthisis pulmonalis, viz: desquamative pneumonia, and acute miliary tuberculosis through infection from cheesy foci. They are both original with him, and have been extensively adopted by others. His book, which is a very valuable and interesting contribution to the litera-

ture of consumption, has been translated into English by Drs. Mann and St. John of New York, and will well repay careful perusal.

In the discussion on the "Anatomical Relations of Pulmonary Phthisis to Tubercle" by the members of the Pathological Society of London, in March and April, 1873, Dr. Wilson Fox, after alluding to the cardinal doctrines which Virchow had introduced into the pathology of lung phthisis, viz: that caseous matter was not the type of tubercle, and that the gray granulation of Bayle should only be so considered—said, that fifteen years ago he had returned from Germany strongly imbued with the doctrines of Virchow, whose pupil he had been; that he then had the terms broncho-pneumonia, caseous pneumonia and serofulous pneumonia constantly at his tongue's end, with a strong desire to do all he could towards establishing the clinical recognition of the many diverse diseases into which he then believed phthisis pulmonalis could be separated; and that, although he still entertained the most profound respect for the teachings of Virchow, yet he had, from his own independent observations, arrived at conclusions somewhat different from those of his distinguished teacher, viz., "That in the large proportion of cases where caseous matter arises in the course of phthisis, its origin is not due solely to the inspissation of inflammatory exudations or products, but to the destruction of vessels by a new growth; and that again, the typical isolated gray granulation is not the sole form in which tubercle appears in the lung."

Dr. Fox described the steps by which he arrived at these results as follows: beginning early to teach, he often felt the greatest difficulty, with the diseased lung before him, in pointing out what was tubercle, and what was not. He therefore resolved to study the pathological anatomy of the phthisical lung with greater care; in so doing, he very constantly found the following lesions: first, epithelial proliferation within the alveoli; second, fibroid growths from connective tissue hyperplasia; third, a growth of small cells or nuclei in the tissue of the alveolar walls and bronchioles. These cells were sometimes imbedded in a fine reticulum, while in other instances the reticulum was absent. In some places this cell growth formed circumscribed round bodies, which corresponded to the gray granulation in serous membranes, but in most instances it was extensively diffused over large areas of alveolar tissue. Dr. Fox considered this cell growth to be the distinctive anatomical feature of phthisis pulmonalis, whether

acute or chronic, and it seemed to him that the gray granulations were of the same nature as the diffused cell growth—that they were both tubercular. His further progress I will give in his own words: “I was, however, long under the conviction that the gray granulation was the typical form of tubercle, and, therefore, I felt doubt as to what the character of this diffused growth really was. I therefore determined to investigate the pulmonary manifestations of a recognized tubercular disease, acute generalized tuberculosis in children, and I found here the same sets of changes, viz., circumscribed and diffused growths of the same nature. I argued, therefore, that in the generalized disease a growth similar in structure, similar in vital characteristics and similar in sets of changes, occurring in the same disease, in the same patient, but differing only in being in parts circumscribed and in parts diffused, must be, in all probability, of the same nature, and that if the circumscribed growth—the gray granulation—were tubercular, the diffused growth must also be so; and that if this were tubercular in acute tuberculosis, it must also be so in other forms of phthisis.”

Dr. Fox said he had no dialectical definition of tubercle to give, but according to our present knowledge, and especially the researches of Burdon Sanderson, it might be regarded as an adenoid or lymphoid body—a lymphatic overgrowth produced by irritation.

The gray granulation, with the exception of its rounded form, which is by no means constant, has nothing to distinguish it from the diffused tubercles, which possess essentially the same histological structure and vital tendencies, originate under the same circumstances, and lead to the same transformations.

As to the real relations existing between inflammation and tubercle, he was less sanguine. Tubercle may either precede or follow inflammation, but they usually are found together. The question as to whether one is produced by the other, or whether both are occasioned by a common cause, must for the present remain unanswered. The anatomical picture of most cases of phthisis pulmonalis is tubercular pneumonia, called also by many scrofulous, and by others, cheesy pneumonia. By tubercular pneumonia he meant the condition above described, viz., a diffused growth of tubercle associated with inflammation. As already indicated, Dr. Fox fully endorsed the explanation given by Buhl of cheesy products in the lungs, that is, that they result

from a destruction of the pulmonary capillaries by the interstitial cell growth. He did not, however, agree with the infection theory of Buhl, but gravely doubted that tubercle could arise from indifferent cheesy foci, or through any inflammatory change not associated with a tubercular predisposition.

Thus do we see the doctrines concerning cheesy pneumonia and tubercle, erected by Virchow, gradually losing ground, first through Buhl, whose rationale of caseous matter is accepted, and whose departure from the typical gray granulation to the tubercle lymphoma is further extended by Dr. Fox, who affirms all phthisis tuberculous, and so reasserts the broken unity of the disease.

In the fifth volume of Ziemssen's Handbook of Special Pathology and Therapeutics, published in Leipsic in 1874, is a paper by Professor Rindfleisch, in which the latest views of this distinguished pathologist concerning phthisis pulmonalis and tuberculosis are given. He begins by announcing himself in accord with those pathological anatomists who hold phthisis pulmonalis to be a tuberculous affection. Tuberculosis, whether local or general, occurs only in scrofulous subjects, and in most instances as the result of a scrofulous inflammation, the products of which, being absorbed by the blood vessels and lymphatics, act as a tuberculous virus and occasion a local and general eruption of tubercles. Example: A scrofulous child receives an injury to his elbow joint; after a while a low grade of inflammation appears and results in pyarthrosis; the pus cells undergo metamorphosis, their detritus remains in the joint, it is slowly resorbed, and is followed by local and general miliary tubercles. Although the above described relation between scrofulous inflammation and tubercles is taught in very explicit terms as the essential doctrine, and enforced by examples, yet it is also said that enlarged lymphatic glands are primarily tuberculous and that their inflammatory hyperplasia is secondary—which seems inconsistent with the main theory. The local origin of tubercle is from the connective tissue of the blood-vessel apparatus, chiefly the endothelia of the blood and lymphatic vessels, and the fixed corpuscles of the connective tissue. These cells become foci of inflammation and through this inflammatory action the tubercle neoplasm is produced.

Rindfleisch distinctly declares that the time has passed for the gray granulation to be considered the only form of tubercle; besides this, there are submiliary tubercles, forty to fifty of

which are necessary to make a nodule as large as a poppy seed ; and again, in the scrofulous tubercle the cells are large and attain to twice and even three times the size of a colorless blood corpuscle. (Fig. 1.)

FIG. 1.



Tuberculous infiltrate from the mucous membrane of a tuberculous ulcer of the ureter. The small cells with clear protoplasm are common colorless blood corpuscles; the large cells, specific, developed tubercle cells.—*Rindfleisch*.

sponds to its junction with the ultimate bronchial tube. (Fig. 2.)

FIG. 2.



A lung lobulus or acinus with its afferent bronchus. Indicating the locality of the first deposit of tubercle in phthisis pulmonalis.—*Rindfleisch*.

These incipient tubercles are here seen sitting like berries upon their stalks. *Rindfleisch* insists that the catarrh is primary, and the formation of tubercles, in this particular place, secondary, and that this order of development is very constant. As the disease advances the bronchial mucous membrane next becomes involved with a tuberculous deposit which extends thence into the tissues of the bronchial tubes ; these become thickened and corded through an infiltration of their walls, partly with tubercles, but chiefly with the products of a scrofulous inflammation (peribronchitis). Finally, the alveolar structure of the lung becomes involved, sometimes by an extension of the peribronchial inflammation to its corresponding lung parenchyma, and sometimes in adjacent sections which had hitherto remained sound. Here, as in the peribronchial connective tissue, the alveolar walls are the seat of inflammatory products of a scrofulous and tuberculous character, the blood-vessels become occluded, the epithelium desquamates, and the whole falls into a cheesy necrotic state.

Phthisis pulmonalis, in most cases, begins as a chronic bronchial catarrh limited to a circumscribed area in the apex of one, rarely of both lungs. The next step in the progress of the disease is the eruption of tubercles, which first appear in that portion of the lung lobulus or acinus which corre-

sponds to its junction with the ultimate bronchial tube. (Fig. 2.)

Besides this tuberculous broncho-pneumonia, the phthisical destruction of the lung is further aided by the frequent occurrence of Buhl's desquamative pneumonia, which, however, Rindfleisch has never yet seen as a genuine non-tubercular affection, but always associated with either tubercle granulations, peribronchitis or cavities.

In this rapid survey of the subject we have seen that the doctrines of Bayle and Laennec, which had prevailed against all opposition, and held sway down to the time of Virchow, received from him a check which unsettled the old pathology, divided the professional mind, and reintroduced the morbid anatomy of phthisis among the scientific questions of the day.

We also saw that through Niemeyer this new German pathology was developed to its most extreme limits, and widely accepted both in Europe and America. That a reaction from these extreme views has occurred will not occasion surprise, and we have introduced the opinions of Buhl, Fox, and Rindfleisch for the purpose of indicating the nature and extent of this reaction.

These all agree—First: That the non-tubercular, broncho-pneumonia origin of phthisis, as given by Virchow and Niemeyer, cannot be sustained.

Second: That Virchow's limitation of tubercle to the circumscribed gray granulation is arbitrary, and excludes much that is undoubtedly tuberculous.

Third: It is agreed by Fox and Rindfleisch that *all* phthisis is tuberculous; and the position of Buhl is materially the same, as his cheesy desquamative pneumonia nearly always contains the tubercle lymphoma.

Fourth: It is agreed by all that phthisis pulmonalis is due to a constitutional cause or diathesis.

Fifth: All agree that the anatomical groundwork of phthisis pulmonalis is largely made up of inflammatory products. Buhl and Rindfleisch, that the tubercle is caused by the inflammation. Fox, that the inflammation and tubercles coëxist, without expressing a decided opinion as to whether one is caused by the other or not, but with a very apparent inclination to the belief that the tubercle is caused by the inflammation.

Sixth: Cheesy masses are very constantly found in the phthisical lung, and almost always as the result of a cachectic or tuberculous inflammation; but this cheesy matter can in no sense be considered as a form or type of tubercle.

Seventh: Tubercle is not an accidental production, but originates from normal structures; lymphatics (Fox), connective tissue corpuscles and endothelia of lymphatics and serous membranes (Buhl), connective tissue corpuscles and endothelia of blood and lymphatic vessels (Rindfleisch).

These views are in accord with the doctrines of Laennec, in so far as phthisis pulmonalis is made a tuberculous disease, and due to a dyscrasia; they differ from his teachings by referring the genesis of tubercle to pre-existing elements, and in assigning to inflammation an agency in the production of the tubercle neoplasm. They are also flatly opposed to his proposition, that yellow caseous matter is pathognomonic of tubercle.

In conclusion, I wish to return cordial thanks to my friend, Dr. Charles E. Froelich, of this city, for his patient and faithful translation of page after page of Waldenburg and Rindfleisch, the valuable writings of whom have thus been made available to me in the preparation of this paper.

ARTICLE XXV.

REPORT OF THE COMMITTEE
ON MATTERS OF PROFESSIONAL INTEREST.

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

YOUR Committee beg leave to submit the following brief summary of what concerns our profession in the State of Connecticut.

Your committee desire to record the satisfaction which they have felt at the unexpected promptness, intelligence and completeness with which the Reporters appointed by some of the County Associations have responded to our enquiries. They feel compelled to express their regret, also, that so little response has been made from other counties. The plan adopted by your committee, by which they hoped to discharge most satisfactorily the duties assigned them, provided for communication with every town in the State. To that end they prepared a series of questions, and supplied to every appointed Reporter a sufficient number of printed copies, with an urgent appeal that he would send one or more to every town in his county, and secure responses thereto. The following are the enquiries proposed :

QUESTIONS.

1. What have been the prevailing diseases in your locality? Can you assign probable causes?
2. Have any new or infrequent forms of disease appeared?
3. Have you or your associates employed any remedies, new or old, with noteworthy results?
4. What has been your experience, and that of your associates, with chloral hydrate? Give some idea of the frequency of its use, and the average dose, in your vicinity.
5. Procure written reports of "remarkable and instructive cases of disease."

N. B.—The above questions relate to the year ending in April, 1875.

All these questions have direct reference to the real work of the profession during the past year. It was only necessary that one intelligent correspondent in each town should co-operate to secure the material from which your committee could prepare a general but comprehensive summary of the sanitary condition of the whole State. While the results have not quite realized our expectations as a whole, the full reports which have been received from some portions of the State have demonstrated its practicality and usefulness, and give hopeful encouragement that future efforts will be more successful.

The Reporter from Hartford Co., Dr. Wilcox, sends returns from ten of the twenty-five towns in the county, together with some very interesting communications and cases. Dr. Wilcox also makes some very judicious and timely criticisms on the correspondence which he transmits, and supplements the deficiencies with some very important and discriminating observations of his own.

Dr. Bartlett, Reporter for New Haven Co., secures reports from six of its twenty-two towns.

Dr. Paddock, Reporter for New London Co., furnishes a brief statement of the general condition of health in his locality, with special mention of only two or three towns, and Drs. Porter and Nelson send communications of interest.

Dr. Goodwin of Thomaston, Reporter for Litchfield County, sends us a very satisfactory and lucid report of the health of his county during the past year.

Dr. Cleaveland of Middletown, Reporter for Middlesex Co., laments the apathy of the profession in his county, having obtained communications from only three of nineteen to whom he applied for information.

Dr. Risley of Rockville, Reporter for Tolland County, regrets the paucity of his contribution. He supplied every member with a copy of the questions and earnestly asked for responses; and he explains his disappointment in the following words: "The brethren here are men of great experience and wisdom, but they do not find time to commit their thoughts to paper."

Respecting the two remaining counties, your committee record with regret the unexcused failure of the Reporter for Fairfield* and Windham Counties.

* Since the Convention, Dr. E. P. Bennett of Danbury has very kindly volunteered a brief report for Fairfield county—which is printed among the County Reports.

No tidings whatever from any member of the profession in Fairfield or Windham Counties have been received by your committee in response to the questions sent to every town within their limits.

Notwithstanding these failures this year, there is abundant reason for encouragement in the many reports obtained; sufficient to demonstrate the fact, that if from every county in the State there were annually made such reports as some of the counties have made this year, they would form a current history of the sanitary condition of Connecticut more authentic and satisfactory than could be obtained in any other way. They would also become, as they accumulated, a reliable means of studying the prevalence of disease in different sections and at different times, and possibly in the future afford a key to some of the pathological and etiological problems yet unsolved.

Question 1. What have been the prevailing diseases in your locality? Can you assign probable causes?

The replies to this have been as full and definite as to any. In reviewing them, it is observed that although but a small proportion of all the towns in the State have been directly heard from, yet such as have responded are so scattered through six of the counties of the State, that they afford a fair representation of the general health of the people.

The two counties whose interest in professional matters cannot be aroused into responsive activity, namely Windham and Fairfield, are at the remote corners of the State, most distant from each other. The remaining six counties form continuous territory, comprising the greater part of the State and including the vast majority of the population. Their condition, therefore, may be fairly regarded as representing the sanitary condition of the whole State.

There is to be observed a marked degree of uniformity in the diseases which have most prevailed wherever full reports are made. Those who are thankfully disposed have abundant reason to be grateful to the Giver of all good things that the people have not been afflicted with any epidemic of severity, and that a greater measure of good health than usual has prevailed throughout our State.

The diseases particularly mentioned are fevers—typhoid, malarial, and scarlet; pneumonia, diphtheria, measles, influenza, whooping cough, roseola and small pox, and of these only a few have been conspicuous for any prominence. Connecticut, in com-

mon with a wide region of country, has suffered from a more malignant form of pneumonia than is often observed. Other inflammatory affections of the respiratory surfaces have been more frequent, and all the reporters have alluded to the prevalence of throat disorders, influenza and bronchitis. From most of the reporters we get statements of the appearance of malarial diseases in new localities not before subject to them.

No disorder is more uniformly spoken of than pneumonia, which has been exceptionally rapid and fatal. New Britain is the only town of which it is reported that pneumonia has been less frequent and less fatal than in other like communities.

Perhaps it will convey as fair an idea of the condition of the health in the State if the reports respecting prevailing diseases from every town heard from be presented in a condensed form, taking them in the order of counties.

HARTFORD COUNTY.

Hartford.—Dr. Avery reports as most prevalent, pneumonia, typhoid fever, tonsilitis, and a mild malarial fever; and Dr. Bowen has observed, chiefly among the working classes, a large number of cases of acute inflammation of the middle ear, resulting in suppuration, rupture of the drum and loss of hearing. He attributes it to rapid and extreme changes of temperature. Also an unusual number of cases of kerato-conus; the same observation, he says, has been made by oculists in other places.

Wethersfield.—Dr. Warner declares for the sanitary condition of this old town, that it has been remarkable for the absence of all fatal influences, except old age. Of the 30 deaths in the town, 3 were imported, 3 occurred a few hours after birth, 13 were over 70 years old, 6 over 80, and 1 over 100. Less typhoid fever than in any season for 10 years. Notably less consumption than since the prevalence of intermittents, having been only one indigent case in the town in twelve months.

Rocky Hill.—Dr. Griswold reports no prevailing disease; typhoid fever has almost disappeared, but fever and ague is increasing, occurring in places hitherto exempt. No satisfactory cause is known to him—thinks “it has traveled this way.”

Tarrifville.—Dr. Sanford thinks there has been more sickness than usual during the past year, but presenting no peculiarities other than an unusual number of pneumonias of a typhoid form during January and February.

Glastonbury.—Dr. H. C. Bunce reports that bronchitis and brocho-pneumonia were very general and severe during January and February, and that milder catarrhal disorders have been prevailing since.

South Glastonbury.—Dr. Rising makes a similar report.

Suffield.—The prevailing diseases, says Dr. Mather, have been typhoid fever, influenza and pneumonia, which he thinks "are fairly attributable to the dispensations of Providence and a dry atmosphere." He reports, also, a few cases of cerebro-spinal meningitis. Dr. J. K. Mason, of the same town, speaks of the frequency of roseola, also diphtheria and other severe forms of sore throat.

Bloomfield.—Dr. Gray writes of the great fatality of pneumonia among the aged.

Collinsville.—Dr. G. R. Shepherd reports cholera infantum, epidemic dysentery and cerebro-spinal fever for the summer; typhoid and one or two cases of typhus fever in the autumn, thence until midwinter remarkably healthy, since which pneumonia, bronchitis, parotitis, epidemic catarrh and erysipelas, have been very prevalent.

New Britain.—Dr. E. B. Lyon says that while malarial diseases have been increasing, there was on the whole less sickness than usual through the year. There has been some scarlet fever; and during December and January an epidemic of diphtheria prevailed, in many cases with fatal termination; he attributes its existence to bad drainage. He reports pneumonia as less frequent and less fatal than in other like communities.

Southington.—Dr. F. A. Hart reports the prevalence of typhoid fever in his town, often complicated with pneumonia and malarial influences.

NEW HAVEN COUNTY.

New Haven.—Except for the prevalence of a fatal form of pneumonia, New Haven has enjoyed exceptionably good health. Dr. Bartlett, Reporter for New Haven County, attributes the excessive severity and frequency of pulmonary inflammation to meteorological influences, which have been peculiar, in that there have been large ranges of temperature in short spaces of time. He supports his statement by quoting numerous observations taken by Sergt. F. P. Bayes at the U. S. Signal Service station in that city. By comparing the excessive deviations of temperature

with the mortuary reports of the same dates, he finds a very suggestive correspondence.

Small pox appeared in the city in the winter, and by repeated outbreaks in various sections of the city threatened to become a serious epidemic, but by the prompt action of the Board of Health a thorough public vaccination was carried out and the further progress of the disease arrested. Nearly 7,000 persons were, during the first two weeks in March, vaccinated at the public cost. Both bovine and humanized virus was employed in almost the same number of cases, and the difference in the immediate results was only apparent from the greater severity of active inflammation following the bovine virus. A remarkable susceptibility to the action of the vaccine virus was observed, even in those who had been quite recently vaccinated; and not less remarkable was the almost entire exemption from unpleasant and alarming after-effects. The number of public and private vaccinations during the months of February and March must have considerably exceeded 10,000 in New Haven, and yet, so far as it is known, but two or three complications of disease occurred in such manner that the vaccine inflammation could be regarded as contributing to a fatal result. This exemption was due to the great caution observed by the public vaccinators to operate only upon those in good health. The boasted superiority of the bovine virus has not been confirmed by this somewhat extensive experience.

Dr. S. D. Gilbert, of Fair Haven, reports interesting details of a fever nest in an Irish community, and traces the source of the poison to the close proximity of the wells to a number of very foul privies.

Cheshire.—Dr. Chamberlin reports the prevalence of acute pulmonary diseases during the winter and spring, and also the appearance of a few cases of small pox.

Seymour, Dr. Bayley says, has been unusually healthy throughout the year—not even cholera infantum during the summer—very little diarrhœa—no deaths from dysentery. In the spring have been a few cases of scarlet fever and measles, in a mild form. Pneumonia has prevailed, but not fatally. He gives an interesting account of a nest of diphtheria at Beacon Falls, which well illustrates the influence of unsanitary surroundings.

Meriden.—Dr. Catlin and Dr. Nickerson both speak of the prevalence of malarial disorders and the controlling influence of

the malarial poison in other affections. A severe type of influenza has prevailed during the spring; and there have been an unusual number of cases of puerperal convulsions, terminating favorably. Whooping cough occurred sporadically; also measles and scarlet fever.

North Haven.—Dr. Stillman sends an interesting communication, giving a brief sketch of the beginning and progress of the various types of malarial fever which have occurred in North Haven and Hamden during the past 12 or 13 years. He gives a graphic description of the variety of phases which the malarial influence has developed in the successive years, and his experience of the modifications of treatment required. It is an interesting and instructive sketch, and the committee hope that other practitioners who have watched this disease as intelligently through a series of years will be prompted to communicate their experience.

NEW LONDON COUNTY.

Nothing peculiar is reported from the towns in this county. From the few which have made special reports it appears that the same general character of disease has prevailed. Dr. Woodward relates a somewhat severe epidemic of small pox in the village of Baltic.

LITCHFIELD COUNTY.

From the excellent report of Dr. Goodwin it appears that scarlet fever has occurred pretty generally throughout the county, and pneumonia still more extensively, while typhoid fever has been much restricted, and he says no fatal case of diphtheria has been reported.

MIDDLESEX COUNTY.

In this county only the ordinary disorders have prevailed. The most marked peculiarities noticed have been the "croppings out of malaria" in new localities, and the greater severity of pulmonary affections.

TOLLAND COUNTY.

The few reports received indicate no prevalent disorders, and an average state of the public health.

Dr. Griggs, of Mansfield Center, says that typhoid fever has been somewhat more frequent, but thinks there "has not been a remarkable case of disease in the town in the last thirty years."

Question 2. Have any new or infrequent forms of disease appeared?

The replies to this have been almost wholly in the negative. Dr. Porter, of New London, gives an interesting report of a new skin disease, "Lichen planus."

Question 3. Have you or your associates employed any remedies, new or old, with noteworthy results?

Dr. Shepherd, of Collinsville, regards *verat. vivid.* as almost a specific in pneumonia. In 14 cases last treated by him he kept the pulse under 90 with Norwood's tincture; all recovered except one, which was complicated with cerebro-spinal disease.

Dr. Gray, of Bloomfield, gives his personal experience of the value of chloroform by inhalation (8 or 10 drops) in paroxysms of asthma.

Dr. F. A. Hart, of Southington, speaks of the pleasant results obtained from codeia and lactopepsine; and declares that "noteworthy" is the use of one-sixth of a grain of the former combined with five grains of the latter in irritable stomach and restlessness accompanying fevers, or as often observed in chronic disorders.

Dr. Warner, of Wethersfield, extols the use of quinine as a parturient, and chloral for after-pain; nothing, in his opinion, so effectual and free from objection.

Dr. S. D. Gilbert, of Fair Haven, gives a limited experience with iodid. of arsenic in typhoid fever, for the relief of grave intestinal symptoms.

Dr. Nelson, of New London, expresses confidence in the value of liquor ferri subsulphatis as a local application in diphtheria, and of tinct. *ver. vir.* in the treatment of typhoid fever.

Question 4. What has been your experience, and that of your associates, with chloral hydrate? Give some idea of the frequency of its use, and the average dose, in your vicinity.

The replies received to this and the previous question indicate very satisfactorily the conservative habits and careful practice of our profession in this State. There is no evidence of the hasty adoption of new medicines in an experimental way; and the very cautious and discriminating mode in which chloral hydrate is reported to be used, has led to no unfortunate experience as an effect of that drug. The agent seems to be generally employed throughout the State. A commendable prudence seems to be everywhere practiced in regard to the dose, scarcely any exceeding 20 grains, while most give less. Apparently the most usual dose

is 10 grains, repeated every 30 to 60 minutes until it produces the desired effect. No excessive action is mentioned as the result of its use. The opinion, however, is frequently expressed that it is less used than formerly, and some practitioners declare that they have ceased to employ it, without assigning any reason for abandoning it. This would lead to a suspicion, which Dr. Wilcox says is sustained by facts, that a full experience respecting chloral has not been reported. Most practitioners bear witness to its value, and some with enthusiasm, as an agent having special uses and powers not found elsewhere. Dr. Talcott, of Guilford, says it is the best palliative he has used in a case of recurring asthma, in doses of 15 or 20 grains.

It would appear from the reports that it is as often used in combination with the bromides or opiates as alone. A marked uniformity of opinion exists respecting its therapeutic qualities and the indications for its exhibition. It is generally agreed that its powers as an anodyne are very feeble, while its most prominent and trustworthy quality is that of a hypnotic or sleep-producer. It is rarely mentioned for its local action as a topical application; and no correspondent has alluded to its solvent powers.

When rubbed together with powdered camphor in equal quantities, the two agents slowly dissolve and form a syrupy liquid looking like glycerine. This solution is decidedly active for its anæsthetic powers when applied locally. The writer has often used it with good effect for neuralgic pain. Paint it lightly over the part and let it dry. It does not blister, though it smartly tingles the skin. A solution of three parts of chloral and one of water will dissolve, with the aid of moderate heat, several of the most important and active alkaloids, as morphia veratria and atropia.

Besides a host of brief experiences with chloral which the committee have received, there are two communications of more than ordinary interest; one by Dr. H. P. Stearns, of the Insane Retreat, at Hartford, and the other by Dr. S. H. Chapman, of New Haven.

Two very instructive instances of the use of chloral in obstetric practice are related by Dr. Porter, of New London. One a case of rigid os uteri and the other puerperal convulsions; in both these cases he thought it conspicuously beneficial in its action. Dr. Geo. R. Shepard, of Collinsville, instances its prompt effects in relieving a severe case of urticaria attended with most excessive and intolerable itching.

A few reports of remarkable and instructive cases are received in reply to the 5th requirement.

J. K. Mason, of Suffield.—Fungus hematodes, amputation of leg—recovery.

Dr. Avery.—Oxaluria—cured by nitro-muriatic acid.

Dr. Irving W. Lyon.—Pneumonia with pericarditis—Paracentesis pericardii. This case is instructive on several points both of pathology and treatment.

Dr. Lyon also communicates a case of typhoid fever and acute rheumatism occurring together, and illustrating an exception to the recognized general law respecting the existence of two diseases in the system at the same time. The relation of these cases are the more satisfactory because of the full and carefully detailed statement of the daily conditions of the patients as regards temperature, pulse and other symptoms.

Dr. Chamberlain, of Cheshire.—Case of peculiar formation of placenta.

Dr. Catlin.—Diphtheritic croup—tracheotomy successful.

Dr. R. S. Goodwin, of Thomaston.—A very unique case of non-puerperal, ovarian abscess. It is admirably well related by *Dr. G.*, and is very interesting and instructive.

Dr. Risley, of Rockville.—Case of frequent and persistent singultus.

At the Annual Convention held one year ago, two measures of weighty interest to the profession, which were about to become subjects of legislative action, were so far aided in their progress as to receive the hearty endorsement of this Society as expressed by special vote.

One was the establishment of an Asylum for the special treatment of Inebriates, and the brain disorders that are consequent upon excessive use of stimulants and narcotics.

Respecting this, it is very satisfactory to be able to inform the Society that the necessary legislative action has been taken, corporators appointed, and a complete organization effected. A considerable fund has been subscribed, over \$10,000; a site has been purchased in the suburbs of the city of Hartford, and the necessary steps are being taken as rapidly as possible by the energetic founders to put this philanthropic enterprise into active operation. A petition is now before our General Assembly, for an appropriation of \$25,000 in furtherance of this humane effort.

The other measure, was the establishment of a State Board of

Health and Vital Statistics. This undertaking is not so far advanced. The Governor, pursuant to an act of the last legislature, appointed a commission of seven, three of whom were members of this Society, two are distinguished scientists, and the remaining two are prominent in public life, to report to the General Assembly now in session.

This committee have given the subject very thoughtful consideration, and submitted their report, together with certain proposed acts, which, if adopted, will establish in Connecticut a State Board of Health and Vital Statistics, will re-organize the local boards of health in every town, and provide for more complete records of vital statistics under the direction of Boards of Health in such manner as to secure accurate reports, at least monthly, of the births, marriages, and deaths occurring throughout the State. The report will soon be published, and it is hoped it will receive the attention of the members of this Society; and if it meets their approval, they will aid in guiding the Legislative mind to reach a right conclusion.

C. A. LINDSLEY,
 W. A. M. WAINWRIGHT, } *Committee.*
 H. W. BUEL,

REPORTS OF COUNTY ASSOCIATIONS.

*Hartford County.*L. S. WILCOX, M.D., *Reporter.*

The report submitted from this county is made up mostly of the replies given by the physicians of the county to the questions prepared by yourself as Chairman of Committee on Matters of Professional Interest in the State. It may be remarked here, both with gratitude and for mutual encouragement, that never before in the experience of this association have so many answers been returned to circulars sent out to elicit information; while on the other hand, it should also be remarked with deep regret and justly censuring complaint, that very many of our busiest and most experienced members have given to these important questions no attention whatsoever, thereby withholding, criminally, from the rightful common stock of knowledge, that best and most effective of all knowledge—the knowledge by experience, without which all theories of the schools, based upon all exactest investigations, and nicest scrutinies and aptitudes of science, in our profession certainly, are not only untrustworthy, but too often fatally mischievous.

To accompany these various replies I would make one or two observations. You will notice that of all who have replied to the question of experience with chloral, not one seems to have seen any unfavorable effects from its exhibition. The inference is, that no unfavorable effects have been witnessed. This inference is doubtless true in the experience of these observers, but it is not true in the experience of all. For, to go no further, three fatal cases at least have been presented to the Hartford City Society, where the drug was fairly administered.

Another observation is, that pneumonia and allied diseases have prevailed most extensively and fatally in towns and localities of the driest soil, while localities that usually have a wet soil have been very healthy. I know not whether this observation may be true of other parts of the State or not, or whether one may hazard the suggestion that the extensive droughts of

the past season may have been one of the causes of the recent marked prevalence of pulmonary diseases throughout the country. Again, one marked feature in colds and throat diseases, and infant teething, has not been alluded to in these various reports. It began to be noticed with the first cold weather of last autumn, and it still continues. It is an unusually extreme soreness and pain of the muscles of the neck, sometimes with and sometimes without their swelling, and sometimes a precursor of sore throat, and other times not. Also a more or less severe swelling of the glands of the neck, particularly in teething children, often, but not always, very painful, and rarely terminating in suppuration; often located directly under the mastoid process, and extending posteriorly; this variety being frequently very large, but not very painful, and never suppurating.

THE USE OF CHLORAL HYDRATE.

BY H. P. STEARNS, M. D.,

Superintendent Insane Retreat, Hartford.

Having had occasion during the last year to exhibit this medicine with far greater frequency than when in general practice, and probably than other physicians in the county, my experience and views regarding its use may not be without interest. With one hundred and thirty patients, all of whom are suffering from some form of nervous disease, the opportunities and calls for its exhibition have been abundant. The facilities for observing its effects have also been much better than is usually possible in general practice.

I regard it mainly, if not entirely, a hypnotic, and its action in this direction probably results from its effect on the heart. During the first fifteen or twenty minutes the heart's action is rather increased, the face is flushed and the eyes frequently are suffused. After that time, until the termination of its physiological effects, the action is that of a sedative to the circulation. There is a less rapid supply of blood to the brain and sleep results. The force of the heart's action is not so much changed as its frequency, while the volume of the pulse remains about the same as before

taking the dose. The number of beats per minute will often be reduced from five to ten per minute. It follows, therefore, that chloral hydrate should not be prescribed when there is reason to suspect organic or functional disease of the heart, nor in cases of feeble circulation resulting either from disease or old age. If used at all in such cases, it should be with great caution and in small doses.

The time and manner of its exhibition I regard important, as tending to secure the most desirable results. I think the effects are better if given after the patient is in bed and ready to sleep; the room should be dark and entirely quiet. The dose should depend somewhat upon the degree of mental excitement and the physical condition of the patient. Doses which might prove amply sufficient in such cases as are presented in general practice, are wholly inert in cases of mania. The doses prescribed at the Retreat have been from twenty to sixty grains, and the ordinary dose for producing sleep is thirty grains. I am in the habit of combining it with the tincture of hyoscyamus and the fluid extract of hops, and the effect seems to be somewhat increased when used with these remedies, which are favorable in their action as nervines. When combined with the bromides of sodium or potassium, and especially with some of the preparations of opium, good results are obtained. It is well known that opium does not generally operate kindly when exhibited in cases of mania, but the action of the two combined in doses of one grain of opium to fifteen of chloral is often exceedingly favorable where opium alone would not be tolerated. When not used in combination with the above named medicines it is usually prescribed in an aqueous solution. This is generally prepared daily and kept in a glass-stoppered bottle, as, if exposed long to the air, its properties evaporate, to some extent. It should not be mixed with syrups or sweetened water, and if administered with any form of alcohol its effects are diminished.

I have witnessed no *permanently* unfavorable results from the use of this medicine, but on the contrary such very favorable ones that I continue to use it with all freedom in selected cases. Those in which it seems to be contra-indicated I have referred to above. I will here add that in two or three cases in which the chloral had been exhibited for some days there was some redness of the conjunctivæ. This, however, readily passed away after discontinuing its use. In one case also there appeared on the

back an eruption of the skin, which occasioned for the time considerable inconvenience, as it was attended with inflammation. Others have noticed such a result in some cases, and it is doubtless due to the stasis of blood in the capillaries. In several cases its effects in producing sleep have been greater than was anticipated, so that the patient did not awake fully for some hours after the usual period. In none of these cases, however, has there been any indication of failure in the heart's action, and the respiration has continued natural.

From the results of my experience I should say that in those cases where death has occurred from its use, it has been given in too large doses, or unsuitable cases, and, therefore, any argument against its use, based on this ground, is equally applicable as against the use of opium or chloroform. That its effects are much less uncertain than those of the above named and many other medicines, is disproved by the fact that several hundred pounds of it are used in the asylums of the United States every year, and so far as is known without the occurrence of a single death.

The local inflammations following its use, without doubt, occur only when it has been too long exhibited, and are not unlike the results when the bromides have long been used. They indicate its discontinuance.

In conclusion, I will say that I regard it as one of the most valuable of our sleep-producing agents; that from its physiological effects it should be used with caution, like other powerful remedies, and in selected cases; that under no circumstances should we advise or countenance its use, except upon a written prescription and in designated doses, by a physician.

Retreat, Hartford, April, 1875.

A CASE OF PNEUMONIA, PERICARDITIS, PARACENTESIS PERICARDII.

IRVING W. LYON, M.D., *Hartford.*

Cornelius Kane, a brickmaker, aged thirty-one years, short, stout, of robust health and temperate habits, was first visited at five P. M., April 14th, 1874. I learned that he had worked in his brickyard on the 11th inst, during a storm of snow and rain which wet his clothing through to the skin, and that he had had a severe chill on the evening of the 12th. The pulse was 116, respiration 30, temp. $102\frac{1}{2}^{\circ}$; headache, moderate pain in the right mammary

region, slight cough. Careful auscultation failed to discover the suspected crepitant rale of pneumonia. I ordered aconite internally, and a poultice containing mustard to the right chest.

April 15th, 3 P. M. Pulse 100, respiration 26, temp. 102° ; pleuritic pain much easier, some headache, no sleep last night. Crepitant rale over a limited area at base of right lower lobe; ordered flaxseed poultice to chest and oiled muslin jacket; aconite to be continued, with an opiate at bedtime.

April 16th, 12 M. Pulse 100, respiration 26, temp. 102° ; bronchial breathing, bronchophony and dullness on percussion over lower third of right lower lobe; cough with pneumonic sputa. After my visit yesterday, he arose from bed, dressed and walked $\frac{1}{8}$ of a mile to the brickyard of which he was the proprietor, directed some work to be done differently and returned on foot, the weather being cold and damp.

April 17th, 11 A. M. Pulse 104, respiration 28, temp. 101° ; hepatization has extended upward so that about two-thirds of the lobe is involved.

April 18th. The entire right lower lobe is now consolidated, notwithstanding which the pulse is 86, respiration 24 and temp. $98\frac{1}{2}^{\circ}$.

April 20th. Pulse 84, respiration 30, temp. 98° . Rales redux over the lower third of the lobe; expectorates well.

April 21st. Patient was doing so well yesterday, that I said to him, that I would not visit him again till the 22d; but early this morning he sent for me in haste. I found him with acute pain in the precordial region, greatly aggravated by each respiration. Pulse 92 and weak, respiration 36, temp. $98\frac{1}{2}^{\circ}$. Auscultation of the heart gave the double friction sound of acute pericarditis with unusual distinctness. The respiratory sounds throughout the left lung were normal. Ordered opium and the resumption of the aconite which had been discontinued, and a mustard poultice to the precordial region. I learned at this visit that because he was restless and uneasy in bed, patient had been in the habit for two or three days past of getting up and sitting by the stove, this more especially at night, remaining out of bed from half an hour to two hours at a time.

April 22d. Pulse 104, respiration 28, temp. $99\frac{1}{2}^{\circ}$; precordial pain severe, no sleep, double friction sound heard as yesterday, rales redux and diminished percussion dullness over the lower two-thirds of right lower lobe, bronchial breathing over the upper

third. The pain prevents coughing and expectoration, which latter has almost ceased.

April 23. Pulse 108 and very irregular, respiration 32, temp. $100\frac{3}{4}^{\circ}$; double friction sound heard distinctly; complains constantly of precordial pain, notwithstanding the free exhibition of opiates. Respiration in the right lung progressing satisfactorily; the lower half of the left inferior lobe the seat of subcrepitant rales with increased clearness on percussion.

April 24th. Pulse 100, irregular, respiration 24, temp. 100° ; pericardial friction sound absent. The disappearance of the friction sound, the irregular action of the heart, and the diminished force of its apex beat are accepted as evidences of pericardial effusion, though no increased area of cardiac dullness can be satisfactorily determined. Ordered a blister to precordium, and potass. iodid internally. During the next few days the resolution in the right lung was completed without expectoration, the subcrepitant rales remained in the left lower lobe, with increased pulmonary resonance; the pulse grew more irregular and feeble, the area of cardiac dullness gradually increased till May 2d, when its measurements were $3\frac{1}{2}$ inches on the third rib, $4\frac{3}{4}$ inches on the fourth rib, and 5 inches in the fifth intercostal space, and extended upwards to the first interspace. There was also a very considerable bulging of the precordial region. The pulse was 78 and very irregular, respiration 28, oppression but not pain in the precordial region, heart sounds distant and indistinct; patient desired to lie upon the right side only.

May 3d. Lips, tongue and face of dark venous hue. Afraid to stir on account of the increased dyspnoea which it occasions. Respirations 36 and a groan with each expiration, which was notably prolonged, as in asthma. Ordered a purge of mag. sulph.

May 4th. Somewhat easier, respiration 34; face, neck and lips livid; vertical diameter of liver on mammary line increased to six inches, the liver is also tender on percussion.

May 5th, 8.30 A. M. Patient apparently dying, head, face and neck very livid and swollen, pulse very feeble and irregular, respiration very labored; the friends had gathered about the bed to see him die. I proposed the operation of paracentesis pericardii which I had before discussed and explained to the patient and his friends; they assented. I drove to the city (distant two miles), and returned with Drs. Fuller and Chamberlain, who readily recognized the pericardial distension, and agreed with me as to

the operation. The vertical diameter of the liver now measured $7\frac{1}{2}$ inches, and the entire body was œdematous; every part of the left thorax yielded exaggerated resonance on percussio, except that occupied by the distended pericardium.

The operation was performed at 11 A. M., by introducing a small trocar and canula through the fifth intercostal space exactly three inches from the mesian line, and one inch to the right of the left nipple; the point was directed upwards and backwards with an inclination towards the mesian line. The instrument entered just two inches, and upon withdrawing the trocar, pus flowed freely from the canula. As the pus continued to flow the patient became less livid about the face, felt better and breathed easier, the pulse became regular at 108, respiration 28. Besides some lost, the amount of pus which we drew off, carried home and measured, was thirty-two ounces. 5 P. M. Pulse 104, regular, respiration 32, venous hue of face nearly gone, the vertical measurement of the liver has decreased from $7\frac{1}{2}$ to $5\frac{1}{2}$ inches.

May 6th, 8.45 A. M. Pulse 96, regular, respiration 20, temp. $98\frac{3}{4}$. No pain, slept well through the night, and has taken nourishment well: face, lips and neck congested, right arm and hand œdematous, the right lung clear on percussio, auscultation discovers a few coarse crepitant rales left from the pneumonia. The liver measures vertically $4\frac{1}{2}$ inches; pœcordial region œdematous, area of cardiac dullness much diminished, but still greater than normal. He feels cheerful, moves easily in bed, talks and smiles, and enters readily into conversation. 5 P. M. Pulse 104, respiration 20, temp. $99\frac{1}{2}^{\circ}$, sleeps quietly and considerably. A specimen of the pus from the pericardium exhibited under the microscope the usual appearances of laudable pus, and another specimen after standing 24 hours in an urinometer glass showed $\frac{2}{3}$ deposit of pus globules and $\frac{2}{3}$ liquor puris.

May 7th. Pulse 104, as near as can be told, as it is very irregular and indistinct; respiration 18; but the act of expiration is prolonged and laborious; tongue has cleared since yesterday and is very red. Whole right half of body œdematous, including the arm and leg; some œdema of the left side of the trunk, but none in the left arm or leg; right jugular vein distended; color of right hand purplish, of left natural; liver measures vertically $5\frac{1}{2}$ inches. On account of the œdema and of his having had no stool since the 3d, is ordered mag. sulph. one oz. 5 P. M. Bowels moved twice from the salts, color better, coarse mucous and sibilant rales over both lungs, with mucopurulent expectoration.

May 8th. No sleep during night, some precordial oppression, countenance of better color, voice natural, right side, trunk and extremities less œdematous; liver measures $5\frac{1}{2}$ inches on mammary line; pulse 108, not so irregular as yesterday, temp. $98\frac{1}{2}^{\circ}$, respiration 24; coarse mucous rales over both lungs, especially at their bases, percussion resonance vesiculo-tympanitic over the left and apparently normal over the right lung posteriorly; has expectorated about a gill of fluid muco-purulent matter during the night; ordered opium continued moderately, quinine, iodide of potass.; sinapisms and oiled muslin jacket to the chest. 5 P. M. Pulse 108, intermittent, expiration prolonged like asthma, respiration 24, face and lips a little blue, both feet slightly œdematous, right the more so, no pain but a feeling of oppression about the heart, liver $4\frac{1}{2}$ inches only.

May 9th. Pulse more irregular, respiration 24, temp. $100\frac{1}{2}^{\circ}$; no sleep last night, face full as clear as yesterday; begins again to lie upon the right side; area of cardiac dullness increasing especially on the fourth and fifth ribs and fifth space; heart sounds becoming more indistinct, expiration very prolonged, expectorates freely as yesterday, auscultatory sounds the same. 5 P. M. Respiration 26, pulse 108; liver measures $5\frac{1}{4}$ inches, ordered ol. ricini purge.

May 10th. Looks well as yesterday, but can get no sleep; pulse 108, very irregular and intermittent, respiration 23, temp. 98° . Evening, color more venous; area of cardiac dullness increasing.

May 11th. Pulse very irregular, respiration 30, a moan at the close of each expiration, coughs and expectorates less, walls of thorax congested and of a very venous hue, face only a trifle venous, lips decidedly so; line of liver dullness $5\frac{3}{4}$ inches; passes little urine for past three days; both feet very œdematous, right the more so, left thorax, except over heart, yields the same abnormal resonance on percussion, the heart dullness extends rather laterally than vertically, reaching nearer the axillary line than before.

May 12th. Much worse every way. With the advice and assistance of Drs. Hastings, Fuller and Chamberlain, he was tapped again at 4.30 P. M. The same instrument was introduced in the fifth interspace as before, and nearly on the same spot; only one ounce and a half of pus flowed away, though we all felt certain that there was much more in the pericardial sac.

May 13th, 5 P. M. Respiration 40, pulse weak, irregular and difficult to count, lungs stuffed with rales, liver as before, prolabia moderately venous, face and neck scarcely so at all, but rather thin, and in striking contrast with the turgidity present just before the first operation; integuments of thorax and abdomen more venous and œdematous than ever before; eats and sleeps none; scarcely any urine secreted, is losing ground rapidly; continued to fail through the night and died at 8.15 A. M., May 14, having lived after the first operation nine days less three hours. No autopsy could be obtained.

Remarks. We used a trocar and canula in the operation because we feared that the point of the aspirator needle might come in contact with the heart as the fluid subsided; an occurrence to be dreaded, Dieulafoy to the contrary notwithstanding. I have since furnished my aspirator with trocars and canulas with stop-corks.

Why but an ounce and a half of pus came away at the second operation is difficult to decide: according to Dieulafoy the difficulty of evacuating the pericardium after an opening has been made into it, had become one of the greatest objections to the operation of paracentesis pericardii, an objection which his new method would fully meet. This may be the explanation of our difficulty.

Suppurative pericarditis is *very* rare, and usually attributed to blood poisoning, as from Bright's Disease, Septicaemia, &c.; but in this case, the urine, which was examined carefully several times, was always healthy. The patient was a vigorous man, attacked with simple pneumonia, which confined itself to the right lower lobe and ran a favorable course: the only cause for the pericarditis which I could discover, beyond the fact of its being an occasional complication of pneumonia in healthy subjects, was the exposures to cold which he underwent; first, in going to the brickyard, and afterwards getting out of bed to sit up by the stove as before mentioned.

A CASE OF TYPHOID FEVER AND ACUTE RHEUMATISM OCCURRING
TOGETHER.

IRVING W. LYON, M.D., *Hartford.*

William H. Thomas, a policeman, age 35, of slight physique, but good general health, was taken sick Dec. 8, 1874. I was called Dec. 10, found him with pulse 96; temperature 100° at 9.45 A. M.; complained of lameness and soreness all over with headache and nausea, tongue furred and dryish along its center, had also some cough. His wife was convalescent from typhoid fever. I was obliged to leave town the same day and the patient was seen by Dr. Fuller during my absence.

On the 11th and 12th the Doctor noted the pulse 96, with less headache and nausea.

On the 13th, at 11.30 A. M., the pulse was 92, temperature $99\frac{1}{2}^{\circ}$, no headache, soreness greatly diminished, cough troublesome with free expectoration (bronchitis).

I next saw him Dec. 15th, the seventh day of his illness; the pulse was 74, temperature 99° at 9 A. M., right iliac tenderness was present, and the peculiar typhoid fever eruption.

Dec. 16th. Eruption distinct, pulse 88, temperature at 6 and 10.30 P. M. was $101\frac{1}{2}^{\circ}$ each time, respiration 28, cough with muco-purulent expectoration, complained of pains in both wrists and ankles and left knee joint. Because of the low temperature at this stage of the fever, I left my thermometer, a self-registering instrument, to have an observation taken in the night.

Dec. 17th, 9 A. M. I found my thermometer registered at $100\frac{1}{2}^{\circ}$, the temperature having been taken at 1.30 in the morning. At 9 A. M. the temperature was $102\frac{1}{4}^{\circ}$, pulse 100, respiration 28, tongue dry along center, the pain in wrists and ankles severe. 6 P. M., temperature $103\frac{1}{2}^{\circ}$.

Dec. 18th, 11.45 A. M. Pulse 98, temperature $101\frac{1}{4}^{\circ}$.

Dec. 19th, 9 A. M. The articular pains very severe; both knees, ankles and wrists were very painful to the touch, the patient crying out if they were moved. Evening.—Pulse 110, temperature 104° , sweating; a stool was procured during the day by an injection, the first in five days, the costiveness doubtless due to the free exhibition of opiates for the rheumatic pains.

Dec. 20th. Severe rheumatic pains in feet, ankles, knees and hips, also in hands, wrists, elbows and shoulders, so that the patient could not move, and moaned constantly. The eruption of typhoid fever was distinct upon the abdomen and chest. At 12, noon, the pulse was 112, temperature $103\frac{3}{4}^{\circ}$. Alkalies internally and alkaline fomentations to the joints covered with oiled muslin had been employed since the 17th; the urine was now alkaline. Evening.—Temperature 104° , respiration 30, with cough.

Dec. 21st, 9 A. M. Pulse 112, temperature $103\frac{3}{4}^{\circ}$, pain in hips and shoulders better, but in all the other joints very severe; tongue at tip and along its center very dry and red, sordes upon teeth and gums, eruption distinct, moderate tenderness upon pressure in the right iliac region, no stool. 6 P. M., temperature 104° , respiration 34, auscultation showed nothing besides bronchitis, heart intact.

Dec. 22d, 9 A. M. Pulse 94, temperature $100\frac{2}{5}^{\circ}$, vomited in the night once and had three liquid stools, two of which were large, face ghastly pale and sunken, especially about nose and lips, sighs deeply and often as though exhausted, perfectly rational, answers correctly but with slow and feeble voice, tongue very dry and red, bowels tympanitic and rumble a good deal. Is the sudden fall in the temperature due to internal hemorrhage? Stools to be watched. The alkali (potass. bicarb.) which had been given in diminished doses since the urine became alkaline, to be discontinued, but the alkaline fomentations to be continued to the joints. Dr. Fuller saw the patient with me in the evening; we looked at the eruption together, found the pulse to be 86 and the temperature $103\frac{1}{2}^{\circ}$.

Dec. 23d, 8.30 A. M. Drs. Fuller and Campbell present. The patient had had a stool at midnight, no blood in it, tongue dry, sordes upon gums, bowels less tympanitic, pulse 84, temperature $101\frac{3}{4}^{\circ}$, arthritic pains easier, patient sighed every few moments. We all looked at the eruption and agreed as to its nature. The patient was upon the free use of milk, brandy and quinine, with opium and astringents; turpentine stupes had been kept upon the abdomen since the diarrhœa began. 7.30 P. M., pulse 90, temperature $103\frac{2}{5}^{\circ}$, respiration 30, sleeping, had had two stools since the last visit.

Dec. 24th, 25th, and 26th showed gradual improvement in all the symptoms, the diarrhœa was held in check by the opiates and astringents, patient having one or two semi-liquid stools each day; quinine with nourishment and stimulants were

pushed, as the patient was always very weak and had constantly a dry and red tongue with sordes upon teeth and gums.

Dec. 27th, 9.30 A.M. Pulse 68, temperature 101° . Systole of heart very feeble, had had two stools in the night, large and fluid. Rheumatic pains had suddenly left the knees in the night and attacked the wrists, hands and left shoulder joint, which had become almost free; the affected joints were red and swollen; tongue red and dry; fauces also dry and the seat of either dirty mucus or lodged food; sighed, and was very nervous and unable to obtain much sleep; urine was examined carefully and found free from albumen or casts.

Dec. 28th, 9 A. M. Pulse 66, temperature $99\frac{1}{2}^{\circ}$, the pain in the wrists and shoulder easier than yesterday. Evening, pulse 88, temperature $103\frac{2}{5}^{\circ}$, had one stool during day.

Dec. 29th, morning. Pulse 96, temperature 103° . The left hand and wrist nearly free, but the right foot, hand and wrist and both shoulders were very painful; tongue very red and dry. He was taking from two to three pints of milk daily, and had been for several days; besides eggs, farina, six grains of quinine and twelve ounces of brandy. Evening. Temperature $103\frac{4}{5}^{\circ}$.

Dec. 30th, morning. Pulse 78, temperature 102° .—Evening. Pulse 96, temperature $104\frac{2}{5}^{\circ}$.

Jan. 1st, 9 A. M. Pulse 100, temperature $101\frac{1}{2}^{\circ}$, tongue dry, rheumatic pains confined to hands and right toe. The specific typhoid fever eruption yet distinct upon abdomen, where it was seen by Dr. Campbell and myself. Evening.—Pulse 100, temperature $103\frac{1}{2}^{\circ}$.

Jan. 2d. The evening temperature was $101\frac{2}{5}^{\circ}$.

Jan. 3d, 9 A. M. Pulse 100, temperature $101\frac{1}{2}^{\circ}$, had some pain in the right hand, tongue dry and red as ever.

Jan. 7th. Tongue was still red and dry, pulse 88, temperature 100° , left hand quite painful.

From this time the patient steadily improved, so that Jan. 17 he was able to get out of bed and on the lounge, but the hands and feet remained very tender and swollen.

Jan. 22d. Pulse 105, appetite good, tongue red but moist.

Feb. 1st. Was discharged from treatment with fair and improving strength, but with a good deal of stiffness in the various joints, particularly in the hands and feet. The hands were so stiff and painful that they could not be shut.

Remarks.—I have recorded this case the more fully in order that there should be no question as to the diagnosis, for though Drs. Fuller, Campbell and myself entertained no doubts concerning the duality of the symptoms, yet it is always well in reporting anomalous cases to give data sufficient to enable others to form an independent judgment.

I believe it to be a well recognized law in medical philosophy, that two acute systemic diseases, without mutual affinities, cannot occur together at the same time and in the same person, each developing its own peculiar symptoms independently of the other; and because the present instance appears to be an exception to this law, I have reported it.

A CASE OF FUNGUS HEMATODES SUCCESSFULLY TREATED BY
AMPUTATION.

J. K. MASON, M.D., *Suffield.*

Allow me to speak briefly of one case—somewhat interesting, if not remarkable or instructive. I refer to that of E. G., of East Granby, Conn., whose thigh I amputated in its lower third, February 2d, 1875. This young man (19 years old) had a fungus hæmatodes on the front aspect of the leg, two or three inches below the patella. It was of five months standing, and had attained to the size of an inverted two-quart pan. It had given rise to several dangerous hemorrhages, and was seriously threatening his life. With the advice of Drs. Parker and Detmold, of New York, I removed the limb as above stated; and though he was greatly reduced in flesh and his whole system under the influence of this malignant growth, he bore the operation well and made a rapid recovery, the stump healing by first intention in three or four weeks. Up to this date there has been no return of the disease locally; but of late he has suffered somewhat severely from sciatica, so that his health has not become reëstablished. Throughout, the case has been one of extraordinary interest, and thus far tolerably successful; but, it must be said, the end is “not yet.”

A CASE OF EXCESSIVE PRURITUS CURED BY CHLORAL HYDRATE.

GEORGE R. SHEPERD, M.D., *Collinsville.*

In the use of chloral hydrate I stand alone in this immediate vicinity. As a simple hypnotic I use it frequently in doses of five grains, repeated every hour till sleeping, and seldom find more than two doses required to produce the desired result. I used it recently in a case where I doubt if any other remedy would have operated so quickly, if it did as successfully. A lady, of decidedly nervous temperament, sent some pillows to the steam renovator to be cleaned, and subsequently called in to witness the process herself. While there, the proprietor showed her some moths he had removed from her feathers, and immediately, as she expressed herself to me when I was summoned to attend her, she "began to crawl all over." In less than an hour she was covered with an eruption of urticaria, accompanied with extreme itching. I found her with the clothing entirely removed, in bed, lying between the blankets, rolling from side to side in order to subdue the intense itching. Her husband informed me it had been difficult to keep her from springing out of the open windows into the rain, so great was the distress. As soon as I learned the cause of the trouble I administered ten grains of chloral hydrate. It required the strength of us both at first to keep her on the bed, but in fifteen or twenty minutes she began to be more quiet. In half an hour I gave ten grains more of chloral, and in fifteen minutes from that time she was sleeping. An hour after she fell asleep the eruption began to fade, and when she awoke (four hours subsequently) it had entirely disappeared, and she was as well as usual with the exception of some nervous prostration for a few days.

New Haven County.

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

In pursuance of my duty as Reporter on matters of professional interest for this county I submit the following report.

I am happy to say that an increased number of communications has been received this year, but many more are needed to make the matter complete. In order to impress this fact upon the professional mind, I state briefly a few of the reasons why the subject should receive due attention.

(1.) It is the only method for obtaining facts and theories, which are of the greatest value to the profession. Every medical man in this county has an experience and a method of reasoning to a certain extent peculiar to himself. Of course he is governed in a general way by the established doctrines and precepts of the day; these are open to every one, spread upon the pages of the text-books and journals; but this individual experience he alone possesses, and whatever of truth there is in it he has the monopoly of it; and again, if it contains any error he is the greatest sufferer. Some say, I have my ideas, to be sure, but I am afraid they will not stand the test of close scrutiny; I can use them to advantage, but they will not meet the approval of my brethren. Others seem to feel that scientific truths can emanate alone from standard authorities, like Flint in medicine, or Gross in surgery, when the fact is obvious that those works, admirable though they are, need these data to be complete. They have had to depend largely for their information upon the wards of the hospital, with its to a certain extent exceptional experience, while these facts of individual observation are needed to fill out the history of disease. Again, such a report brings before us the relative frequency and prevalence of different diseases and also the peculiar forms which they take on. For instance, in New Haven county, pneumonia has prevailed during the spring to a large extent, and in New Haven the type of the disease has been one of severity and fatality. The question arises, has the operation of it been the same and uniform throughout the whole county, and if so, to what is this prevalence and fatality due? has there been some complication? is it due to local causes or to meteorological influences? and so we are led to the next reason, which is

(2.) A full county report gives an insight into the ultimate causes of disease. The whole State may be considered as the

sum of all the factors of the problem; each county as one of these factors, and knowledge of the habits and prevalence of disease in all these varied localities gives the data upon which we may reach a true conclusion. Here is New Haven county, with its sea coast line, and New Haven lying in the midst of this with its atmospheric and local influences modified by the wind currents from the Sound, and then further east lies Guilford, nearly parallel, with different local influences; now the question arises, what is the ratio of the prevalence of certain diseases in these places, as, for instance, consumption. Then on the north line lies Waterbury, on the west, and Meriden on the east, and Wallingford about midway of the county, with their local causes and the absence of sea coast influences. How does the prevalence of consumption here compare with New Haven or Guilford? So in regard to intermittent fever; five years ago it prevailed to a very great extent in New Haven and its suburbs, especially North Haven; since then it has been gradually dying away. For a long time after its activity subsided its power could be seen in almost every form of disease, and even now this holds true in a certain degree. Now a knowledge of the experience of the whole county with this disease, well classified and arranged, would throw a gleam of light upon this obscure malady. I use these diseases as illustrations to show how much information would be derived from such yearly reports upon the causes and habits of disease; this would lead directly to the preventive department of medicine, which is the next point to be considered.

(3.) A complete county report would tend toward the prevention of disease. This point needs no elaboration, for if we know the cause of disease we shall certainly apply the remedy there rather than wait to treat its manifestation, for by these statistics will come the realization that there is such a thing as preventing typhoid fever and diphtheria and cholera infantum, and a long list of other ailments, by means of pure air, wholesome food and water, and cleanly habits, both as relates to the public at large and the individual alone. We shall thus educate one another and also instruct the community at large in those principles which elevate public morals and public health.

1874 was a notably healthful year in New Haven; no epidemic of disease prevailed. 1875 has also been comparatively so; thus far, May 1, with the exception of pneumonia, which has prevailed largely and with fatality; 68 deaths are reported for the current

year ending at this time. Last year the deaths numbered forty-five, and in the preceding fifty-six. To what can this excess of mortality be ascribed? Without doubt, to meteorological influences and chiefly to large ranges of temperature in short spaces of time. This is plainly shown, I think, by the following figures which I derived from the U. S. Signal Service and Registrar's reports of this city, and have here classified and arranged.

In January, 1874, there were six deaths from pneumonia. The highest thermometer 58° on the 23d instant. The lowest thermometer 7° on the 17th instant. Monthly range 51° . Greatest daily range 23° on the 18th instant. In the space of six days the thermometer ranged 51° .

In January, 1875, there were five deaths. Highest thermometer 40° on the 22d instant. Lowest thermometer 2° on the 10th instant. Monthly range 38° . Greatest daily range 24° on the 9th. In twelve days we find a range of 38° , which accounts for less number of deaths.

In Feb., 1874, there were four deaths. Highest thermometer 60° on the 23d instant. Lowest thermometer 3° on the 2nd instant. Monthly range 57° . Greatest daily range 24° on the 19th instant. A range of 57° in twenty-one days.

In Feb., 1875, there were twelve deaths. Highest thermometer 51° on the 23d inst.; lowest thermometer 2° on the 9th instant. Monthly range 49° . Greatest daily range 30° on the 11th instant. In fourteen days the thermometer ranged 49° , which with the large range on the 11th, accounts for the great number of deaths.

In March, 1874, there were nine deaths. Highest thermometer 60° on the 4th instant. Lowest thermometer 10° on the 24th instant. Monthly range 50° . Greatest daily range 27° on the 25th instant. In twenty days there was a range of 50° .

In March, 1875, there were seventeen deaths. Highest thermometer 54° on the 12th instant. Lowest thermometer 6° on the 1st instant. Monthly range 48° . Greatest daily range 26° on the 24th instant. In eleven days a range of 48° , being 4.36 per day against 2.50 per day in March, 1874.

In April, 1874, there were ten deaths. Highest thermometer 59° on the 19th instant. Lowest thermometer 16° on the 5th instant. Monthly range 43° . Greatest daily range 29° on the 11th instant. In fourteen days a range of 43° .

In April, 1875, there were six deaths. Highest thermometer 63° on the 2nd and 30th instants. Lowest thermometer 21° on

the 19th instant. Monthly range 42°. Greatest daily range 24° on the 23d instant. A range of 42° in 17 days.

The supporting and tonic plan of treatment has been adopted for the most part in this disease with counter irritants locally. Bleeding has been employed rarely; in one reported case of double pneumonia it was used and followed by bad results, the patient going into a decline. Yet there are doubtless certain cases in which its use is justifiable and proper. Arterial sedatives of the class to which aconite belongs are used at the outset of the disease when indicated.

Small pox, which manifested itself from time to time last year, began this year to show a disposition to spread. Accordingly as a precautionary measure the Board of Health wisely ordered a public vaccination at the expense of the town. The work was begun early in March and continued for two weeks; fourteen physicians were engaged and the result is shown by the accompanying figures.

Primaries.

	Whole No.	Inspected.	Successful.	Failed.	Not inspected.
Bovine,	719	513	452	61	206
Humanized,	709	493	417	81	211
	<u>1428</u>	<u>1006</u>	<u>869</u>	<u>142</u>	<u>417</u>

Re-vaccinations.

	Whole No.	Inspected.	Successful.	Failed.	Not inspected.
Bovine,	2104	1635	1239	396	469
Humanized,	3344	2564	1817	757	780
	<u>5448</u>	<u>4199</u>	<u>3056</u>	<u>1153</u>	<u>1249</u>
Total inspected,	5210.	Successful,	3925.	} Whole number of vaccinations, 6876.	
Not inspected,	1666.	Failed,	1295.		

There was no further spread of the disease, and at this time the city is free from that pest. During the year four deaths from variola occurred. Traumatic tetanus ensued after wounds to an unusual extent during the month of April just passed; five cases have been reported, four have resulted fatally. During the whole of last year but three deaths were registered from this cause. These statistics tend to confirm the theory of an epidemic influence in this malady.

As to the other commonly occurring diseases there is little to report. I name the more prominent and the death-rate of each. Diphtheria caused 8 deaths; last year 12. Croup caused 23 deaths; last year 16, the year before 64. There were 85 deaths

from cholera infantum, which prevailed largely during the months of July, August and September, 1874; nearly all of the whole occurring during these months. The whole number for the year 1873 was 76; 1872, 124. Searlatina caused 13 deaths this year, last year 6. Phthisis shows an increase over last year, 197 deaths against 161 then. I would call attention to the large number of deaths from cancer in its various forms. 25 deaths are reported from this cause.

Chloral hydrate in New Haven is regarded as a useful and valuable remedial agent, but yet one that must be used with discrimination. By some it is highly valued and constantly used in the milder and more chronic disorders of the nervous organization, while others reserve it for those cases in which the older and more established remedies have failed; or where the symptoms are peculiarly acute and violent. In ordinary cases of nervous excitation the dose is from 10 to 15 grs., repeated two or three times, at intervals of an hour or two as required, and even in acute mania and delirium tremens it is not thought advisable to administer at first the extremely large doses which were used when the drug was first introduced. In this class of cases the average dose is 25 or 30 grs., repeated if necessary with caution. Bad effects have been noted from its use similar to those resulting from an over dose of chloroform by inhalation, such as asphyxia, syncope, and rarely delirium. The largest dose reported to me was given in a case of delirium tremens; 156 grains were taken in three hours; this made the patient wild, but it was continued until 240 grains were taken in twenty-four hours, with no beneficial effects; a moderate dose of potassium bromide was then given and sleep soon followed. The patient recovered.

In another case of wakefulness, 10 grains were ordered once an hour until sleep ensued; the nurse gave 80 grains in five hours the first night, the second night 80 more, and the same the third night; no unpleasant results followed. It is thought to be especially adapted to the nervous disorders of the pregnant state, very serviceable in cases of tardy labor dependent upon uterine inertia, or where the pains are excessive. An interesting communication from Dr. Chapman of this city upon this subject is here inserted, following which are the replies which have been received from other medical gentlemen in various localities.

OBSERVATIONS ON THE USE OF CHLORAL HYDRATE.

BY S. H. CHAPMAN, M.D., *New Haven.*

Chloral Hydrate has been used quite extensively by the profession in more or less heroic doses in cases of extreme nervous irritation, such as tetanus and delirium tremens, and also as an occasional sedative in small doses; but in almost all instances, its use has been limited to short periods of time. For this reason I venture to call the attention of my colleagues to the benefit obtained by its protracted use in a certain class of cases.

The cases to which I refer are those of what might be called "irritable pregnancy." A short description of the course of irritable pregnancy will enable us at once to understand the action of the drug. The period when this disease begins, is, in most cases, sharply defined; namely, the period of quickening. You observe that no mention is made of the sometimes exhaustive vomiting of the earlier period of pregnancy. This, although likewise due to a reflex nervous irritation, lasts but a short time, is amenable to other treatment, and the ultimate cause is not the same as that of irritable pregnancy.

The train of symptoms that arise from the time of quickening, however, may be traced directly to the movements of the fœtus and usually continues until labor is accomplished. The principal symptoms, from which arise all others as secondary, are two in number, viz: sleeplessness and involuntary muscular contractions.

A simple illustration will enable us to understand the relation of cause to effect. When two nervous persons sleep together, each keeps the other wakeful by restlessness; a simple turn in bed is sufficient to disturb the rest of a nervous person. It may be described by saying that an irritation of the cutaneous nerves is communicated to the brain, setting up thereby certain ganglionic combinations which, in some cases, cause disturbing dreams, in other cases absolute wakefulness. The fœtal movements act upon the pregnant woman in much the same way. In most instances, the nervous system becomes accustomed to this irritation, but where there is hereditary or acquired nervous hyperæsthesia, the first result, sleeplessness, is followed by other and distressing symptoms which may lead even to a fatal result.

They are here enumerated in the order to which they seem to belong: Constantly increasing nervous irritability; loss of appetite; loss of physical strength; hysteria; and after labor, which

in such cases must always be more or less unphysiological in character, great physical and nervous depression, in some cases protracting convalescence, in others causing convulsions or mental alienation. There is a double danger in this train of phenomena; for, as you readily see, sleeplessness and nervous irritability produce loss of appetite and deterioration of physical strength; while the two latter phenomena may also produce the former, so that they act and react in such a way as to constantly abet instead of oppose one another.

To return to my illustration—a person turning in bed not only makes his bed-fellow wakeful but causes him to move about even when not awake; so that the irritation of the cutaneous and sensitive nerves not only extends to the brain, but passes on to the motor nerves, setting up in this way involuntary muscular action.

A similar phenomenon is caused by fetal movements; not only general involuntary muscular action, but also choreic action in parts of different muscles. It is to the abdominal muscles, however, that I wish to call particular attention. It is well known how intimate is the reflex communication between the abdominal and uterine nerves, a communication which assists in the process of labor; but the boundary line between its physiological and pathological action is easily passed in cases of nervous hyperæsthesia; so that a phenomenon which is intended by nature to be present only at a certain period, may develop itself earlier though in secondary degree.

In cases such as have been described, if the hand be passed over the abdomen, it will be found in condition either of tonic or clonic contraction. This, therefore, can be a cause of accompanying kidney-disease, by diminishing the size of the abdominal cavity and pressing the enlarged uterus back upon the large vessels.

The description given, though cursory, will make evident the value of treatment by chloral. Unlike other sedatives and narcotics, it may be taken for months with no injurious effect upon the digestive organs, as I will prove by the history of a case; it is not necessary to increase the dose; it produces an almost immediate effect. Its action seems to be chiefly this: Being absorbed into the blood of the mother, it finds its way to the fœtus and acts as a sedative upon its movements. This removes at once the original cause of the disease, so that the nervous system of the mother has an opportunity to recover from a previously constant irritation.

This explanation of its action also shows why small doses are sufficient and why these doses need not be increased. In illustration of these principles and the action of the drug, allow me, in conclusion, to relate a case that was under my care in 1873.

Mrs. H. J., 24 years of age, primipara, of an inherited nervous disposition, both her grandmother and aunt having developed insanity. I was called first to see her at the end of her fourth month of pregnancy; found her pale, somewhat emaciated, and complaining especially that she could not sleep since the child began to move; that her appetite was not good; that she was very nervous; this latter was especially testified to by her husband; had slight choreic movements of the eyelids and of the left nostril; abdomen quite rigid; prescribed chloral hydrate in solution of water, 5 grains to the teaspoonful, and ordered two teaspoonfuls to be taken at bed time, and if in ten minutes no apparent effect, then one more teaspoonful. On the following day I found that 15 grains had been taken with a fair night's rest as a result, and a corresponding feeling of relief to the patient; the drug was ordered to be continued in like quantity every night. This treatment was continued for a month with the happiest results. The patient gained in weight, was less irritable and nervous, and while previously unwilling to exercise, gradually formed the habit of walking or riding every day. The digestive system, instead of being injured was strengthened, so that the appetite became again quite normal. At the end of a month, partly to test the effect, and partly from a supposition that the drug might eventually do harm, it was discontinued for a few days; but the patient began again to complain of sleeplessness and languor, and desired to be allowed to take her medicine again.

From this time until labor was in full progress, the patient continued its use, not omitting to take it oftener than twice a week during the entire time. During the eighth month, the dose was increased to 20 grains, and on a few occasions to 25 grains; but, during the ninth month was again diminished to the original quantity. On the night when labor came on, the patient thought that she had some colic, and took her medicine as usual, but was awakened about eleven o'clock by sharp pain and a gush of fluid.

At 12 o'clock I was called in, and found by an examination, that the os uteri was fairly dilated and the membranes ruptured. The course of labor was regular and lasted, from the time of rupture of membranes, four hours, and the patient made a rapid and good recovery.

In the fifth week after labor, the patient was able to take a journey of nine hours by rail, with no feeling of excessive fatigue. The child was healthy and weighed eight pounds.

This case does not absolutely prove that the patient would not have passed through the period of pregnancy and labor as well without as with the use of the drug in question; yet there is a probability that a serious result was prevented by its use. In addition to the above, I may state that the choreic movements of the face entirely ceased soon after the drug was regularly administered.

Allow me in conclusion, to point out what seem to be the essential facts with regard to its use in this case. First, the drug was almost daily used for months with no deleterious effects on the digestive organs.

Second, it was not necessary to gradually increase the dose, as is the case with morphia or bromide of potassium.

Third, the drug had no injurious effect on the child. It is quite as well as other children to-day.

Fourth, under its use the patient gained in weight and regained her natural cheerfulness and activity; while the cessation of its use was followed by a retrograde movement toward her old condition of nervous irritability.

MALARIAL DISEASES IN HAMDEN AND NORTH HAVEN.

DR. STILLMAN, *Reporter.*

Chills and fever have been the prevailing disease in this locality from August, 1863, until the present date. Its first appearance was in Hamden, on the west side of Whitney Lake, within two years from the time the new dam was finished and the lake filled with water. Three cases came under my own care during this month, but one of them, on the east side of the lake. The disease continued to spread on the west side of the lake and Mill river until 1867, not extending over a space of three miles in length and one or two miles in width. But few escaped. But not until 1867 did this disease appear on the east side of the lake and river, except in one or two instances. During the summer and fall of this year it spread more rapidly in Whitneyville, Augurville, Centerville, Ivesville and Mount Carmel. On the line of Mill river, a

distance of six miles, but few cases occurred this year in either place; but each succeeding year new cases occurred and the old ones continued until 1870, 1871 and 1872, when every person within my acquaintance had chills and fever, with, perhaps, two or three exceptions, particularly in the valley leading from Whitneyville to Mt. Carmel; above a certain line it did not break out until 1871, although it was in every family below this line.

In 1867 I had five cases in North Haven; this was its first appearance here. New cases occurred each year after, the same as in Hamden, until 1870, when no one west of the Quinnipiac escaped but the writer of this article. Up to this date but few cases were seen on the east side of the river. From 1870 it spread to the eastern part of the town and on the western line of Northford adjoining North Haven.

At this time and for three years after, sometimes whole families were attacked at the same time, some more violent than others. One would have a distinct chill with violent shaking, followed with fever then with profuse sweating, and the next day be able to do a good day's work. Other members of the family would have daily attacks of chills followed by fever, lasting for one week or more, depending more often on medical treatment or the neglect to use quinine or other remedies to check it. When there was a distinct chill with violent shaking the disease could be controlled readily by the free use of quinine. This was especially so from 1863 to 1867. From fifteen to twenty-five grains at a single dose would check it apparently, but it would return with a certainty on the seventh, fourteenth or twenty-first days unless quinine was used daily to ward off the attack. Among the laboring classes and farmers it was very severe, and no security for a day after the first attack without rest and quiet for a few days. They would feel that they had entirely recovered, but half an hour sitting in the hot sun would bring on a violent chill, and, *latterly*, an attack of dumb ague. Some of the more vigorous and robust would have a chill every other day or every fourth day, and labor on the intermediate days perhaps for a month, but would soon after break down with an attack of intermittent fever, which would terminate favorably in from seven to fourteen days. I think it would be within the bounds of truth to say that there were from 100 to 150 cases of chills in one day in the towns of North Haven and Hamden. Frequently I have visited from thirty to forty of my own patients, particularly from 1870 to 1873.

From 1870 the disease assumed more the form of typhoid fever, or, as it was often called by physicians, typho-malarial, which would terminate fatally and suddenly, often to the surprise of the family and attending physician. Persons who had been subject to occasional attacks of chills or dumb ague during the summer would succumb to an attack of typho-malarial fever within ten days from the time they took the bed. In some instances they would be taken with cramps and spasms and soon become insensible. At first the whole body would become rigid to the ends of the fingers and toes. Patient could talk and swallow with difficulty. Hot fomentations and mustard paste externally with diffusive stimulants; carbonate ammonia, ether and lavender internally, and in some cases chloroform was given to break the spasm. Abscesses have been quite common, especially after suffering for a year or two from chills.

One case, a young lady 24 years of age, had pelvic abscesses for nearly two years, attended with great pain and occasional convulsions, which would find their outlet into the vagina and discharge in that direction. There would be a recurrence of this abscess three or four times during the year, which has finally left her mentally and physically almost a wreck. Another case of abscess in the back, near the kidney, requiring six months from the time the swelling began before the patient was able to walk or leave the bed. Another case, an immense abscess in the abdomen, that discharged six quarts of purulent matter in twenty-four hours from the time it was opened. They have come also on the neck, on the knee, in the groin, on the fore-arm and legs and over the face, all resulting entirely from chills.

The disease still continues, although not in its original form, but comes on with dumb ague, and almost every variety of sickness this phase will have developed before you get through with the case, especially in pneumonia, whether mild or severe. In many cases of sore throat with dumb ague the disease would yield with free use of quinine when all other local remedies had failed. Neuralgic pains and swelling of the joints are common with many cases at the present time. Sometimes severe forms of sciatica, which would require six or eight weeks to remove. Congestive chills have been frequent and sometimes fatal after three or four attacks. Sometimes it would be in the lungs and brain, often in the liver and spleen, occasionally in the intestines, and then attended with excruciating pain, requiring large doses of morphine with stimulants

to get relief. One case of congestive chills occurred in my own family, in a servant girl, aged about 32; had had slight attacks of dumb ague, but not sufficient to loose a day's work. In April, 1873, in the morning, about 8 o'clock, complained of dizziness in head, without pain, went to bed and slept quietly until noon; during the forenoon, about 10 A. M., her face presented a glassy appearance, but nothing was done in the way of medical treatment as she was very quiet. At 12 o'clock my attention was called, and I found her totally insensible, pulse not perceptible at the wrist, hands purple and blood settled under the finger nails, face livid with purple spots, also the same appearance on the neck and chest, with pupils contracted, with feeble action of the heart; made an attempt to rouse her by shaking and other means. At first was unable to swallow, but by passing a small quantity of brandy with a spoon into the throat succeeded in making her swallow; and by hard work for an hour or more she was brought to consciousness and without much suffering. This woman would have died in thirty minutes, in my judgment, if her condition had not been discovered.

Some persons, from the continued attacks, have lost their health and have been obliged to go to other sections of the country, because no remedy could be found to check it. Persons coming on a visit to Hamden or North Haven would have a chill from ten to fifteen days after their arrival, and this would hardly admit of an exception; and persons who had not previously had this disease, on going from either of these towns to any distance, whether 20 or 200 miles, would in most cases have a chill within a fortnight after their departure, and from that time on continued to have it.

The treatment in the early years of this disease.—Quinine was almost wholly relied upon to break up the chills. Nitrate of potash in doses of ten grains, two or four hours previous to the expected attack, would frequently avert it, and in one instance it did not appear again for nearly a year.

Emetics have been used during the last five years with good results, followed with calomel and blue pills and other cathartics. Latterly, the disease has been more of a bilious character; torpid liver and constipation of the bowels. When the symptoms approached an appearance of typhoid character, I have used alcoholic stimulants almost without regard to quantity.

The cause of the sudden appearance of chills and fever was thought to be, for some years, due to the filling of Whitney Lake, which took place about two years previous to the first case of

chills, which was Aug. 27th, 1863; but physicians have fully agreed that it is epidemic in its character, as it has already spread over more than half of this State.

The principal remedies used are sulphate of quinine, liquor, potassa, arsenites with mineral acids, and nitrate potassa. Alteratives, such as calomel and blue mass, but the best remedy in torpid condition of the liver, in tedious cases, calomel stands first in order, and without this remedy I could not do any good with quinine. Patients suffering for months while taking quinine constantly, would be brought out of it with small doses of calomel, rhubarb and bi-carb. soda for a few days until it acted as a cathartic, and for six months after would be in good health and free from chills; and small doses of quinine of three grains would be more sure to do good than fifteen or twenty grains without the calomel. One man took at one dose sixty grains of quinine, which cured completely, after recovering from the ringing noise in the head.

A NEST OF DIPHTHERIA AT BEACON FALLS.

N. B. BAYLEY, M.D.

The salient points in relation to this epidemic of diphtheria, which was attended with great fatality, are as follows:

The village, of some 600 or 700 people, is composed to a large extent of Germans, who have huddled themselves into small houses, densely crowded, without ventilation, and with scarcely any attempt at cleanliness. These houses are situated near the bank of a canal which supplies the large woolen mill of that place with water for motor-power, and in which most of these people were employed. This canal had several times during the summer months been empty, and there had been quite an accumulation of vegetable material on its banks. In one of these small houses, which was densely crowded with occupants, the bed-room, which was of very small dimensions, and occupied by five persons, the husband and wife and three children, was within 20 feet of and below the level of the water in the canal. There was scarcely room to get around the beds. These children were all swept away by the epidemic. The disease was confined to this immediate locality of four or five houses; it did not extend back upon

the higher land, with one exception I believe, and that was not a fatal case. No adults were attacked. The whole number of children attacked was eleven or twelve, and the number of recoveries was only one, I think. The symptoms, in brief, were as follows :

The period of invasion lasting from one to three days, like that of membranous croup, followed by high fever. Exudation within the larynx and pharynx; extreme dyspnea; lividity of surface; restlessness, delirium or coma and death; after the occurrence of laryngeal exudation, the patients survived only from one to three days. One patient who recovered from the diphtheritic attack, died suddenly from bilaterel paralysis. I treated only one case, the others were divided among different practitioners. But all treatment was *nil*. The important points to which attention is called are as follows, viz: Its precise localization, only four or five houses, situated near a sluggish stream giving off miasma; the densely crowded population; the want of cleanliness, the stench meeting one as he went into the door with a powerful blow, as it were; and an utter disregard to all hygienic rules of life. These causes seemed to excite an intense *diphtherial* poison which attacked those who were continually exposed to it; while the older children and adults who were away from this precise locality for more than one half of each day escaped altogether.

TYPHOID FEVER CASES.

S. D. GILBERT, M.D., *Reporter*.

During the last five months of 1874, there occurred in my practice sixteen cases of typhoid fever, varying in gravity from one, in which perforation seemed imminent; and others accompanied with great depression, delirium, etc., to others exhibiting the mildest types of the disease. Eight of them occurred in a part of the 7th ward of New Haven, known as Dublin, within a circle of perhaps twenty rods in diameter; these patients were Irish. On inquiry, it was found that the privies in this neighborhood were very foul, and in several places the wells from which the patients drank were very near these, and the water was undoubtedly infected from this source. The remaining eight cases were scattered; one particularly impressed me with the fact that a large amount of alcoholic stimulus may sometimes be borne with

excellent results. In the case of threatening perforation to which I referred, during several successive periods of twenty-four hours, one quart of brandy was administered; and during one period of the same duration, three pints were given. It was supposed on several occasions by the physician who attended the patient with me, as well as by myself, that death must ensue; but after the exhibition of brandy in frequent and large doses, he rallied again. We both felt that recovery could not have resulted had not this course been pursued, for the effect of the stimulant was so marked, bringing up the character of the pulse, diminishing delirium, moistening the tongue and seeming to inforce new vigor into the powers of life. I also found in this case much benefit from the administration of $\frac{1}{2}$ gr. of iodide of arsenic every four hours. It seemed to gradually remove the extreme tympanitic condition of the bowels, which was accompanied with great tenderness. This treatment was continued until there seemed to be a tendency to diarrhœa, and was then stopped. Brandy was also administered in large doses in one other case, accompanied with great depression, as indicated by collection of sordes on the teeth and gums, brown tongue, perfuse diarrhœa, etc.

In all the milder cases, there was little or no alcoholic stimulus employed; but the treatment consisted of nourishment, camphor mixture, quinine, etc. All the patients recovered. With the exhibition of hydrate of chloral I was most familiar while an intern in the Lyingin Hospital of Dublin, Ireland, in 1872. It was the common practice after confinement, if after-pains ensued, to give it in half-drachm doses and even larger, and with good results. In private practice, have used it in a great variety of cases and always with good results.

CASE OF DIPHTHERIAL CROUP.

H. B. CATLIN, M.D.

Frances Smith, aged 5 years. Was taken sick about 8 P. M., Feb. 15, 1871, with symptoms of croup. During the night she was vomited freely with squills and pulv. ipecac but without any relief.

I was called early in the morning, Feb. 16. Found her suffering severely with all the symptoms of membranous croup. Gave immediately five grains of Hydrar. sub. sulph. flav. (turpeth

mineral) as recommended and used for years by Dr. Fordyce Barker of New York. This vomited her freely, but as it afforded no relief I repeated the dose; this also operated as an emetic, but without any favorable influence upon the breathing. There had been no difficulty in swallowing, no complaint of sore throat, so that at first there was no examination of the fauces. The tongue was covered with a white coat. I now ascertained that the tonsils were covered with a diphtherial deposit. The cases of diphtherial croup heretofore met with had come on in the latter stage of the disease. This apparently commenced in the larynx or at least was simultaneous with that on the tonsils. The breathing became more and more laborious. The face was dark and extremely anxious, showing the oxygenation of the blood to be very imperfect.

I proposed the operation of tracheotomy and requested counsel. Prof. Francis Bacon of New Haven saw her with me at 8.40 p. m. It was our opinion that she could not live till morning unless relief was obtained. Her pulse was now very feeble and frequent, 140 to 150 per minute; face livid.

The family were informed that an operation was the only hope, and that might fail, though it would probably give temporary relief. No objection being made, chloroform was administered and Dr. Bacon operated. Care was taken to arrest the slight hemorrhage before the trachea was opened. A double canula was inserted. The patient was immediately relieved, and had a quite refreshing sleep for several hours. Her pulse was less frequent, 110; her natural color returned, face a little flushed.

The next day, the 16th, there were at times labored respiration, but the removal and clearing of the inner tube would again afford relief. The constitutional remedies were tinct. chlorate of iron, chlorate of potash, and quinine. A solution of the chlorate of potash and tinct. chlorate of iron was thrown into the fauces and through the canula in a spray. Nourishment, consisting of beef tea, milk and milk punch, was regularly administered. The bowels were loose, but as the discharges were bilious the movements were not checked.

The 17th, 18th and 19th, she was quite comfortable when the canula was kept clean. It was necessary to be very particular in cleaning it, for it would become filled with a very tenacious substance which could only be removed by the free use of warm water and a bit of sponge attached to a crooked wire. The constitutional

symptoms were not severe. She was always cheerful and pleasant. At 3 A. M. of the 20th I was called to see my little patient. She had been for some hours coughing and throwing matter through the canula, some false membrane, some muco purulent matter, at times bloody.

I introduced a small elastic catheter and passed it down into the trachea, and subsequently a silver probe coated with nitrate of silver. She then threw out more matter and was relieved. The medicines were continued, with the addition of small doses of morphia to allay irritation.

I was with my patient most of the time for the first two days (the 16th and 17th); after that her elder sister, an intelligent nurse, served in removing, cleaning and replacing the inner canula.

On the 21st the diphtherial deposit had separated from the tonsils, but she could not breathe through the natural passage. During the 22d and 23d there was considerable irritation of the trachea and bronchial tubes, coughing and throwing out matter through the canula. The spray was thrown in through the tube twice a day.

The 23d, the pulse was 64, regular, countenance bright, considerable discharge outside the canula. There was some pain in the bowels, and as they had not moved for three days, a dose of castor oil or enema was prescribed.

The 24th inst., the 10th day of the disease, we found the canula caused considerable irritation attended with a discharge of mucopurulent and bloody discharge. We removed the canula. A large opening remained through which she could breathe freely; by closing this she could breath imperfectly through the natural passage. 25th, much improved, no bloody discharge, less irritation. 26th, improving rapidly.

March 1st, discharged cured. Quinine and iron continued till about the 25th, then pyrophosphate of iron and tinct. cinchonii were prescribed. For several days the room was kept quite warm and filled with steam. The patient is still living and in good health.

The eldest sister of the above patient and chief nurse had diphtheria of the fauces, but the larynx was not diseased. She soon recovered.

CASE OF VESICO VAGINAL FISTULÆ.

BY P. A. JEWETT, M.D.

Mrs.—, aged 24, American, was confined with her first child September, 1873. Her labor was severe, but not protracted. From her own statement and that of her husband, I have no doubt that a partially ruptured and indurated hymen existed at the time of the labor. Almost immediately after her confinement her urine escaped from the vagina. This was supposed by her physician to be due to simple incontinence. About one year after her confinement I was called to see her. I found on examination a large transverse fistula, $2\frac{1}{2}$ inches in length. This was so situated as to include the neck of the bladder to its entire extent. *The whole urethra was also destroyed.* There were three cicatricial bands extending across the vagina, and a band near the ostium vaginæ that nearly closed that opening.

My first attention, by way of operative procedure, was directed to dividing the bands in the vaginæ and keeping the passage dilated until the incisions had been healed. I then made the attempt to form a new urethra by plastic operation. This was repeated three times without success. I at last gave up the attempt, and proceeded to operate on the fistula. The edges were pared with the knife and scissors; and pure silver wire sutures were introduced, according to Dr. J. Marion Sim's method. The fistula was closed throughout its entire extent. A new urethra was made by making a slight cut near the position of the meatus, and a director was passed forcibly into the bladder. This was followed by a Sim's catheter retained and suspended from the thighs by adhesive plaster. The catheter was suffered to remain without inconvenience to the patient for ten days, when the sutures were removed.

Union had taken place to the extent of two-thirds of the fistula. As soon as the patient had sufficiently recovered from the first operation, I operated again in the same manner. This resulted in closing the fistula completely, with the exception of a small opening at the neck of the bladder about one quarter of an inch in diameter. Having waited a sufficient time for the recovery of the patient from the effect of the last operation, it was again repeated, with the result of closing all the opening with exception of a small portion, the size of an ordinary probe. This I have treated with caustic, and find that it is rapidly closing. The pa-

tient now passes the most of her urine by the new urethra, either with or without the use of the catheter. I have advised the use of the catheter for a time for the purpose of keeping the urethra pervious.

From my examination of the literature on this subject I find no case of *entire* destruction of the urethra. Dr. Emmett mentions cases in which the greater portion of the urethra was destroyed, but not the entire urethra. In his cases the urethra was so nearly destroyed, however, as to make no difference in the operation.

I have operated several times for this terrible accident. In every case I have followed the rules laid down by Dr. Sims. The position of the patient, the speculum, the silver wire, (without the clamps,) and the catheter, are all of his invention. I wish to bear witness to his ingenuity and skill in originating the operation, and to say that not only the profession, but the civilized world are under obligations to him for having demonstrated the curability of this most troublesome complaint.

A CASE OF ERYTHERMA NODOSUM FOLLOWED BY ERYSIPELAS
TERMINATING FATALLY.

BY W. G. ALLING, M.D.

Mrs. B., American, age 36. Vaccinated March 5th with bovine quill slip. The vaccine disease run its regular course. The vesicle was perfectly normal but very large.

March 19th I was requested to see Mrs. B., and on visiting her found that the vaccine disease had run its course, and was covered with a large dry crust. But Mrs. B. was suffering from inflamed patches from one to two inches long of oval shape of a bright red, situated on the arms and legs (mostly below the knees). There was at this time a considerable fever. The inflammatory patches increased, with grave constitutional disturbance for the next three days, when Dr. Lindsley was called in and pronounced the disease erythema nodosum. From this time until the 27th the patient gradually improved. The vaccine sore at this time was entirely healed. But at my visit in the afternoon of this day she complained of some soreness of the throat, and I found on examining the throat that it was very much inflamed and an erysipelatous inflammation had developed on one side of the nose,

and in spite of all treatment the inflammation spread rapidly until the whole face was involved, entirely closing the eyes in 48 hours. The patient was very delirious, making it very difficult to give food or administer medicines. She gradually sank and died the 9th day after the first appearance of the erysipelas.

Mrs. B. had been suffering from general debility and great nervous prostration for nearly two years, having to take tonics and nervines most of this time.

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

At the meeting of our County Medical Society, the duties of "reporter" were thrust upon me, and the members present would not allow me to decline the appointment. Coming at so late a day it allows but little time for preparation; hence the vague and unsatisfactory character of what follows. I have been disappointed in procuring the information I had hoped from others. Whatever facts I present, then, of the living, must be recalled from my own experience; of the dead, from the records of the Town registrar.

The past year has not been characterized by the prevalence of any unusual sickness, and medical practice has had a continued variety. We have had no epidemic and no small-pox scare. Measles, of mild form generally, have been more or less common with children. Of mumps, I have met with one case of severity, terminating in an abscess. The child, although seriously ill, recovered.

I recall a case of meningitis complicated with whooping cough, which caused me much anxiety. A child, about 18 months old, while suffering from whooping cough, was attacked with inflammation of the brain. The fever continued high, the thermometer varying from 103° to 105°. Extreme irritability, and convulsions, made the case one of unceasing care and anxiety. And when after nearly three months, our little patient was convalescent, his disposition seemed entirely changed; from a gentle and affectionate child he had become exactly the opposite. His paroxysms of violence were fearful; he would bite and strike his mother, and when his brothers or sisters in any way crossed him he would beat them with any thing that he could grasp. As his strength returned, and he was kept as free from excitement as possible, his mind gradually became calm, and at last he recovered with every faculty unimpaired.

 PREVALENCE OF SCARLET FEVER.

A. B. WOODWARD, M.D.

Scarlet fever has prevailed quite extensively in the village of Baltic (a village six miles from Norwich), having made its first

appearance near Dec. 1st. About forty cases have been treated, with a mortality of one in eight. The deaths were from secondary causes, as kidney trouble. The parotid gland was often affected, and in one case resulted in suppuration. Small-pox has also prevailed in this village, about thirty cases having been treated. Four were fatal. The prevalence of pneumonia, complicated particularly at its outset with catarrhal symptoms, is also noticed by Dr. Woodward.

The returns made to the registrar show as usual, that phthisis is prominent in claiming its victims. For a population of about 1,800, 65 deaths were returned. The largest number for a month, eight each, stands recorded for March, April, and October. The smallest, three for May, and four each for June and December. Of pneumonia there were but twenty deaths recorded; the months June, July, August, and September, having no fatal cases returned. For the entire year there were but twelve deaths recorded from typhus and typhoid fever, the two diseases being set down as similar; and but thirteen for scarlet fever occurring during six different months. The fatal cases of cholera infantum commence with hot weather, when foul smells arise from decompositions, and plenty of green or withered fruit is within the reach of children. The first death occurred in June, the last in October.

The whole number of deaths returned for the year is 384. These figures show, what has often been observed, that more than one-fourth of the children born die under one year of age, and more than one-third die before the fifth year. Such facts, if generally known, should make parents extremely careful how they trust these delicate children with ignorant nurses and indifferent servants; or how they encourage any form of quackery. These are fruitful sources of misery and sorrow.

CASE OF NEW SKIN DISEASE.

ISAAC G. PORTER, M.D., *Reporter.*

In response to the second question, the following is presented, as affording evidence of a new skin disease, or, of one newly described. It may interest, chiefly, by its novelty, and yet, through its persistence and the pruritus which belongs to it, it may possess no small practical importance.

A lady æt. 35 years, whose menstruation was irregular and deficient and general health delicate, noticed, in August last, a singular eruption on the inner aspect of the right arm, immediately above the wrist, consisting of pimples of various sizes from a pin's head to a line in diameter, flat and slightly raised, some of them having a slight depression in the center, and extending in a nearly continuous line of patches from the wrist to the shoulder. The patches were of irregular outline, varying in width as they ascended, from $\frac{3}{4}$ of an inch to $1\frac{1}{2}$ inch in diameter. Only a few papules were found in other parts of the body when the patient came under observation, which was four or five months after its first appearance. The skin of the patches, between and among the papules, was violaceous or light purple. Some of the papules were pale-red, though when found distinct and separate, they were nearly pearl-colored and appeared to have glistening heads. Subsequently, small white micaceous scales formed on some, within the patches, giving a remote idea of lepra, and adhering firmly. But there was no evidence of "abnormally active epidermal proliferation."

For some months the eruption was confined to the inner aspect of the right arm, the opposite remaining intact, subsequently, however, to be slightly affected with a few scattered papules, as was also the inside of the thighs and legs. But these never had the troublesome itching which belonged to the patches and which constituted the chief evil. Inasmuch as the disease did not invade parts usually exposed, the patient too long disregarded it and failed to persist in the use of medicines when not, forthwith, efficient.

This form of skin disease is acknowledged by leading dermatologists to be not only new but "*sui generis*." It was first described by Wilson (in the "Journal of Cutaneous Medicine, vol. III, 1869), under the designation of 'Lichen planus.' " "Lichen planus," says he "is an eruption of pimples remarkable for their color, their figure, their structure, their habits of isolated and aggregated development, their habitat, their local and chronic character and for the melasmic stains which they leave behind them when they disappear." Probably Dr. R. W. Taylor was the first in this country to observe and describe it, which he did in L. Duncan Bulkley's "Archives of Dermatology" (New York, Oct., 1875). I am indebted for a true diagnosis to the editor of the last named journal, the talented son of a most worthy father (the late Dr. H. D. Bulkley), and an honorary member of this Society.

A few words respecting treatment and the present state of the patient is all that remains. The white micaceous scales pointing to the use of arsenic, it was carefully tried but with no good results. Fox says the same respecting its use in *Lichen rubra*. The iodides and bromides were also found useless—as was a limited trial of carb. lithiæ. Nothing seemed so positively beneficial as cod liver oil with phos. calcis. Later, she has used ferruginous tonics and alkalies, internally and externally, also Hebra's *Tincture sapo. cum pice* and zinc ointment. The treatment suggested was not fairly tried, the discomfort of the patient not being severely compromised. The violaceous color, which is said to be very persistent, has, in this case, nearly disappeared, and some of the papules still remain.

In answer to the question respecting Chloral Hydrate, the following case is presented, as exemplifying a class of severe and tedious labors, and also the power of the article in question in ameliorating suffering, and expediting the parturient process.

During the last month (March) I was called at 7 A. M. to a small German woman, æt. twenty-six, primipara, compactly built and of dense fiber. She had always suffered from dysmenorhea, and, after two years of unfruitfulness, was surprised at finding herself pregnant. It is sometimes said of a man, who, after a severe sprain of the ankle persists in using the crippled member, that he had had the misfortune of *not* breaking his leg. So, in her pregnancy, my patient had the misfortune of full, bounding health, with not a moment of discomfort, or the loss of a meal during her whole pregnancy. Her pains had been regular and apparently *true* during the preceding night, but it was found that no impression had been made upon the os uteri, which remained closed. They still continued active, and at 11 A. M. the os was dilated so as to admit the point of the finger, its edges remaining sharp, rigid and undilatable, while she was becoming nervous and almost frantic at her sufferings, aggravated, as they were by almost constant vomiting. Fearing convulsions, or exhaustion, I dissolved chloral hydrate $1\frac{1}{2}$ drachms in six tablespoonsful of water, and administered one tablespoonful every twenty minutes. The second dose mitigated the pains slightly, and they were borne more quietly. The third dose was vomited almost immediately, and so much nausea remained that an hour intervened before the medicine was resumed, viz: at 12.45 P. M. The effect of this con-

joined with that proceeding from what had been retained on the stomach before vomiting, soon became apparent. The pains were less agonizing, and although continuing about as frequent they were followed by a decided and complete calm, the patient appearing to be in a quiet sleep, and when the pains returned she was less agitated and alarmed, and resumed her efforts with patience and fortitude. She seemed comforted and refreshed, dropping into a serene repose as soon as the pains left her, resembling the sweet sleep which occurring in the intervals of natural labor, usually betokens progress and a happy termination. Soon after the fourth dose, the membranes ruptured spontaneously. At 2.30 P. M. the os uteri, which had hitherto remained sharp and rigid, and dilated only to the size of a ten-cent piece, began to open, and the uterus that had become œdematous around the contracted os, now became soft and relaxed, so that with moderate attempts in assisting dilation with the finger, at 3.30 the os was the size of a dollar; patient sleeping quietly between pains, yet replying rationally to questions; pulse 80 to 100, respiration 40 per minute. At 6 P. M. there was a prospect of speedy delivery, but the child was very large, and although her pains continued to last, yet all advance ceased, the passages became hot and it was necessary to deliver with the forceps at 9 P. M., the mother making a slow but happy recovery.

The dysmenorrhœa, so long persistent, and which was doubtless referable to a nearly closed os, together with her robust health during pregnancy, help, in part, to explain the difficulties in this case, one of the most obstinate and threatening I have ever met. At least, my experience, when pregnancy follows certain kinds of dysmenorrhœa has taught me that in such cases, perhaps, through physiological and mechanical causes combined, a painful and tedious labor may be expected. The action of chloral in such cases and in others allied, is most happy, partly because available at an earlier stage of labor than is true of either chloroform or ether.

As in the use of the articles last named, care and judgment must be exercised in the selection of cases, and in the continuance of the chloral when much somnolence exists at the usual time of repeating the dose, whatever it may be.

As analogous to the foregoing, so far as the use of chloral is concerned, I append a short history of a case of puerperal convulsions of very recent occurrence.

An Irish woman, æt. 26—primipara—lower extremities œdematous, was seized with puerperal convulsions at 9 A. M. and prior to labor. These were several times repeated during the day, but I did not see her until 5 P. M., she being under the care of a midwife, and labor having just commenced. Her pulse being full she was freely bled, but with only partial relief, the operation merely retarding the spasms, between which she lay unconscious and breathing stertorously. The bowels having been freely evacuated by enema, the use of chloral was commenced nearly as in case first, with the effect of greatly prolonging the intervals between the attacks, she having only one until near the close of labor. The forceps being at hand the head was easily delivered at 9 P. M., only two convulsions having occurred since the use of chloral. Child dead. Soon after delivery, another occurred, but the *pupils being dilated*, an efficient dose of morphine exhibited hypodermically appeared to check them, after a single recurrence. Unconsciousness remained for a day or two, after which she made a good recovery.

If chloral shall be found to exert a happy influence in such cases, even though it acts less promptly than the inhalation of chloroform, its obvious advantages in threatening, or milder attacks, must give it the preference.

In this case, it must be conceded, that between the bleeding, the morphine and the chloral, it is difficult to decide to which the palm belongs. I must confess that when called to puerperal convulsions, I am pleased to find that the lancet is admissible, if not demanded. Here it seemed only to prepare the way for something better. The chloral I believe did good service, while of morphine hypodermically administered in cases where the attacks follow delivery, it can truly be said that it has deservedly the reputation of being one of our most efficient remedial means.

*Fairfield County.*E. P. BENNETT, M.D., *Reporter.**To the Chairman, &c. :*

DEAR SIR:—In reply to your circular I can report as follows for our county. In the first place we have had a general malarial condition of the atmosphere, modifying and complicating in certain degree all our other diseases, and producing cases of ague in consequence of local causes intensifying this general malarial condition of atmosphere.

Small pox has prevailed to a limited extent and was fatal in several cases. Its origin could not be traced. In my own opinion, small pox, like scarlet fever and measles, may occur spontaneously. Scarlet fever prevailed extensively and was very malignant and fatal. I do not think that much medication in scarlet fever is productive of good. Its complications often need active medication. Pneumonia has prevailed extensively, was of a typhoid character and very severe, but in our practice only one death occurred, and that in an old lady. Treatment: Stimulant from the commencement, wine-whey and carb. ammonia preferred. Used no blisters or venesection. Measles now prevailing of mild type. Whooping cough very prevalent. Used in second stage, bromide of potash and hydrate of chloral combined, with good results. Consumption not as prevalent as in former years.

In regard to bovine or humanized vac. virus, I prefer the latter. I saw many fearfully bad arms from bovine virus, especially where they had been previously vaccinated and had 'a good scar.

*Litchfield County.*RALPH S. GOODWIN, M.D., *Reporter.*

During the year ending in May, 1875, there has been on the whole, in Litchfield County, no unusual amount of sickness, and no severe or wide-spread epidemic of a fatal character. Epidemics have occurred, however, in particular localities, but have not spread over any great extent of territory.

The medical gentlemen from the various towns of the county have very generally responded to the request for information forwarded to them, and from their reports I have gathered the facts embodied in this report concerning the amount and extent of prevailing diseases.

Scarlet Fever.—In the town of Litchfield, there have been over twenty cases, two of which were fatal. In Plymouth ten cases are noted, with one death. All of these cases occurred on the hills and in elevated situations, and none in the villages of Thomaston and Terryville, which are situated in the valleys. Salisbury, in the northwestern part of the county, has been swept by an epidemic of this disease the past winter. There have been several fatal cases there, and a large proportion of all cases were followed by acute nephritis from which most recovered. Sharon, next south, has been free; but Dover, beyond, has suffered a severe visitation. In Wolcottville, during the months of November and December, quite a number of cases were noted—almost an epidemic. The disease, however, soon disappeared. In New Milford, this disease prevailed in the early part of last summer, with several malignant cases.

Pneumonia.—There has been an unusual number of fatal cases of pneumonia in all parts of the county, during the winter and early spring. These cases, for the most part, have occurred in the aged and feeble and among children; but the strong and robust have not wholly escaped. A fact with reference to this disease has been noticed by the physicians of Plymouth and vicinity, viz: In the winter and spring of 1873-74, nearly every case of pneumonia was complicated to an unusual degree with acute pleurisy, and very often followed by extensive pleuritic effusion. The recoveries were excessively tedious on this account, and deaths were not rare. This tendency to extensive pleuritic complication has disappeared during the past winter. In Cornwall, Sharon, Litchfield, and Winsted, quite an unusual number of deaths from

this disease are reported. The causes assigned are old age, and the exceptional severity of the winter.

Typhoid Fever.—It does not appear that this disease has been so extensively prevalent in the county as in former years. Plymouth has hardly had more than a single case or two,—an immunity which she has not enjoyed before for a half score of years. With the exception of Watertown and Warren and New Milford, I hear nothing mentioned of typhoid fever elsewhere in the county. Of this affection in Watertown, Dr. W. S. Munger gives the following account: “We have had, during the fall and winter, in the south part of the town, an unusual number of cases of typhoid fever; several of a very severe type, and more of a milder form. Some of the cases were decidedly marked as to their type, eruption, diarrhœa, &c., while others were of a mixed or doubtful character. In the majority of the cases, there has been a marked billious or a remittent tendency, even in those which were, no doubt, cases of genuine typhoid fever. Most of these cases were near a stream of water, connected with which are ponds and reservoirs. I cannot satisfy myself, however, that there was any connection between the sickness and the water, or want of water, rather, in the stream and ponds. The disease was not confined to any class of persons—rich and poor, old and young taking their share alike.”

Dr. Munger further says that though he had many very severe cases in his practice, only one death occurred. In this case, death was in consequence of the *sequelæ* of the disease. A large abscess formed in the ilio-cæcal region and opened externally three days before death. There was no autopsy and it was not ascertained whether the abscess communicated with the intestine or not.

Dr. J. B. Derickson, of Warren, reports five cases of a severe type of *typhus fever*, all occurring in the family of Mr. H. W. Carter, of Warren. The family consisted of Mr. Carter and wife and three sons, all of whom, as I understand, died except one son.

These cases were quite similar and one description answers for all. The disease commenced with a sharp chill, violent headache, pain in the back of the neck, intense heat of skin, and thirst. The pulse at first was usually about 100. In one of the cases the face was swollen and red, simulating facial erysipelas. There were marked exacerbations characterized by a return of the chill, followed by an increase of fever, and then after a few hours or days, the fever would subside and the pulse become less frequent

and all the symptoms would ameliorate. Delirium and diarrhœa were prominent symptoms, and convulsions occurred in one or two of the cases. There was also, in all of the cases, a notable tendency to contraction of the cervical muscles and consequent disposition to keep the head well thrown back. In one of the cases, in which there were no decided general convulsions, there was a constant twitching of the upper lip and of the corners of the mouth and eyelids, accompanied with rolling of the eyeballs. In all of the cases there was well marked tenderness of the bowels, but no considerable tympanitis. Another feature of some of the cases was difficulty of swallowing, as though the muscles concerned in deglutition were partially paralyzed. The pulse in all of the cases indicated extreme general prostration and feeble action of heart. The duration of the disease was from 12 to 21 days. There was no prodromic period in any of the cases except in that of one son, who was the first one attacked. He was living in Terryville, and had been ill and threatened with fever for several weeks previous to the final attack. He came home sick, evidently bringing the disease with him, which all of the members of the family subsequently had. This sickness prevailed in the months of July, August, and September, 1874.

In seeking for the causes in this severe form of disease, Dr. Derickson says that he ascertained that the cellar of the house had contained stagnant water during all the early part of the summer. This water had communicated by some means with the well. It was also ascertained that a drain connected with the sink had been obstructed for some time and had been generating foul gases. It was found also that the surface-washing from the pigsty probably affected a neighboring spring from which water was sometimes taken for family use. In the treatment of these cases Dr. B. B. North, of Cornwall, and others, were associated with Dr. Derickson. The treatment adopted was supporting, stimulating and palliative, and was such as the various symptoms and complications seemed to indicate. In all of the other towns of the county which have been heard from, less typhoid fever than usual is reported.

Inflammatory rheumatism has been unusually frequent this winter. Erysipelas occurred in a slightly epidemic form in Harwinton. Pertussis has prevailed as an epidemic in Winsted, Litchfield, and slightly in other contiguous towns. Diphtheria has occasionally occurred, but no fatal cases are reported. Dr. W.

Beach reports six severe cases of this disease in Litchfield, all living in the same house. All recovered. One of them had as a sequel, a very persistent paralysis of the muscles of the throat and tongue. No local cause could be assigned for these cases. Influenzas, accompanied by very severe frontal headache, acute tonsillitis, and acute bronchitis, have been usually and generally common during the past winter. Follicular pharyngitis, sometimes mistaken for diphtheria, and sometimes recognized in its true character, has spread in an epidemic form through various parts of the county, but has been of so ephemeral a nature as to merit here only a passing notice. With the exception of two cases of varioloid in Litchfield, I have heard of no small-pox in the county. Dysentery, cholera infantum, cholera morbus and diarrhoea were of less frequent occurrence than usual last summer, owing, doubtless, to the temperate character of the season. No new or infrequent forms of disease have appeared.

The only new remedies employed that have come to my knowledge, are croton chloral, guarana and salicylic acid; but no definite results are yet recorded. With regard to the use of chloral hydrate, a wide diversity of view has been expressed by the medical gentlemen who have reported on this subject. Dr. H. M. Knight, of Lakeville, uses the drug largely in his institution—pounds of it every year. Twenty grains is a minimum dose, thirty to forty grains the common dose, and sixty grains a frequent one with him. He believes it to be a *safe* medicine, and that the dose ought always to be *weighed*, never estimated, as quantities of the same bulk will often vary considerably in weight. Irregularity in the circulation does not deter him from its use if its use be strongly indicated. Dr. Knight never uses the drug except in the form of flakes. As soon as the flakes become powdered from long standing or exposure to air, he throws them away and uses the freshly prepared drug.

Dr. J. Knight Bacon says, "chloral hydrate, after its wild-fire rush among the profession, who, many of them, seemed to have looked upon it as the long sought for *Elixir Vitæ*, has sunk to its proper level, and while of undoubted benefit in pure insomnia and in nervous affections without organic disease, is not very much prescribed by physicians of my acquaintance. But it has a desperate and increasing hold upon many who have become victims to its use. These are derived, for the most part, perhaps, from the female portion of the community, and *chloral eaters* are vying

in numbers with the consumers of opium. The habit once formed is very hard to break off. The toxical effects are loss of appetite and notable loss of memory. The average dose prescribed is 15 grains *pro re nata*." Dr. Munger, of Watertown, reports that he should be very sorry to be obliged to give up the use of this remedy. He uses it in doses varying from eight to thirty grains. It does not take the place of morphine, but in many cases in which morphine produces wakefulness instead of sleep, he finds the chloral to work like a charm. He has not found it to derange the stomach to any great extent. He has used it continuously for months in some cases. In such instances he has been obliged to augment the dose somewhat, as a continued use begets a toleration of the drug to some extent. Dr. W. Beach, of Litchfield, is satisfied that for some reason it is not prescribed by himself and colleagues nearly so much as formerly. He thinks that physicians are getting to be a little afraid of it. When given, the dose has been from fifteen to twenty grains, to be repeated in thirty minutes if necessary. The general impression throughout the county seems to be that this drug is not now used quite so often nor in so large doses as formerly. No one, however, discards its use entirely, but nearly all consider it a valuable remedy and would certainly not give it up voluntarily. The average dose recommended is about 15 grains. The highest dose mentioned is 60 grains, and the lowest is 5 grains *pro re nata*. In one instance 200 grains were given in 24 hours.

In concluding this report, I would remark that our County Medical Society is at present in an active and flourishing condition. We have four meetings every year, two stated—the annual and semi-annual—and two quarterly, held in various parts of the county, as is determined by vote from time to time. It is the custom to have a paper read and discussed at each meeting. These meetings have been very well attended, and a generous and laudable spirit of fraternity has always prevailed.

A CASE OF NON-PUERPERAL OVARIAN ABSCESS, WITH HYDATID
CYSTS.

RALPH S. GOODWIN, M.D., *Thomaston*.

Miss F., aged 24, ceased to menstruate in the fall of 1872. She had been previously healthy, but not very strong and robust.

She could not account for the absence of menstruation, and consulted a physician without satisfactory results. She suffered from a sense of weight and some slight pain in the pelvis and back, and was confined to the bed at that time for two or three days only. She never menstruated again during her entire sickness. From this period until the summer of 1873, about nine months, she gradually failed in health and strength, becoming pale and somewhat emaciated. She consulted, at different intervals, several medical gentlemen, all of whom failed to make out the diagnosis.

In August, 1873, I was called to see the case for the first time. The patient had then been out of health for nearly a year. The particular occasion for my being summoned to the case was the development of a new symptom, which had been but recently discovered, viz: the daily evacuation from the rectum of an ounce or two of pus. I found her as just described, pale and weak, but with a fair appetite and digestion. She had no fever nor chills. She evacuated *per rectum* regularly every morning, a half gill, more or less, of highly offensive pus. A few hours afterwards she usually had a natural fœcal evacuation. Occasionally, the pus and fœces were evacuated simultaneously. She was able to walk about the house and to ride short distances in a carriage, but with some difficulty, as the jar pained her.

Upon examining the abdomen externally, there was no fullness, but rather the reverse. I could discover no tumor in any part of the abdominal or pelvic region. There was, however, tenderness in the region of the left ovary, which was aggravated by deep and prolonged pressure. She complained of a dull, heavy, deeply-seated pain in that region, which was subject to exacerbations. It was noticed subsequently, that these exacerbations had a direct relation to the amount and regularity of the evacuations of pus. When the discharge of pus was most copious, she suffered the least pain, and *vice versa*.

An examination *per rectum* revealed nothing. The source of the pus was not discovered. Examination *per vaginam* revealed nothing except tenderness upon the left side near the ovary. The womb was normal in size and condition. The diagnosis was not made out. My suspicions, however, were directed to the ovary as the seat of trouble, from the fact that menstruation had been absent for so long a time. But her general anæmic condition could account for that, and in the absence of any tumor that

could be felt, I am free to confess that I was very much in the dark as to diagnosis.

After several weeks of treatment with tonics, such as iron, quinine, cod liver oil, &c., during which time there was no perceptible failure in strength, I called Dr. H. Buell in consultation. He made a very thorough and systematic examination of my patient, but with entirely negative results. He could not discover the exact source of the pus, nor could there be found the swelling or sac of some kind, which was emptying itself constantly into the rectum. During an interview, we came to the conclusion, however, that there was such a pyogenic sac or cavity, situated somewhere in the vicinity of the upper part of the rectum, and emptying itself into it. But whether it was a suppurating ovary, or a peri-rectal abscess, of a scrofulous nature or otherwise, we had no means of knowing. That was one of the things which "no fellow could find out."

The treatment proposed was as before, tonic and supporting, with anodynes to relieve pain. At the same time it was suggested that I should try, by means of a gum-elastic tube connected with a syringe, to throw detergent and astringent washes into the upper part of the rectum, with the hope that some of the fluid might enter the pyogenic cavity and assist, if possible, in arresting the progress of the disease. Solutions of iodine, nitrate of silver, carbolic acid, acetate of lead and permanganate of potash were used to this end for several months, but without avail. The discharge kept on about the same. The patient's strength gradually declined. Emaciation proceeded to an exceedingly great degree. She ceased to suffer much pain, and became bedridden for several months. She was excessively anæmic and hydræmic. The limbs became much swollen from the toes to the thighs. Her intellect was remarkably clear to the very last, and it was notable that no nervous disturbance of an hysterical, or any other nature, occurred during her entire sickness. She died in this state of marasmus in December, 1874, having been sick a little over two years.

Autopsy, twenty-four hours after death.—The *post mortem* examination in this case was conducted by Dr. Wm. Woodruff, Dr. T. G. Wright, and myself. Upon opening the abdominal cavity, the peritoneum, covering both the abdominal and pelvic viscera, presented nothing abnormal, in appearance. The first thing noticeable, moreover, was the presence of hydatid tumors, some

in the lower part of the abdominal cavity, and some attached to the ovaries on each side. One was found within the peritoneal cavity, attached by a thread-like pedicle to the omentum. This was a pear-shaped cyst, as large as an English walnut, and nearly filled with a limpid yellowish fluid. Other cysts were found in the more immediate neighborhood of both ovaries, either attached to them by thread-like attachments, or glued to them by their walls. These cysts, consisting each of a delicate, semi-transparent membrane, filled with a thin straw-colored fluid, were of variable sizes from a marble to an egg. The largest one found, which was the size of a hen's egg, was situated on the left ovary, and was glued to it by its walls. It could not be detached without rupturing its delicate sac. The place of the left ovary was occupied by a sac, which it was estimated would hold about a gill. The walls of this sac or cavity were from one-fourth to one-half an inch in thickness, and were completely agglutinated to the surrounding tissues and organs. The fallopian tubes were merged into the walls of the sac, and the womb, which did not appear to be abnormal in size or position, was also firmly adherent to the sac. The communication between this cavity and the rectum, which had been established by disease, was readily found, and consisted of a sinus or fistulous tract a half an inch long and a few lines in diameter. It was broken into, during efforts at removal of the diseased mass, when pus flowed out freely.

This sac then, which I have described, was the left ovary converted by disease into a pus-forming cavity, which for more than a year had been discharging its contents into the rectum. It was very difficult to extirpate this diseased organ without breaking down its walls; but by dissecting and carefully tearing it away from the neighboring tissues, it was finally removed and laid open to view. It was found to contain an ounce or two of bad-smelling pus. It evidently had not been distended to its fullest capacity for some time—the walls being collapsed and shrunken somewhat; for the pus, as soon as secreted, had found its way out into the rectum. Its internal surface was uneven and lined with a pyogenic membrane.

On further examination, it was found that the right ovary was also in the same diseased condition, but it had not progressed so far. It was converted into a sac with a single cavity which would hold about half an ounce. It was full of pus which had not yet found an outlet so far as could be ascertained. It was

adherent to the womb and surrounding tissues, but not to so great an extent as its fellow. All of the other organs, so far as examined, were in as healthy condition as could be expected at the close of so protracted a sickness. There were no evidences of tubercular deposit, or cancerous infiltration, in any part.

This case presents several interesting features worthy of notice.

1st. It is a case of double suppurative ovaritis, very chronic, occurring in a young unmarried female. This is declared by all authors to be excessively rare. Niemeyer says that "ovaritis attacks only one ovary." In this case, both ovaries were simultaneously affected. He also says in explaining the pathology of the disease: "If the inflammation start from the stroma of the ovary, the process is usually limited to a decided hyperæmia, an inflammatory œdema, and a proliferation of the connective tissue, which subsequently leads to thickening and shrinking of the ovary, but suppuration and formation of abscesses, or diffuse destruction of the ovary, rarely occurs in these cases. In non-puerperal ovaritis, Kiwisch has only twice seen this rare termination."

2d. As to the cause of this ovarian abscess. Prof. Thomas enumerates the following causes, viz: acute ovaritis, retention of debris of a fœtus, piliferous or dermoid cysts, inflammation of walls of ovarian cyst, tubercular deposit, and the scrofulous diathesis.

In the case under consideration, with the results of the autopsy before us, we can certainly exclude all of these causes, unless it be the first; and I think by referring to the clinical history of the case, we shall be able to exclude that also.

The symptoms of acute ovaritis, which are, very severe throbbing pain, high fever, chills, &c., were notably absent, according to the patient's own account. This allows the presumption that none of the causes above mentioned were concerned in the production of the ovarian abscesses in this case. It may not seem too dogmatic then, in the absence of the usual causes, to suggest that these abscesses were produced in some unknown manner through the influence of hydatids. The presence of these hydatid cysts, as found in the autopsy, inclines me to that belief.

In this, I am aware that I am entirely unsupported by authority. Dr. Thomas says: "Hydatid cysts may develop in the ovary, though the occurrence is so rare as to make an extensive consideration of them unnecessary." He adds: "The literature of the subject is very meager." He quotes Kiwisch as saying

that "he has never met with an instance, and that he suspects the authenticity of the reported cases, thinking that torn off secondary cysts have been taken for acephalocysts." He concludes the subject thus: "Too little is known of such cysts to warrant further remarks upon them."

Nowhere have I seen it intimated, moreover, that hydatids, even if actually found in the ovary, would be likely to produce suppurative disturbance. In the case under consideration, the nature of the cysts, which I have described, was carefully scrutinized and fully discussed by the medical gentlemen present, who unanimously came to the conclusion that they could not be secondary ovarian cysts, but that they were genuine hydatids, and nothing else.

May not the presence of hydatids, being lodged and growing within the parenchyma of the ovaries, and by their action as foreign bodies, gradually inducing the suppurative process, explain the slowness and insidiousness of the approach of the disease in this case, as well as the interesting and unusual appearances found in the antopsy?

*Middlesex County.*DANL. A. CLEAVELAND, M.D., *Reporter.*

In compliance with your request I transmit what information I have been able to obtain in regard to matters of professional interest in this county for the past year.

In seconding your earnest effort to obtain information from every town in the commonwealth, in regard to the health of the people, and the experience of physicians in different sections with some remedies now in use, and the adoption of new ones, as well as their observation of the usual phases of disease, I wrote to nearly every physician in the county early in January, setting forth your views, as well as my own, of the importance of redeeming the profession in this State from the just charge of apathy in these matters, endeavoring to incite those brethren within my precinct to an effort to place the profession of our State on a footing with the other States in New England.

In response to earnest appeals sent to nineteen physicians I received replies from only three, Dr. S. W. Turner of Chester, Dr. Miner C. Hazen of Haddam, and Dr. J. H. Churchill of this city, a synopsis of whose reports I subjoin. From personal conversation with many physicians from different parts of our county, I learn that we have been unusually exempt from any prevailing sickness the past year, with the exception of intermittent fever. This disease has prevailed to a greater or less extent all over our county, and in and about Middletown it was exceedingly frequent and persistent during the spring, summer, and fall months. The local influences which produce this disease and keep it alive in this community, where, until within a few years, it was almost entirely unknown, are questions well suited to the investigations of a State Board of Health, did such an organization exist within our commonwealth.

In response to the questions propounded in the circulars sent out, Dr. Turner, of Chester, replies in substance as follows: Has used chloral somewhat in his practice, and has never been disappointed in its effects. Has kept accurate records of its use and the results in two cases. First, that of a lady who had lived on morphine and stimulants for a period of thirty years. From June 2, 1874, to Jan. 15, 1875, a period of 227 days, gave her an average of 16 grains daily. During this time her appetite and general health have improved, and she has taken $\frac{2}{3}$ less morphine than before commencing the use of the chloral.

The second record kept was of a man 87 years old, who in his early life was a confirmed inebriate, but who reformed many years since. He has suffered from urinary troubles for a few years past, and about one year ago, while he was unusually nervous, gave him chloral; gave him from 10 to 20 grains at a dose, with satisfactory results.

Dr. Turner is now giving it to a lady 91 years old, who is suffering with cancer of the breast. She is taking it in 10-grain doses with the effect of quieting pain and procuring sleep. In one case of puerperal mania gave it without benefit, and then tried hypodermic injections of morphia with the desired result. Has always found it beneficial in acute and chronic nervous diseases; would not be willing to be without chloral hydrate in his practice.

Dr. Hazen, of Haddam, writes: "There have been the usual diseases of this locality the past year. Intermittents to some extent have prevailed and the various out-croppings of malaria in various phases. Pneumonia has been somewhat common and of severe character. We had a general epidemic of rubeola in the early part of the year, of somewhat severe character. With regard to new remedies, have not much to report; have to feed my patients on quinine to keep them along. Think I have used the chloral hydrate less than usual the past year; give decided doses generally, and only calculate on one dose—from 20 to 40 grains."

Dr. Churchill writes: "The only epidemic, or anything approaching one, which has occurred in my practice during the past year, was one of sore throat, in which the constitutional symptoms resembled those of diphtheria. The tonsils were swollen and of a dusky red, but in no case was there any exudation. The primary symptoms yielded readily to treatment, but the patients were left quite debilitated and required a long course of tonics to bring them up again. Diseases of a malarial type have been quite prevalent, but I can assign no probable cause.

I have been employing ergot in congestion of the brain and cord, for the purpose of reducing circulation therein, with very good results. The statements made of its physiological action in reducing the calibre of the smaller arteries and arterioles, seem to be verified by clinical facts which I have observed.

With regard to chloral hydrate, I can only say that I do not make very extensive use of it, and have rarely exceeded 15 grains at a dose, more commonly using but 10 grains."

*Tolland County.*S. G. RISLEY, M.D., *Reporter.*

I am able to send but little matter of professional interest from Tolland county. The brethren here are men of great experience and wisdom, but they do not find time to commit their thoughts to paper. I have supplied each member with a blank and earnestly asked for written documents; and I respectfully send you the result.

 A CASE OF SINGULTUS.

S. G. RISLEY, M.D.

O. B., is 52 years old, little under size—weight about 125 lbs., delicate complexion, feeble organization; machinist by occupation. He has had a great deal of sickness during the last 20 years. Generally when he is sick he has accompanying hiccup (singultus), which symptoms would be present for the most part from two to five days.

In the years 1861, '71 and '74, he had long sickness, each time being afflicted with hiccup about 14 days. It was not constant during the twenty-four hours, but there was usually a cessation of the trouble for three or four hours, when he seemed wearied out, and would instantly fall asleep. Often when he was asleep a gentle spasmodic action was observable, resembling the hiccup during waking hours.

The treatment of this patient was various and varied. Most of the antispasmodics and anodynes were resorted to at different times. I think on the whole as much benefit was derived from remedies designed to correct the condition of the stomach, such as bismuth, pepsin, &c., as anything. But in the three protracted attacks, nothing but time seemed able to bring this troublesome disease to a favorable termination. The man is more of an invalid since his long sickness last summer than ever. The late Dr. Beresford of Hartford, on one occasion advised blistering along the course of the pneumogastric nerve, which had no effect on the disease.

A CASE OF PARALYSIS.

WILLIAM N. CLARKE, M.D.

Mrs. B., a widow lady of 64 years, while attending an evening meeting (Advent, she being of that religious faith), on the 13th of December last, and while she was speaking in meeting, which she was accustomed to do, she found a difficulty in calling to mind words to express her ideas, or rather a *want* of ideas, which was very unusual for her, as she was very gifted in extemporaneous speaking. This hesitating became quite noticeable by the audience, but she finished her remarks and returned home, without feeling much, if any, indisposition; but very soon noticed that there was a difficulty in collecting her ideas and conversing freely. She would hesitate, when asked a question, it would be some little time before she would give answer. This difficulty gradually increased, and was soon followed by gradual loss of muscular power in the right arm and leg.

When I first saw her, about two weeks from the first appearance of the disease, she could answer questions and tell her feelings, although imperfectly, but she gradually lost her speech so that she would answer by yes and no only, and in about three or four weeks she became speechless, incapable of uttering a sound, and the limbs became perfectly paralyzed, and still she looked in the face almost as natural as ever, and seemed to know everything as well as ever she did.

The effects of this disease on her faculties, mental and physical, were rather peculiar. After she became speechless, I proposed to her to write her wants on a slate; a pencil was given her, which she took and held a few moments in her left hand, and then returned it, shaking her head, and upon being asked if she could not collect her ideas she again shook her head, evidently showing she had no control of her mind. I found upon inquiry that she was deaf with the right ear, showing her paralysis to be complete or nearly so of that side. Her eyes were not at all affected, having the perfect use of them both till she closed them in death, which occurred Feb. 9th, nearly two months from the first attack. The usual treatment in such cases was applied, but with no apparent effect.

ARTICLE XXVI.

PUBLIC HYGIENE.

An Address to the New Haven County Association.

BY C. A. LINDSLEY, M.D., PRESIDENT.

If one were to ask the next intelligent person he might meet, this question: What is the function and duty of a physician? The prompt and ready answer would probably be—to cure the sick. And such response would well consist with popular sentiment respecting the purpose and object of medical science. But the questioner might by chance meet a person of broader views, of more comprehensive and thoughtful mind, whose answer would not be so simple and narrow and so limited; but with an intelligent and truer conception of the full scope and possibilities of our profession would reply—to cure the sick, but *more especially to prevent sickness.*

Consider with what astonishment and indignant horror, the world would regard a large commercial seaport town, which provided all the appliances, conveniences and means that science and skill could devise, together with an host of brave and trained men to use them, for the sole purpose of saving life and property from the vessels which were wrecked upon its coast, and yet had made no survey, possessed no chart of reefs or shoals or rockbound currents by which such wrecks occurred, and had no skillful pilots to guide approaching ships through such dangerous passes, safely into harbor. In short, possessed the most complete facilities possible for saving from wrecks, but no provision whatever for preventing wrecks.

And so by an obvious parallel, if the whole business of physicians is limited to curing the sick, then are we but mere wreckers, to save whom we can of those who in the voyage of life, trusting only to fair winds and open seas, have been drawn into the whirlpools of contagion or been cast upon unknown reefs by the tempests of disease.

The popular answer then, "to cure the sick," is defective, is only half the truth,—nay, not that, for whereas the pilot preserves the lives of hundreds where the wrecker saves but one—so too it will be found that "preventive medicine," so called when developed as it can be, will preserve its hundreds too from sickness and death, where mere curative medicine can restore but one to health.

In this direction now more than ever before is the mind of science turned. At no time in the history of civilization has the study of public Hygiene made such advances, and enlisted so many earnest workers, as during the present generation. And as the object is pursued, new fields of investigation constantly open; richer harvests are found ripe for the gathering; wider and wider its connections and dependencies expand, until learned men from all other walks of life become hearty co-workers with us in the good cause. And while the *press*, the *pulpit*, and the *schools* aided and protected by the strong arm of the *law*, send forth their laborers into the harvest, it must ever be that physicians, as the acknowledged conservators of the public health, shall always form the vanguard of progress, by their special fitness to investigate the *causes* of physical deterioration and disease and to point out how they may be averted.

The study of the causes of disease is strictly a part of physiology, but it can only be carried out by the practical physician, since an accurate identification of diseases is the first necessary step in the investigation of causes.

The word Hygiene has a broader signification than some attach to it. Physical well-being is so intimately and inseparably connected with all other well-being, that Hygiene in its largest sense includes rules for the perfect culture of both mind and body. We cannot disassociate the two. The relations of mental and moral action to the functions of the body are so mutually sympathetic, that abnormal conditions of one inevitably disorders and hurts the other. The rules then upon which a perfect system of Hygiene would be founded must be drawn from the knowledge and experience of the physician, the schoolmaster, and the priest. The body must be trained, the intellect developed, and the moral intelligence cultivated, and all in harmony. "Then," says a distinguished writer, "if our knowledge were more exact and our means of application adequate, we should see the human being in his perfect beauty, as Providence perhaps intended him to be, in the harmonious proportions, and complete balance of all parts, in which

he came out of his Maker's hands, in whose divine image, we are told, he was in the beginning made."

But such perfection is utopian; the hope, even of approach to it, must be only after generations of practical experience in hygiene. So remote is it that peering forward now towards the far distant goal, we seem but to have just begun our progress thitherward. And yet we have begun. Long strides have here and there been made, of a most assuring and encouraging significance. The economy of health is being investigated now as it never was before. Some of its laws, long known, but most criminally neglected, have been put in practice with surprising results. Human life has been lengthened, health protected, sickness averted and the sum of human happiness thereby proportionably augmented. That too, by means so obvious and practicable, that already those in authority, charged with the execution of public laws of hygiene, are accused of criminal neglect if certain diseases prevail, or if epidemics are allowed to exist.

The diseases which are capable of more or less control by public measures of prevention, are among the most important factors in the premature destruction of human life. If in all instances they do not prove speedily fatal, they may nevertheless be as important agents of human misery and distress, by the consequences of prolonged sickness which they occasion and the reduced standard of general health and prosperity. Diseases of the zymotic class are for the most part preventable by well directed hygienic precautions, and even those which are called constitutional diseases are very much under control by enlightened hygienic action. It needs no argument to convince this audience that Typhus Fever owes its origin to overcrowding, uncleanliness, and want of ventilation. That Typhus Fever is preventable by simple cleanliness and an abundant supply of fresh air, is demonstrated by the fact that due attention to these measures alone have practically abolished the disease; while curative measures were utterly inert to stay its ravages when these conditions were neglected. The disease is so contagious that isolation and disinfection are essential elements of its management. The external cause is an animal poison, communicable from one to another, floating in the air as thrown off from the skin or lungs of the patient. It is not believed to be communicated in water or in food. The place of its nativity is in crowded tenements, jails, and ships, and hence its synonyms, jail and ship fever. Its contagious quality is established by the

records of what have been termed "Black Assizes," wherein it is stated, judges, juries, and others in court took the fever from the exhalations from the prisoners. It has often been experienced that even exposure to the weather, bad diet, and defective nursing, are less dangerous to the patients, than aggregation of numbers of cases within walls.

Typhoid Fever is a disease of far more practical interest to us than that last named. It is the prevailing continued fever of New England; and it demands from us a far more attentive regard and study from a hygienic standpoint than it has hitherto received. While it would not be right to say that we have studied too much the cure of our typhoid patients, it certainly is right to say that we have neglected too much the investigation and practice of those measures which limit its prevalence and even promise its suppression. Its producing cause is a poison of animal origin. It is believed to exist chiefly in the intestinal discharges of persons sick with the disease. Other modes of origin and transmission are suspected, and have not been disproved. That a poison received from without is necessary to its development, may now be considered the settled belief of the profession. Pathologists differ respecting the origin of the poison. While all agree that it does emanate from the discharge of patients sick with typhoid fever, they do not all agree concerning another source of production, namely, the effluvia from sewers and cesspools. Those who believe in the growing doctrine, of the *invariableness of causation*, deny the latter theory. It is not my purpose to enter into a discussion of this question now. Suffice it say that very significant facts are adduced in support of both sides of the question, and it is therefore to be still considered an unsettled point. In a practical sense it is almost immaterial how it may be settled, the effluvia from sewers, even if not capable of generating the specific poison of typhoid fever, are sufficiently objectionable for other reasons to demand the strictest care in avoiding them. The point of more practical interest to physicians as sanitarians is the means of destroying the poison however it may be generated. If the fact is conceded as stated, that every typhoid fever patient gives off from his person with his intestinal and other discharges a poison capable of reproducing the disease in healthy persons, it becomes a matter of the most urgent consequence, to provide, if possible, that the said poison shall not be operative upon healthy persons, to reproduce the fever. By every practice known to

science, means should be sought by which its virulent action shall be destroyed and rendered harmless. The interests of all who are susceptible to the action of such poison are at stake. It is often of even greater moment than to cure the sick one.

There are two ways in which the desired result can be attained. One by destroying the poison germs by chemical agencies, the other by putting them beyond the reach of human contact. The latter is sought to be accomplished by deep burying in the ground, all the evacuations from the body of the patient, and all water used in washing his person or clothing. This method is often wholly impracticable. The chemical agents most used as disinfectants are carbolic acid and the mineral acids and the salts of iron and zinc. Under no circumstances whatever should the evacuations from a typhoid fever patient, whether of fæces or urine or expectoration, be thrown into any privy vaults, water closets, sewers or cesspools, until after thorough disinfection. The poison enters the body both by air and water, and recently it has appeared that milk is a competent vehicle of admission.

Every case of typhoid fever implies the presence of the specific poison as a producing cause, and is evidence conclusive that something wrong exists for the practical hygienist to investigate and correct. If neither privies nor sewers are discovered to be in fault, then look well to the water supply. There are reasons for believing that the dejections from fever patients heedlessly thrown into privy vaults and cesspools, gradually percolate through the soil, until they reach the wells or streams from which drinking water is obtained, and that in this way more frequently than in any other, the healthy are infected. The following instance is well authenticated. A large number of persons attending a ball at Cowbridge were attacked with typhoid fever in consequence of using water from a well which had been contaminated by the evacuations from a patient suffering with the disease.—*Manual of Public Health, Ireland*, p. 161.

I appeal to your own experience and practice in this frequent fever, to render your own verdict, whether innocent or guilty of neglect of duty respecting these important precautionary measures.

The eruptive fevers are generally contagious. Because of that, they are dangerous to the public health, and demand from those in charge of these patients far more careful attention to isolation and disinfection than is commonly given. Small-pox is the only one, against the spread of which we possess a sure and certain

guard, in that most brilliant of all medical discoveries, vaccination. The origin of the eruptive fevers is obscure. Recent investigations have led to some plausible speculations respecting scarlet fever and measles. But the evidence is yet by no means conclusive. A theory has been proposed, based on a series of observations, that the miasm arising from the decomposition of the refuse of slaughter houses might generate scarlet fever. Its frequent prevalence in the immediate neighborhood of slaughter houses has been remarked.

The origin of measles has been ascribed to the fungi upon mouldy straw; and the oft-observed prevalence of measles in camps it is supposed may be so explained. Both theories are suggestive and deserve fuller investigation. Nothing whatever is known of the origin of small-pox. In the case of scarlet fever and measles no means are known which will prevent the activity of the poison in susceptible persons, except that a good sanitary condition lessens its intensity. The evidence in regard to belladonna in scarlet fever is contradictory, but on the whole unfavorable. All the discharges from patients should be carefully disinfected and the skin daily anointed. The contagion becomes active by inhalation, and also by reception with drink or food. Milk has been discovered to be a medium of communication, as in typhoid fever. The poison has appeared to get into the milk from the cuticle or throat discharges of persons afflicted with scarlet fever, who were employed in the dairy while ill or convalescent.—*Dr. Parkes, Practical Hygiene*, p. 246. Many instances in which the evidence is very strong are now on record. The period of activity of the poison of both small-pox and scarlet fever may be very long—no one has presumed to limit it. The hope and the search for some means which will protect from scarlet fever as vaccination does from small-pox, should not be abandoned.

It is impossible on this occasion to review, however briefly, the hygienic relations of all diseases. My purpose is rather to illustrate the immense success of well directed effort in preventing sickness. The important factors chiefly concerned in such efforts, the agencies which we can control, and by means of which we can determine the healthfulness or the insalubrity of human existence, are for the most part air, food, water, exercise, and cleanliness. The wholesome supply of these essentials of life, combined with favorable mental and moral conditions, afford the highest possible standard of healthfulness. We are not one of

us sufficiently impressed with the vital importance of each and all of these essentials.

Permit an illustration of the simple value of pure air, in that most prevalent and fatal of maladies, consumption. Dr. Cotton shows that in 1,000 cases of phthisis, 841 were persons of in-door occupations, 159 only following an out-door life. In the British army, by sanitary measures, chiefly those of improved ventilation and increased cubic space, the mortality from this disease has been reduced one-half in all, and to one-third in some corps. Insufficient or unwholesome food is so obvious a cause of ill health that illustration would be superfluous.

Water, while it is almost as essential to life as air, is often the vehicle of the most deadly poison. Unremitting vigilance respecting our drinking water will scarcely ensure continuous safety. Nothing can be judged by its appearance. Bright, clear, crystal water may be a most dangerous fluid. Already I have mentioned an instance of the communication of typhoid fever from a well. A volume might be filled with like examples. I will trespass upon you with only one more. "Two water companies supplied a part of the city of London. Their mains ran along the same streets, side by side, and supplied water to the different houses, some drawing from one, and some from the other. One company drew its water from high up the Thames, where the water was comparatively pure. The other drew its supply much lower down the river, where it was grossly contaminated. Four thousand persons died of cholera in this section of the city. After the epidemic subsided, a most careful and searching investigation, house by house, was instituted, when it was found that the mortality in the houses furnished by the first named company was 37 per 10,000, while that in the others was 130 per 10,000, or nearly $3\frac{1}{2}$ times as great."

In regard to the healthfulness of simply keeping clean, I quote one or two passages from an address of Edwin Chadwick, C. B., one of the most eminent sanitarians of England. "It may be set down as an economic axiom, that whatever else they denote,—filth and squalor in a class or population, denote loss of power and waste." "A general who was beleaguered with a battalion in Spain, had his men put upon short rations. To occupy and amuse them, he sent them to a neighboring river to bathe daily, and he found what he had not expected, that under this course of daily ablution, his men were in better force, that his power was greater

on their short rations than other men were on their full rations." Another remarkable observation is made by the same author: That whereas among soldiers for whom only provision was made for washing face and hands the death rate was 17 per 1,000; soldiers from the same class confined in prison on reduced fare, but practicing absolute cleanliness of person and clothing, enjoyed vastly better health, and the death rate was only $2\frac{1}{2}$ per 1,000. There are good reasons for thinking that the superior health of prisoners, which has been observed in well ordered prisons, is due mainly to the rigid habits of daily personal ablutions required of them, notwithstanding the disadvantage of confinement and very low diet. In stock-raising the principle has been applied with profitable results. Even pigs, which are popularly believed to be in their most natural condition when the dirtiest, are found to illustrate the advantage of cleanliness. Experiments have determined that the growth of pigs daily washed is one-fifth greater than that of the unwashed, although fed on exactly the same diet.

The advantage of cleanliness on a large scale has perhaps never been more satisfactorily demonstrated than by the notorious Benjamin F. Butler, who at least made himself an enviable reputation as a sanitarian, whatever may be said of his propensity for spoons, when during the late war, through the agency of a sanitary police, enforced with military authority, he converted the city of New Orleans, before disreputable for its unhealthiness, into one of the most cleanly and salubrious ports on the continent. The comparisons of armies as regards those subject to sanitary regulations and those in which they are neglected are the most satisfactory, and show what is possible: because whatever is attempted can be accomplished, which is not true of mixed populations. Still it would be quite easy to draw from the experience of European cities many instances in which the death rate has been reduced from 5 to 25 per cent. by the adoption of even a few sanitary improvements.

Your efforts in improving the well-being of your fellow creatures need not, however, be limited to the amendment of those conditions which are directly productive of specific disease. There are many other subjects legitimately within the consideration of sanitary science, which indeed is almost co-extensive with everything pertaining to the best interest of social life. All those practices in communities, and conditions and habits of life, in which large numbers or classes of population are concerned, and

which depress the vital energies of those subject to them and increase their susceptibility to disease, are proper objects of hygienic consideration, and present fields of labor from which the most prolific harvests can be gathered. To even enumerate all these would become tedious. The more obvious topics to which I allude are the sewerage of towns and cities, drainage of lands, location of dwellings, their construction as to air, light, dryness, &c., particularly the tenement houses of the poor, the public sale of food, erection of churches and halls, and school houses, where large assemblies gather, the influence of occupations and trades, the habits of operatives, whether voluntary or forced. I conclude this brief list with one other topic which I believe is justly entitled to a larger share of attention from both sanitarians and philanthropists than it has yet received; and that is the protection of children of tender age from the ignorant cruelty of parents and the avarice of manufacturers. The statutes of Connecticut forbid under penalty the employment of any minor under fifteen years of age for more than ten hours per day at labor, and the next section declares that eight hours shall be the length of a lawful day's work. The practical question is, can children with safety to their full vigorous physical development be required to labor under the same restrictions of confinement, &c., as many hours per day as adults? It is a pitiable sight to see little children, many of them frail, feeble and sickly, in large numbers in the various factories, in which they may be found, laboring throughout the long weary hours of the day at an age when every feeling of humanity and reason declares that it is an outrage against nature. It is a mean and pitiful advantage taken of their very helplessness, to thus break down their development and ruin their chances of a healthy future for the very slender results of overworked exertion thus forced from them.

I appeal to you as sanitarians and philanthropists to investigate this subject in the name of humanity. But I assure you it will be idle to attack their oppressors through their sentiment of benevolence; they are steeled against any such impressions; you must satisfy them, as you can, that overwork is always unprofitable, wasteful and expensive; satisfy them of this, as the stock-breeder is now satisfied respecting his colts and steers, and you will be surprised to see how economy as a motor of human action can beat sentiment and benevolence out of sight. A strong illustration of this is found in the experience of transporting British

convicts. At first a fearful mortality prevailed, sometimes one-half being thrown overboard during the passage. The appeals of humanity were vain. The sufferings and death of the poor victims were claimed to be unavoidable. At length a happy thought suggested a different contract for their passage. Instead of passage being paid for the numbers embarked, it was contracted for that only those landed alive should have their passage paid. It was wonderful with what zeal shippers applied themselves to the practical applications of sanitary science. The result was, even among persons of such bad material as convicts, a reduction of the mortality from 50 to $1\frac{1}{2}$ per cent. This arrangement too evoked assiduous care for the passengers, and secured to every poor fellow, who died on the passage, at least one sincere mourner. When in the cause of reform, the sentimentalist and the moralist have failed, the economist can step in, and by his potent art draw down metallic tears upon the cheeks of avarice.

In conclusion, gentlemen, I wish I might impress more fixedly in your minds the vast importance of those influences which, almost wholly manageable, act, as we direct, for weal or woe upon the public health. While all are ready to admit in general terms the close relationship between disease and controllable causes, still very few realize the degree or extent to which human ailments are preventable. The bills of mortality in large cities show that a very great percentage of deaths are due to preventable causes. If the days of the years of our pilgrimage are three score years and ten, there can be no good reason why the average of human life should fall so far below one score, and why hecatombs of children should be sacrificed under the age of five.

Sanitary science is no longer a subject for doubtful disputation; not one about which even the different denominations of doctors differ, and the application of its principles suggested by reason and supported by practical experience and classified results, fully attest its value, wherever men are associated, or whenever human life seeks to be sustained. Hygiene is now gradually assuming its true position as an art, based on the science of physiology, with whose progress its future is identified.

If we had a perfect knowledge of the laws of life, and could practically apply this knowledge in a perfect system of hygienic rules, disease would be impossible. But as it is, disease exists in a thousand forms, and the human race languishes, and at times almost perishes under the grievous yoke. Permit me to conclude

in the words of an eminent teacher of hygiene: "In the scheme of Providence it may not be meant that man shall be healthy. Diseases of mind and of body may be the cross he has to bear; or it may be the evil against which he has to struggle, and whose shackles he is finally to unloose. The last disease may disappear we may believe only when man is perfect; and as in the presence of the Saviour all disease was healed, so, before perfect virtue, sorrow and suffering shall fade away. Whether the world is ever to see such a consummation no man can say; but as ages roll on, hope does in some measure grow. In the midst of all our weaknesses, and all our many errors, we are certainly gaining knowledge, and that knowledge tells us, in no doubtful terms, that the fate of man is in his own hands."

"It is undoubtedly true that we can, even now, literally choose between health or disease; not, perhaps, always individually, for the sins of our fathers may be visited upon us, or the customs of our life, and the chains of our civilization and social customs may gall us, or even our fellow men may deny us health, or the knowledge which leads to health. But as a race, man holds his own destiny, and can choose between good and evil; and as time unrolls the scheme of the world, it is not too much to hope that the choice will be for good."

ARTICLE XXVII.

STANDARD OF VITALITY IN IRRITATION AND INFLAMMATION.

BY G. W. HARRIS, M.D., OF OLD LYME.

By vitality, we understand the life-sustaining endowment and functional activity of the whole body, or any of its parts. The usual definition of disease is any variation from the healthy vital processes of the system. This aphorism would naturally lead to the assertion, that disease cannot obtain without deficient vitality—and that essentially disease is any *deficient* variation in the vital processes of the system. Yet so often in its initial stages, at least, is sickness even unto death, considered an entity or vice to be expurgated, starved out, or eradicated by venesection, I trust our society will excuse my making it the object of this brief paper to substantiate the notion that diseased processes are concomitant with loss of real vitality. The most debatable grounds are the conditions of irritation and inflammation; and the time at our disposal will necessarily limit our attention to them.

Irritation embraces the state of activity arising from the spur of healthy stimulation; that caused by unhealthy or persistent stimulation; the initial processes of inflammation; and the exhaustion of sudden shock. If these typical classes be discerned, none would question that healthy stimulation can never become a disease, or that shock can possibly occur without great decrease of vitality, and our enquiries are obviously limited to cases of unhealthy and persistent stimulation, and the first stages of inflammation. Instances of unhealthy or persistent stimulation are common enough among persons addicted to bad habits; and in cases of disease accompanied by sympathetic pains in other parts of the body. But we think no one will pretend the blotched and bloated inebriate, or the sodden and sallow opium eater, or the haggard, nervous, and shame-faced onanist, or even the rude health of the gourmand to be quite up to the normal standard. As for sympathetic pains, I do not know one which does not considerably interfere with the functional activity of the affected

part: a headache, from deraugement of the stomach, impedes the processes of thought, volition, and sensation, and may seriously affect the conformation of the brain; pain in the left shoulder from heart disease; or the right, from disease of the liver; left side, from disease of the womb or testes; or knee, from hip disease; the glans penis from stone; all interfere with the functional performances of the sensitive parts, and are therefore attended with diminution of vitality therein.

Let us now cite some of the examples of irritation preceding inflammation. A man wears a tight boot for a few hours, he is not very uncomfortable, but being upon his feet all day at night they are tryingly sore, and each step is accompanied by acute pain, and when the boot is removed the feet are red and swollen. Another is out in the wind all day, with the thermometer in the neighborhood of zero; his eyes by night seem full of gravel and are suffused with tears, and a network of irritated vessels covers the conjunctiva; they are so painful he cannot bear artificial light. Each finds his appetite gone, and with such simple measures as may be, goes supperless to bed, but morning finds the feet and eyes quite recovered, but for the next few days they will be more considerably treated, and really no harm seems to have come of the exposure.

These seem to me sufficiently illustrative, but if it were necessary to instance a grave organic irritation, we might consider the first stage of pneumonia, when peurile respiration, followed by minute crepitation, and a shade of dullness or pathognomonix of congestion of the lungs. We have all seen such patients with a bounding, frequent pulse, fairly heaving, seemingly chilled to the core, with dyspnœa painfully suffocative, impressed with a gloomy foreboding of impending sickness, whom after very free perspiration and good night's rest, we have found in the morning with a respiration as soft as the warm rustle of summer winds—so comfortable in every way as to believe themselves quite equal to any emergency or undertaking, and, in fact, get right up without a pull back.

These every day examples of prompt recovery can hardly be satisfactorily explained by asserting that they are simply cases of vascular excitement starved out by going supperless to bed, for if the sufferer have a restless night they are pretty sure to be aggravated next morning. Now if reduction of vitality were the desideratum, nothing remedially, excepting bleeding and poisoning,

are so exhausting as sleeplessness. Is it not that sleep and the recumbent posture relieve the feet? sleep and exclusion of light relieve the eyes? sleep and established perspiration relieve the lungs? and give nature a chance to rally with an elasticity wonderfully prompt and efficacious, which elicits our highest admiration, but is as inscrutable as the forces of life?

These three typical examples of unhealthy irritation, if not arrested would have led to inflammation. I know many would say that congestion of the lungs when vesicular rales obtain has become an inflammation, but am inclined to think the presence of fluid in the air vesicles not more conclusive as to this, than suffusion of the eyes, or a watery nose, after being out in the cold, would be of ophthalmia or catarrh, in fact may appeal to the experience of all present to confirm my own, that the cases most likely to prove conjunctivitis are those where the eyes are dry, those most likely to prove catarrhal, where the nostrils are hot and parched, and those most likely to eventuate in serious pneumonias, where the dry peurile respiration precedes for a *day or two* the vesicular rale.

Regarding acute inflammation, the popular professional opinion is that the vitality of the affected part is increased; humoralist, solidist, and physiological speculators and adherents, all made the process excessive in vitality; and even now the microscopical pathologist, with excessive cell proliferation, under his focus, inclines to the same opinion. Indeed, this notion has been dogmatic until quite recently. But now the names of Bennett, Lister, Anstie, Chambers and others, cause the evidence upon which it has been adduced to be seriously questioned.

The grounds of dissent may be fairly set as follows: The symptoms of inflammation are pain, heat, redness, and swelling succeeding the condition of stasis in some of the capillary vessels of the inflamed part. Stasis is the occlusion of one or more capillaries by the stoppage of blood corpuscles within their walls. Previous to its occurrence the irritating cause produces active determination of blood to the affected part, but unless stasis occurs none would affirm that inflammation ever obtains.

In stasis the occluded vessels, and neighboring structures dependent upon them for nourishment and support, cannot be endowed with normal vitality—as their circulation and all the processes of nutrition are arrested. All the excitement subsequently exhibited is the result of reflex effort to resolve the abnormal condition.

If there has been a wound a cicatrix is produced; if not, disorganization sometimes occurs, as in abscess, or if not, the inflamed tissue cannot perform its proper function. It is conceded a cicatrix or the seat of a former abscess is not so strong as the original tissue, and we have, therefore, sufficient analogy for the inference that any part which has been the seat of inflammation is weaker than before; and this accords with practical observation, as it is always recognized that an organ, having been inflamed, requires time to recover anything like its former tone, and it may be doubted whether it ever becomes quite as good as formerly.

The cause and result of inflammation being of lower than normal vitality, we are permitted to glance at the intermediate excitement and see if the excessive temperature, sensitiveness, coloration and tumefaction are not significant of similar deficiency.

The local symptoms of this stage, "pain, heat, redness, and swelling," as far as our present powers of observation extend, are due to hyperæmia, and though the reflex nervous influence is all powerful in their production, it is as impalpable as the force which magnetizes the needle, and as little understood as magnetism before the days of Franklin and Volta. Without doubt, the condition of vitality is entirely dependent upon this normal element, and if its amount and force were measurable, the mere theoretical consideration of the subject would never be entertained; but as it is not, we are obliged to base our opinions upon the hyperæmic conditions and its products.

To most observers it has seemed, although stasis is a condition of low vitality, yet the effort of nature to remove it is one in which vitality is excessive, very much indeed like that of a person who tries to throw off an oppressive weight, and in the exercise of all his powers is admitted to be in higher vitality than when quiescent. But the parallel is imperfect, for let us bear in mind, the normal functions of the part are interfered with, and in many cases completely arrested, and that absolute rest forms, unless in organs where action is essential to existence, the most important element of resolution.

Now as to the symptoms: 1. Inflammatory pain has been stated, by Dr. Radcliffe, to be of two kinds: 1, where it occurs at the commencement and soon ceases; 2, where it persists. "The first is attended with chill, contraction of the blood vessels, and the nerves are in a state of unusual feebleness and electric disturbance, owing to that feebleness, but as soon as inflammation

proper commences spontaneous pain ceases, and only tenderness on pressure remains. (2) In certain cases pain persists after the congestive stage has commenced, and the skin is hot and the pulse throbbing. These cases, however, are universally such as are distinguished by the fact that the tissues of the inflamed part are subjected to compression, or to friction, or stretching, both of which are varieties of compression."

Endorsing this opinion, it would be legitimate to conclude that inflammatory pain is mechanical in its origin and cause, and not indicative of exalted action of the sensory nerves.

II. Heat. We know heat is generated by nearly all chemical and mechanical processes, and that the highest degree of heat which the human body exhibits, just precedes approaching dissolution; and practically we are warranted in the statement that abnormal heat in any part or the whole living body, is conclusive evidence of incapacity.

III. Redness and swelling are due to active determination of blood to the part, and the products of inflammation. Action and life seem synonymous, yet a quickened circulation is no more proof of exaltation than heat, and the most frequent pulse is indicative of the feeblest hold on life.

The products of inflammation, liquor sanguinis, coagulable lymph, pus, false membrane, are all below the average standard of the tissues in which they may obtain. These remarks are not positively satisfactory, but sufficient to authorize our holding the position until directly answered; and "the general conclusion" as stated by Prof. Lister, seems permitted, "that inflammation consists in the removal of the modifying influences of the living state, allowing the physical properties of the parts, hitherto restrained, to come into play."

Perhaps there does seem in the course of inflammations during the stages of resolution, a period, such as when a wound or abscess fills up, or inflammatory products are removed, in which the faculty of repair is an exaltation. But probably even this is more apparent than real; for the inflammatory excitement has now entirely subsided, and the capillary stasis has been supplemented by collateral vessels; and the new cell growth is from healthy cells around, and has never been demonstrated as excessive or beyond the natural production. These remarks apply as well to the absorption of inflammatory exudations. To be sure, inflamed surfaces may absorb, for example, the syphilitic virus from

chancre and putrid matter coming in contact with any sore, but it is recognized that healthy inflammatory products are not noticeably diminished until inflammation subsides; for instance, effusions in pleura and pericardium, the hardened base of a boil or carbuncle, and the callus of united fractures, and may it not be that septic absorption is owing, so to speak, to the acrid and more penetrating quality inherent in the virus?

The constitutional symptoms when considered collectively, and the fever and rapid pulse do not make us lose sight of the torpid brain and stomach, muscular languor; and absence of all nervous energy must be interpreted as characteristic of great depression, and the greater the fever and quicker the pulse the worse the concomitant symptoms become. If we look at practical experience upon this subject, we cannot deny that many cases of decided improvement and even prompt recovery have occurred under the so-called antiphlogistic treatment. But think all such as have come under my observation might have been explained by the sedative effect and mechanical relief incident to the course, and not to its devitalizing or asthenic tendencies; thus venesection in pneumonia lessens the amount of circulating fluid and consequently diminishes the work of the lungs and relieves dyspnoea more promptly than any other remedy, but is rarely advisable, for the patient has an alarming tendency to sink afterwards. It may also be thought that local bleeding, so beneficial in all but cases of the lowest type, is so on account of the relief it affords the circulation, and its tendency to prevent the extension of capillary stasis. A low diet is necessary in grave inflammations, for the stomach has not sufficient strength to digest solids, and undigested nutriment becomes a source of local and general irritation. We must therefore conclude upon a digestible liquid diet, not to starve out the disease or lessen the patient's vitality, but because we can only furnish the system aliment in a liquid or semi-solid form. And in prolonged cases, when the amount of aliment is insufficient to meet the waste of the system, we are obliged to resort to stimulants to arrest the metamorphosis of the tissues, and for a time relieve their demand for the nourishment, which it is impossible for us to supply.

There are several remedies, notably the antimonial and mercurial preparations, which are claimed as first class antiphlogistics; and none can deny that in acute dyspnoea, from whatever cause, the antimonials are almost magical in their effects, and I have seen equally pleasing results from the use of mercurials in serious

inflammations. I am not able to explain their operation, but do not believe it owing to their debilitating properties, having always noticed in critical cases that unless speedily beneficial they have been quickly discontinued, and always during their use we make strenuous effort to supply the additional nourishment their employment calls for, ay, most imperatively demands.

There are many who claim that while now we rarely see typical sthenic inflammations, they used formerly to occur almost constantly; that diseases have changed their type and are no longer what they once were. I cannot coincide with this view, but think a strong, healthy man has the same kind of inflammation now as he would have had a hundred years ago, and that a weakly individual is affected as he would have been had he lived then, and that the former gets along better and suffers the less of the two. But even he emerges from the best selected and most assiduously supported case of severe surgical inflammation, worn, debilitated, and evidently devitalized.

I once knew a veteran in medicine, of extensive erudition, calm and sound judgment, large and successful practice, and unquestioned courage, who believing Phthisis inflammatory in its origin—in which he may not have erred—and being himself a victim in his old age, had in the course of twenty odd years—he lived to be nearly or quite eighty—bled himself two hundred and eighty odd times. Now he would be bold indeed who would pronounce consumption other than a disease of low vitality, but we can all remember when this was the prevalent professional opinion, and large doses of antimonials, frequent venesections, emetics and purges, reduced the patient's average lease on life, even including such rare cases as the above, to a few months. Now the average duration is, I think, between two and three years. A similar change has taken place in regard to the professional opinion and treatment of fevers, and a like revolution is progressing now about inflammation.

The bearings of the question cannot be over-estimated; of far greater practical importance than the physical changes or chemical relations is the vital status of the disease and its relation to the patient and his temperament. Do not understand me as ignoring the great triumphs of pathology and chemistry, but only as affirming that we should make use of all methods and appliances of research, and reasoning, in our contemplation of disease, and that the question of vital force, at present impalpable and unsolved, is of the most transcendent import in medicine.

ARTICLE XXVIII.

LATENT ELECTRICITY IN PULMONARY DISEASE.

BY GEO. O. JARVIS, M.D., OF PORTLAND.

[The following article on latent electricity in pulmonary disease embraces the concluding portions of an essay on "Ozone and Oxygen," by the late George O. Jarvis, M.D., of Portland, Ct., the inventor of the "Surgical Adjustor," a man of talent and skill in his profession. It was read by its author a short time before his death before the Middlesex County Medical Association, and was by them referred to the Committee of Publication of the State Society. The entire essay embraces two sections which are here omitted, their subjects being rather scientific than medical. The omitted portions were entitled: 1st. Is Ozone Allotropic Oxygen? 2d. Is Oxygen with Moisture the sole agent concerned in the oxidation of metals?—COMMITTEE OF PUBLICATION.]

I.—*Electricity Essential to Human Life.*

That we inhale electricity, mingled as it is, with the air we breathe, at all times and in all places, cannot be doubted. Nor can it be doubted that it is a most potent agent wherever existing and however employed. The mere fact that such an agent, in such abundance, has been inhaled into the lungs of all animals from the time of their creation to this day, would seem to furnish *prima facie* evidence of its importance in respiration, and that it was intended by Divine wisdom to answer some important end in the process of breathing.

We will now, however, endeavor to determine as far as possible, what that end is. But before we proceed, we must first call attention to some well settled facts in science, which as we proceed will be discovered to have important bearings on this subject.

1st. The *proportion* of the two principal gases of our air, Oxygen and Nitrogen.

2d. Their weight conjointly and singly at different altitudes, and

3d. The absolute diversity in the amount of both electricity and ozone at different altitudes.

1st, Of the proportion of the two principal gases. They are always in precisely the same proportion, at all altitudes, whether at the level of the sea, or on the highest mountain top of the earth's surface—that proportion being 77 nitrogen to 23 oxygen in every 100 parts of air.

2d, Of their weight. Their combined weight at sea-level is 538 grains avoirdupoise to every cubic foot of air, or separately 414 grains of nitrogen and 124 grains of oxygen; while at Golden in Colorado, at an altitude of 5800 feet, their combined weight is 430 grains to the cubic foot of air, or separately 331 grains of nitrogen and 99 grains of oxygen, showing a difference in the amount of oxygen between sea-level and Golden of 25 grains in every cubic foot of air, and of nitrogen 83 grains, or a diminution in the whole volume of air of one-fifth oxygen and the same of nitrogen. These facts are confirmed by the weight of the entire atmosphere at the two places. At sea-level it is 15 pounds to the square inch, while at Golden it is 12 pounds, there being the same diminution of one-fifth. A very just rule by which we may determine the weight of atmosphere at any given point may be stated thus: At an altitude of $3\frac{1}{2}$ miles, the weight of the air would be just one-half that at sea-level, at 7 miles, $\frac{1}{4}$, at 14 miles, $\frac{1}{16}$; and so on in arithmetical proportion until, as I hold, our air finds its equilibrium in the boundless regions of space, only to be disturbed by the same laws of attraction and gravitation in other worlds which governed its density in this, and that just in proportion to the amount of matter contained in each; but regarding other worlds we have nothing to do with them. To understand fully the one we inhabit is more that we shall ever perfectly accomplish.

3d, Of electricity. So long as we can give neither weight nor dimension to it, it is plainly impossible to give quantity; we must therefore content ourselves with what eminent men of science have determined, that the air at high altitudes is more highly charged with electricity than in low lying regions. And is there not a strong probability that the electricity at high altitudes is in an inverse ratio to that of oxygen? If so, it greatly strengthens the ground we take. Of ozone we have only to say, that although its quantity has been determined at given points and that it is in greater abundance at high altitudes, yet no precise rule of its increase or diminution has been discovered.

Now if all electricity could be entirely excluded from any given quantity of air, that air remaining precisely the same in every

other respect, and we should introduce into it two or more forms of animal life, the effect on the vitality of those animals would be proof positive—whatever that might be—of the vitalizing or non-vitalizing properties of electricity; but since we are not permitted to avail ourselves of such direct proof, if we would know of the influence of electricity on the vitality of the animal man, we must take the next best evidence of its vitalizing properties, and which we must believe to be little short of demonstration.

To avoid ambiguity, I will adopt, as the basis of all atmospheric differences to which I may refer, the altitude already named of 5900 feet, that being the difference between the Atlantic coast and Golden, Colorado.*

We have here shown, what I trust no one will attempt to deny, that there is one-fifth less oxygen in the air at Golden than there is at sea-level, and the man who breathes the air of Golden must, to satisfy the calls—the demands of nature—to obtain the needed supply of oxygen for his lungs, breathe one-fifth more times in a minute, or increase the capacity of his chest to so inflate the lung as to receive more by one-fifth of the air than the man residing on the sea coast: otherwise his health must fail for want of that necessary element which properly fits his blood for circulation.

We have also shown that the resident of Golden inhales one-fifth more of electricity, and also in addition, all that the air of that place contains, in excess of the air on the coast, and that by his inhaling one-fifth more times or by inflating the lungs more by one-fifth, he receives no more of the stimulating effects of oxygen—less if anything—than he would on our coast, yet his system is stimulated frequently to a high degree, as Dr. Charles Denison of Denver states it in one of his circulars, “almost to intoxication.” All, so far as I know, who profess any knowledge on the subject, testify to the same fact. Consumptives who have visited Colorado for health, also those suffering from exhausted nervous energy, all declare the air of that region to be highly stimulating. If any one would see a most graphic account of the properties of Colorado air and its climate, let him read an article in the *New York Times* of Nov. 15, 1873, by Grace Greenwood; the facts are there

* For much of the information connected with this subject I am greatly indebted to Prof. Joseph Henry, of the Smithsonian Institution, Washington, and to Prof. E. E. Mallett, Jr., of Golden, Col., than whom authorities more to be depended on could not readily be obtained.

beautifully told, as few could tell them, and they agree substantially with statements made by others.

It has long been surmised by men of science that electricity has been deeply, yes, intimately involved in our being, but no one as yet has been able to tell how. Prof. E. L. Youmans, in his *Hand-Book of Science*, in speaking of electricity, says: "Beyond doubt it is profoundly involved in the phenomena of our being, but we as yet understand but little about it. In connection with the air we can only say, that when it is clear, and electricity is rapidly developed, the spirits are more buoyant, and the feelings more agreeable than when the atmosphere is in the opposite state." Some have ascribed this exhilarating effect to ozone, but this can hardly be possible. Any thing like the amount necessary to produce such effect would of necessity be attended with all the evils incident to inhaling an undue quantity of ozone, such as severe irritation in the air-passages, influenza, inflammation of the lungs, &c. Then again, we must remember the extreme variableness in the amount of ozone at different times, in different seasons of the year, and at different places; also take into account that the stimulating properties of the air in Colorado, for instance, is nearly uniform at all times. So much, however, as the air actually contains may possibly be used by healthy lungs, but not by those which are diseased, as we shall show. But this in any safe amount would be insufficient to produce the exhilarating effect described. Now since there is no other known agent in our air (or indeed out of it) which could produce such effect, is it not safe to conclude that electricity is that agent? and that we of necessity just as much imbibe (probably in great measure for breathing) electricity to live as we do oxygen? Perhaps man in Divine wisdom is so organized that he could not have been continued in life without it, and that it is just as essential to animal life as oxygen? Although we, at present, are not sure of the precise mode in which this is effected, still the coincidences of its vitalizing power are too manifest to be disregarded by him who desires to see all things as they are. But as regards this obscurity, we may possibly advance a step or two if we carefully look into things about which we may be supposed to know something. Allow me therefore to suggest—

1st. That we are pretty well assured that the brain is the great center of all the nerve force which we possess; that however distributed from other and lesser centers, the brain must be regarded as the fountain head of all.

2d. That the nerve force in the healthy subject is constantly suffering loss, impairment, decline, and that by and through the brain it is constantly being replenished, so that at all times the demand and supply are nearly or quite equal.

3d. That this nerve force (or fluid as it used to be called), has never yet been seen, even through the strongest lens, and like electricity it has never yet been discovered to possess either of the properties of weight or dimension. It is so like electricity in many respects that we are led to suspect there may be a very intimate relation between the two, and indeed by all fair analogy have we not good reasons for such suspicion? especially when we take into account, what is highly probable, that between electricity and the brain, there may be such affinity existing as to attract electricity either through the soft tissue or through the nerve filaments in and around the lungs as conduits to the brain, or what is still more probable in addition to that inhaled through the air-passages, may it not enter every fiber of the body, the whole man being charged with electricity, surrounded by it, immersed in it, and just in proportion as the air and surrounding objects are charged, may the brain be supplied in its quiescent form,* there to be so changed by the brain (as oxygen is changed in the lungs) as to fit it, as nerve force, for circulation through the whole nervous system.

That electricity is not nerve force, is apparent from the fact that the latter is always confined within given channels, and is never found to have any power or influence outside of those channels, while electricity, although it may follow a good conductor indefinitely, yet is not confined to any one in particular, and pervades every thing; and while nerve force pervades nothing outside of its own channels, following one set of conductors and no more, electricity follows many. This marks their difference so plainly that we shall not trouble ourselves to present other evidence, although there is an abundance which might be cited.

II.—*Medical properties of Electricity.*

Since the only mode in which electricity has ever been used as a remedial agent, so far as we know, has been in its unquiet or disturbed state, through the medium of some apparatus contrived for that purpose (all or nearly all of which instruments, we are

* Just as a body placed in air of a given standard of temperature is brought ultimately to the same standard of heat.

happy to say have been valuable contributions to medical science) yet no one has seemed to look upon electricity in its latent, undisturbed, quiescent state as an agent which could be used or made available in treating any of the maladies to which flesh is heir. This, however, is the very thing we shall endeavor to show, that it is, in its quiescent state, of equal if not superior value in treating disease to any one of the disturbed modes in which it has ever been used.

After having shown the very manifest influence which electricity has over the physical powers of man, how it contributes to his nerve force, if not in the way suggested, yet in *some* way, its highly stimulating properties when received into the system to any unusual amount, its invigorating effects on his animal spirits, &c., it cannot be difficult to see that it must be a most potent agent in disease, if it can be used as such, either to man's weal or to his woe, just as he may use it. If, for instance, he is suffering from almost any form of organic disease of the heart, from a tendency to apoplexy, or indeed from any disease, where to increase the heart's action would be likely to aggravate his disease, he had better avoid any altitude where the amount of electricity would be sensibly increased. But if, on the contrary, he be suffering from pulmonary disease, where the parenchyma or lung tissue with its air cells is involved in a chronic inflammation, and the tissues are thereby thickened, in consequence of which the blood cannot be sufficiently decarbonized to fit it for healthy circulation, and attended as the invalid undoubtedly would be with impaired physical strength, loss of appetite, night sweats, &c., he had better seek an altitude which is dry, clear and cool, and which is so charged with electricity as to promote his physical energies at once; yet I should here caution not to approach such elevation too suddenly. The same remarks may be made of him also who may be suffering from nervous prostration, by whatever means brought on, whether by being mentally or physically overtaxed. Now after saying so much it may be required of me to state the grounds on which I hold such opinion, and on which I give such advice. I state them cheerfully, unreservedly, and for no other purpose, than that by chance it may be the stepping-stone to the advancement of medical science.

Experimenting with the expired breath of different individuals, of all ages, of both sexes, of sound and unsound lungs, to determine this one point, whether ozone with oxygen was being used

in the lungs to vitalize the blood, in my experiments I was greatly surprised at the extreme diversity which different individuals exhibited of ozone in their expired breath. Some appeared to have used up nearly all the ozone they inhaled, others very little, and others still almost none at all. Of these last, their papers were about as highly colored as those placed out in the open field at the same time—the paper of each one had been put into a separate six ounce glass bottle and sealed hermetically—and on each was pasted a card giving the name, age, date of experiment, &c., of each individual.

Being tolerably familiar with the general health of each one, his or her history, &c., and especially of those suffering from pulmonary disease—the amount of ozone as exhibited by each one's test-paper and the physical condition of each could thus easily be compared—I found those of healthy lungs to throw back in their expired breath, very little ozone. As to others whose papers were considerably colored, but who evidently had no disease of their lungs I can as yet give no good reason for the diversity I saw. However, of those whose papers compared well with the papers placed in the open air (excepting that those in the bottles were more blue) belonged to those persons whom I had long known to have pulmonary disease. It struck me there must be some cause, not yet explained, why healthy lungs used up all or nearly all the ozone they inhale, while lungs diseased reject all or nearly all. But on reflection, we find it to be just as we have good reason to suppose it would be, that the tissue of the air cells and that surrounding them is thickened by the chronic inflammation in which they are involved, many of the cells may be obliterated, and many more may be obstructed by mechanical pressure if tubercles be present—so that let the calls, the demands of nature be what they may, the diseased portion is entirely unfitted to perform the function for which it was created, and if the disease be at all extensive the lungs cannot use up the ordinary proportion of oxygen they inhale, to say nothing of the ozone inspired. Hence it is that we see so large a portion of the ozone inhaled into diseased lungs thrown back with the expired breath, while the exhaled breath from lungs more healthy show very little of it.

It was held for years, and that within my own time, by men eminent for science, that for the consumptive to inhale a greater amount of oxygen than he obtained in common air, would thereby so improve the vitality of his blood as greatly to contribute to

his recovery—and many an apartment has been fitted up, as we have good reason to believe, with all the needed appliances to infuse *ad libitum* oxygen into such apartment and in which the patient was to spend more or less of his time each day. After having been thoroughly tried I believe the practice has been abandoned as entirely useless. In later years ozone has had its advocates, much on the same hypothesis as above, and if not carried out in precisely the same way, yet so as to increase the amount inhaled by the invalid in breathing. If this has not had its day, it soon will have. An error lies at the bottom of both fatal to their success. It is supposing the lungs to perform what in their diseased state they are entirely unable to accomplish, as already fully shown.

But now let us look at that exhilarating, that stimulating agent, electricity, and see what that may do in such cases. And here let me say, our theory is intended to be built on facts—well authenticated—and from those facts entirely our theory first started—so that if it should fail, the facts still remain. Not as was the case with the oxygen and ozone theories just stated, first building up a theory, plausible it may be, yet a theory without a fact on which it is to rest, yet hoping to find facts so as to sustain a favorite theory, but which in the one case was destined to prove a total failure, and I doubt not will also in the other.

But we will once more call attention to those absolute and well established facts demonstrated by mathematics, that there is one-fifth less oxygen and one-fifth more of electricity in every cubic foot of air at Golden than there is on the sea coast, and if as we have suggested, electricity is in the inverse ratio to that of oxygen as we ascend, the electricity at Golden would be two-fifths more than on the sea coast. How much of this is used up in the system, we as yet do not know. Of one thing we may be quite sure, it is never all used up, for in the expired breath of every person, positive electricity is found to be present.

It is estimated that the average of men consume all the oxygen contained in about four cubic feet of air every hour, or 496 grs. of oxygen. That number of grains of oxygen he *must* have every hour to satisfy the demands of his physical construction, to fit and to prepare his blood for healthy circulation, and should it even require ten or more cubic feet of air to obtain that amount he would instinctively seek to obtain it. Now in the same number of cubic feet of air, whatever that number may be, the resident of

Golden would obtain but 396.8 grains of oxygen ; hence the necessity of his more rapid breathing, and hence too of that heaven-born blessing which supplies such places with such a stimulating tonic as electricity that enables his lungs to perform such extra duty, and his physical energies to endure such constant demand. This alone is indeed wonderful, but there are other highly important therapeutic properties, one especially, which it imparts to the system, not less wonderful.

Now on that elevated ground in Colorado we will give our consumptive patient a comfortable home while we watch his progress. We will suppose him to be in the incipient stage of Phthisis, with hacking cough, impaired strength, slowly losing flesh, appetite fickle, with some evidence of tubercles, &c. We first notice him to breathe more rapidly than usual, he complains for a few days of want of breath, but soon, however, that trouble passes off. He breathes more easily, yet still more frequently than he did in New England ; he feels exhilarated, buoyant in spirits, his appetite improves, he is gaining in strength. He has much out-door exercise and enjoys it, his cough diminishes, he sleeps well, he enjoys his food, he gains in strength, and in flesh, and finally too, his cough is gone and he feels well. Now this is no fairy sketch ; many an instance has been reported to me of just such a result. I myself know of one young man, who has had over thirty hemorrhages of the lungs with symptoms as above enumerated, and to-day I cannot see why he is not a well man. He however did not go to Colorado, but spent a summer in very high northern regions, where electricity abounds, and as he told me, during his stay, " he roughed it," i. e., he worked every fair day with pick and shovel in hand at procuring a great variety and many very beautiful and valuable specimens of minerals with which that region abounded, and in which he took great delight. The roughing it and the deep interest he took in the object of his pursuit, no doubt constituted an essential element in his recovery.

It is not to be supposed for a moment that this or any mode of treatment will invariably cure consumption, though taken in hand in its earliest stages, and certainly not in an advanced stage, yet even in this, for a time, when judiciously managed, it may be greatly ameliorated. Yet we do not hesitate to say, that we have good reason to believe that by this means the death-rate from consumption might be very greatly diminished. Nothing in the whole range of therapeutics of which we have any knowledge

would be so likely to promote absorption in the inflamed tissues to break down indolent tubercular deposits, or at least to render them dormant in the lungs, as electricity, received in due abundance into the diseased tissue, as it may be. We have only to call to mind its deobstruent properties, when applied topically in breaking down indolent tumors to be convinced of its most potent agency in other forms of disease. Nothing is so likely to promote the nervous energies and the physical powers of the system, if it acts as a therapeutic agent at all, as electricity, and after what has been shown, who will dispute it? A problem is yet to be solved and we hope the day is not distant when it may be, i. e., Is electricity to the brain what oxygen is to the lungs? the first in supplying the brain with the element of nerve force, the last in supplying the lungs with the element which fits the blood for healthy circulation. If so, the truth of our theory is manifest, indeed; if not, it does not therefore follow that it is erroneous with regard to the vitalizing properties of electricity, but still, if not, is it not a little remarkable that they should so coincide with the facts presented, as to constitute a wonderful analogy.

Dr. Geo. M. Beard, in the *Popular Science Monthly*, says (p. 467-468, of Feb., 1874): "In elevated regions, the air is of course rarer than in low-lying regions, and the quantity of oxygen inhaled, must of necessity be less than where the air is dense; but ozone and electricity both increase as we rise, and very likely this fact will explain the exhilaration and invigoration which not only consumptives but nervously exhausted patients experience, on removing to the mountains. The benefits which consumptives find, by residing in elevated districts, is almost entirely of a general stimulating tonic character that could very well be explained through the ozone and electricity which they inhale far more abundantly than in low-lands."

Here we have facts plainly and well stated by Dr. Beard and which are entitled to our careful consideration, and which we must think corroborate in many respects the views set forth in this article, except in the one particular respecting ozone, and in this any difference may be more apparent than real, for he nowhere states definitely what his views are; yet I must say frankly that I entertain the opinion that ozone plays but a small part, if any, in the exhilaration and invigoration which not only consumptives but nervously exhausted patients experience on removing to the mountains. 1st. From the very small quantity which the air

contains at any place, to say nothing of its being extremely variable at all places, the average quantity of ozone in the air as given by Houzeau (as per Dr. Beard, see P. S. Monthly, page 463) six feet above the earth is $\frac{1}{450000}$ of its weight, or $\frac{1}{700000}$ of its volume. Now doubtless this quantity might be increased several fold without injury to the air passages, but certainly not to that degree as to produce any exhilarating effect on man. But 2d, and which we should suppose would settle that question, at high altitudes, men breathe more rapidly, or they so expand their chests as to receive a greater volume of air, in order to obtain their needed supply of oxygen, than they otherwise would, could they obtain that supply by less rapid breathing. Now this plainly shows, in our view, that he gets no more oxygen, ozone included, than his system demands, and that ozone can have no other effect, (when not in excess) than to make any deficiency existing in the air. If it were otherwise he would not breathe more rapidly. It therefore can have no agency in producing that exhilarating effect so often alluded to by different individuals. And now, is not the evidence conclusive that electricity *is* the only agent in our air capable of producing such effect? Can any other element be named, oxygen being minus one-fifth?

Probably there is no department in medicine where science has been so greatly at fault, and is so still, as in its teachings in the matter of electricity and oxygen in their relation to Pulmonary and some other diseases. This is not for the want of the profound scholars and bright intellects to investigate the whole subject, but from the peculiar nature of electricity, admirably fitted as it is to elude the investigations. The field open for investigation is immense, and if we can but gain one step at a time, we must therewith be content. Yet little as we know about electricity, we do, or may know enough to render it highly beneficial in the treatment of pulmonary disease, and which, as guardians of the health of those under our care it is our plain duty to know.

It has long been a very common practice with physicians of the Northern states to send their consumptive patients South, during the winter season, to reside in a warmer and milder climate, under the impression that such a climate would contribute to his or her recovery; but as every one knows, failures have been numberless, and we can now, in a measure, see the cause. Not a single element essential to the well being of the consumptive, (except perhaps the softness of the atmosphere) is possessed by those places

of common resort in the South; possessing neither altitude, topography, or a dry and cool, bracing atmosphere. Indeed those essential elements seem never to have been thought of, and yet the very warm and relaxing temperature tends so to enervate the system as to make the patient feel both lazy and listless, a state of feeling directly the reverse of what he should possess for his own good. No one has erred in this respect more than myself. I now see, in a measure, wherein I erred; I was at fault, both in my pathology of diseased tissue of the lungs, and in the therapeutics which such disease required. I took for granted all I had read in our best authors on the subject to be true, and so indeed it may be, but they all stop short in showing (as far as I know), what the lungs may and may not perform in their diseased state. So too of therapeutics. Very little has been accomplished on sound principles of science to change the morbid condition of diseased tissues. Perhaps in all this labor I have done no more. Time will determine.

In selecting a residence for the purpose of regaining health it is too often the case, that the patient is governed in his selection by his own fancy or that of some friend, who knows just about as much what he needs for his recovery as he does himself, while in fact if he ever requires the advice and direction of a sound, discreet, and well informed physician in any form of sickness, he does in this.

MEMOIR OF
ORSON WOOD, M.D., OF SOMERS.

BY C. B. NEWTON, M.D., OF STAFFORD.

DR. ORSON WOOD was born in Somers, Conn., 1791, and died in Somers, July 19, 1874, aged 83 years. His father was Dr. John Wood, also of Somers, who began practice in that town as early as 1790, and died in 1832, one of the early physicians of the town, with whom the son Orson studied. He also studied with Dr. Peck of Stafford, attended lectures at New Haven at the time when Dr. Nathan Smith was Professor of Surgery there. He received a license to practice and afterwards had a diploma conferred upon him. On the completion of his studies, at the age of 27, was married to Miss Arathusa Pease of that town. In 1818 he began the active business of his life, in the same town with his father. Dr. Wood was physically somewhat robust, in stature short and stout and inclined to embonpoint, but not too much so for activity and continuous professional labors. Of nervous and sanguine temperament, well balanced in a body of good physique, which he inherited from parents who lived to good ages. To the primitive and healthful habits of his father's time he owed much of his vigor of mind and body. In his boyhood he excelled in the branches taught in the common school, and studied Latin and the higher studies with the Rev. Wm. Strong of Somers, father of Judge Strong, now of the U. S. Supreme Court. In his profession he was a worker in the best sense of the word.

The writer knew him best during the last twenty years of his practice, at a period when he was rich in experience and medical skill, and rode much as a counsellor into the adjoining towns. In counsel he was positive and cautious, but ready of resource. If the disease was obscure or exceptional and no apparent means of cure, he was original in his course of treatment, and would win success when others might despair and give up the case as hopeless. Still he did not forget the *Vis Medacatrix Naturæ* in a mild case. The adaptation of remedy and method to the diseased condition seemed almost intuition to him.

He had much originality and independence of thought and self-reliance. His reading never was omitted until his eyes became injured by accident. His reading was miscellaneous and extensive but largely medical. His favorites were the American Journal of Medical Science and its accompanying "Abstract and News," and nothing of a practical sort escaped his attention or his memory. It was utilized, was made a reserved knowledge for future emergency.

All the new and adapted remedies were familiar to him, with their exact doses and uses, so that he had the reputation of often leaving the teachings of the early schools in which he studied for the later and better methods of treatment, and never seemed too old to adopt them if good. He was well posted upon all the important events of the time.

Practically he was eclectic; would prescribe calomel, lobelia, a homeopathic dose of sugar, hydropathic bath, electro-magnetism, or employ any of the arts known to scientific medication, but never to the extent of claiming for either remedial powers beyond what they really possessed, and only used each within its sphere of usefulness. He had an intelligent disregard for any restricted practice as such, yet never forgetting the teachings of his Alma-mater.

Dr. Wood was a practitioner about fifty years, most of this time in his native town. He spent eight years in Stafford, from 1826 to 1834. Upon the death of his father he relocated in Somers.

His practice was very arduous, the people being an agricultural community, often requiring him to ride long distances to see his patients. He possessed what is very common among physicians as a class, I think, great perseverance in business. I think he loved his occupation and was wholly wedded to it. I do not think either (which is so greatly to a physician's credit), that he discriminated between the suffering poor and the rich to the extent of neglect. I know of many a long and tedious drive which he took, to visit patients whom he knew could never sufficiently repay him. He seemed to go for humanity's sake, and like a good Samaritan never passed them by.

During the last years of his life, when, if he had counselled his own comfort, he would have remained at home, he would have his carriage brought to the door, and by the greatest effort, on account of a partial paraplegia of his lower extremities, manage

to get aboard and drive perhaps to a neighboring town, and never would allow but that he had a working pair of legs under him.

During this infirmity he visited a patient of mine, nearly ten miles from his home, when at the place he seemed so utterly helpless, that though we entreated him to be helped out, he scorned our proffered hands saying laughingly, that he had never yet needed help out of his carriage and he was too old to begin then. It showed the pluck of the man, and he actually went on his hands and knees up the steps to the door.

The family were surprised that I should introduce to them such an infirm old gentleman as a counsellor; but when he had tottered to the bedside and had made his examination, and shown such a clear conception of the case, I had no occasion to tell them that his *head* was perfectly level. Though so kind to the poor, he had his full share of paying patrons, and was so good a financier that many years before his retirement from business he had amassed a considerable fortune for a country physician.

One of his favorite habits was to go over his farm, lay out the work for his men, perhaps take hold with them, give the work a new impetus and off again. His farm, though naturally of a barren nature, and a good deal of it at that, was made very productive, much of it by ditching and compost manuring, setting out fruit trees, &c. I think he succeeded the best, however, in his grape culture; of the latter he had many of the rare as well as the marketable sorts. He was an early bird, among his vines, fruit trees, and garden. I seem now to see him coming up the garden walk, his face aglow with his early morning work, gloves on, (he had a ladies hand,) by the time we boys had begun to realize that day had come.

His first and great bereavement, was the death of an only daughter, a young lady of much promise and exquisite beauty. A few years later his oldest son Orson died, after a lingering sickness; and about the time that the doctor himself had become quite infirm from old age and disease, his son Edwin, the youngest of his children, died of typhoid fever. Leaving of his children to survive him only Dr. Gardner Wood, also three grand-children, the oldest of whom was his nurse through many months of paralysis, during which he was as helpless as an infant. She was at his bedside doing what she could.

Mrs. Wood, who survives the Doctor, was a co-laborer with him. She helped his coming and his going, and added to his

successes in an intelligent and wifely way. She knew the doctor's business well; if he forgot she remembered for him; did he have a call in the night, or in a storm during the latter part of his practice, she looked to his starting and saw that he was well protected for the trip.

He had many students during his practice, among whom was Dr. Wm. Wood of Windsor; Dr. Calvin Pease, formerly of Ellington, who died in the army; Dr. G. C. Wood, his son; Dr. Wm. Woods of Somers, and the writer, and others whose names I don't remember, who studied long before my student time; young Frank Newton and a Mr. Hathaway, both of whom died during their studentship.

Dr. Wood held important offices of trust at different times in his native town. He represented Stafford in the Legislature during his residence there in 1833, also the 20th District in the State Senate in the years 1843 and 1844.

Through the kindness of G. H. Preston, of Tolland, Clerk of the County Medical Society, I obtain the record that he was Fellow of Tolland County Medical Society from 1830 to 1855; was President of the Society during many of the years from 1840 to 1855; was delegate to the National Medical Association a number of times between the years 1850 and 1861. He read a dissertation before the County Society on Variola and Varioloid in 1832; also Biographical Sketches of the Early Physicians of Somers, in 1863; read several interesting articles before the County Meetings, of which we have no full record, but I think published in the Proceedings of the State Society; also one of the Committee of Examiners of the Yale Medical Institution one or more years I am told.

His death was from paralysis of a very gradual approach, beginning in his limbs, from some obscure disease of the cerebro-spinal axis, and he was helpless upon his bed a long time before the final giving up of the vital force, and when the moment of all moments came, his family could hardly tell when he crossed the dividing line to his final sleep.

MEMOIR OF

H. W. E. MATTHEWS, M.D., OF NEW HAVEN.

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

HENRY WYLLY EDMUND MATTHEWS, was born on St. Simon's Island, Georgia, December 10th, 1827, nine days after the death of his father, Rev. Edmund Matthews, who had been Rector of the Episcopal Church on the island. His mother, a native of Cheshire, Conn., soon returned to that place, and in due time her son became a pupil in the Episcopal Academy there, and was fitted for college. He graduated at Trinity, Hartford, in 1847, and choosing medicine for a profession, entered at once upon its study, taking a full course in the Medical Department of Yale College, and receiving his degree in 1850. Immediately thereafter he opened an office and began practice in New Haven. With characteristic energy he soon won for himself a deserved position in the profession. His business steadily increased and he enjoyed a liberal share of patronage of the public until Nov. 17th, 1872, when a misfortune befell him which in all probability hastened his death. On that day while engaged in a post-mortem examination of a subject which had died of malignant erysipelas, he incautiously inoculated himself upon the fore finger of the left hand with virus from the cadaver. For a long time his life was held in suspense, but he finally rallied—a result attributable to his vigorous constitution and the skill of his medical attendants. He so far recovered as to be able in about a year afterwards to take a trip to Cuba, in the hope that a milder climate would promote a more perfect restoration to health. He returned much improved and resumed the practice of his profession with more ardor and energy than prudent regard for his own health would have justified.

As a practitioner, Dr. Matthews was a good diagnostician, conservative in the administration of medicine, not given to novelties, a judicious observer and self-reliant. With such qualities, which

form the basic elements of a successful practitioner, it is safe to infer that he justly enjoyed that reputation.

To the practice of obstetrics he devoted himself with special enthusiasm. Although a bachelor—which unhappy condition is erroneously believed to exclude a doctor from the favor of the patients chiefly interested—yet Dr. Matthews acquired a very extensive practice as an obstetrician. In evidence of the extent of his practice in this line, it may be mentioned that in the first ten months of the year 1872 the certificates of birth returned by him to the registrar were more in number than by any other physician in New Haven.

He was fond of operative midwifery, and had frequent opportunities to exercise his skill and judgment in aiding his professional brethren of less experience in the delivery of difficult cases.

He had also a large general practice, and ever manifested a real and unfeigned interest for the welfare of his patients. They appreciated his efforts and rewarded him, if not always with legal tender, with at least their respect and confidence. His patients were greatly and deservedly attached to him. Dr. Matthews had a strong abhorrence of quackery in every form, and a just sense of the rules of professional courtesy. He was called by his friends exceedingly generous. He was always good natured, and not unfrequently carried to the bedside of his patients, what is sometimes better than medicine, the warm sunshine of a sympathetic yet jovial presence.

Like all conscientious physicians, he was a benefactor to the poor, and took his share of attendance upon them when sick without expecting remuneration. Once when driven with business a message came for him to visit a poor person sick with a chronic disease, who had been under the care of many other physicians without relief. He declined to go, and a wealthy gentleman, childless, but hoarding year by year his accumulations, learning of his refusal, expressed to the Dr. his surprise that he should decline, and thought it a hard case that a man because he was unable to pay, should not command the services of the best physician. "Sir," said he, "I have already several poor persons and families that I attend more or less regularly without charge, and I do not feel in justice to myself that I ought to take others on my hands at present. But, if *you* will pay for medical attendance I will visit the patient—and there is just as much propriety that you should remunerate me for such service, as that I should

supply it gratuitously. My contributions to the poor every month are a hundred fold greater than yours."

In person the subject of this sketch was slightly above the medium size, of good presence, fine physique, well developed and handsomely proportioned. He was remarkably cheerful in disposition, with many agreeable social qualities, which rendered him a pleasant companion and friend. He was a member of the Episcopal Church from his youth, and in all his dealings was respected for his upright character and strict integrity.

Like many others in our profession, constantly driven by the active and laborious duties of our calling, he found little time, and possibly little inclination for more quiet labor with the pen. At least the writer believes he has published nothing, and has left few or no papers to illustrate his talent in that field of professional work. He was, however, an industrious reader and had a very retentive memory. He formed decided and independent opinions, and if they were not always expressed with the grace of refined and cultured rhetoric, they were honestly and plainly spoken, and defended with boldness and spirit if occasion required.

He adds another to the many illustrations in our profession, of a busy, useful life, filled with privations and exposures, the emoluments from which only yield a reasonable competence, eventually a victim in the full vigor of its maturity to one of the many dangers inseparable from professional duty.

He died Friday morning, Jan. 29th, 1875, at half-past four o'clock, after a very brief illness, of pleuro-pneumonia. On the Saturday previous, while visiting patients, he contracted what was thought to be a slight cold, and the next day complained of a sore throat, and treated himself for it. Monday he was no better, but the symptoms of his disease were not alarming, and his speedy recovery was confidently anticipated. Wednesday night he became suddenly and decidedly worse—the prescriptions of his physicians affording him only temporary relief, and from that time forward, with a constitution shattered by his former trouble, he failed rapidly, and during the last hours of his illness was a great sufferer.

He was unmarried, his home in New Haven having always been with his mother, who survives him, at the residence of his brother-in-law, the Rev. E. E. Beardsley, D.D., the Rector of St. Thomas' Church.

MEMOIR OF
GEORGE O. JARVIS, M.D., OF PORTLAND.

BY C. E. HAMMOND, M.D., OF PORTLAND.

DR. GEORGE O. JARVIS, the subject of our brief sketch, was a son of John Jarvis, of New Canaan, Conn., born July 14, 1795. Receiving such education as the schools of that earlier day offered, he became himself a teacher in his turn, and at a proper age began the study of medicine with Dr. Truman S. Whitmore, of Winchester, Conn. He afterwards attended lectures at Yale College,—the medical department of that institution being then in its early infancy. In 1817, in accordance with the usual custom of that day, Dr. Jarvis received from the Connecticut Medical Society a license to practice, and commenced his professional labors in the town of Torrington. He remained in that place two years; then removed to Colebrook, and continued there up to 1840, when he changed his residence to Portland, then a part of the town of Chatham; where he died of a combined attack of erysipelas and diphtheria, Feb. 3, 1875, after a brief illness of about one week, having been in active professional service for fifty-eight years. He received the degree of M. D. from Yale College in 1846.

Dr. Jarvis married Nov. 19, 1819, Miss Phila M. Marshall, who survives him. He had a family of six children,—four daughters, of whom three have deceased; two sons, one of whom, Charles, resides in Portland; the other, Dr. George C. Jarvis, of Hartford is a member of our profession.

In his intellectual capacity, Dr. Jarvis was above the average man. His intuitions were active, his logic was clear, and his judgment correct. He had strength of will, fixity of purpose, and energy of action. He was decided and positive in his opinions, but not without good and sufficient reasons for entertaining them. His inventive turn of mind, and a faculty of adjusting means to ends, gave him an inclination to the practice of surgery; and at one period a considerable portion of the surgical business

of his section came into his hands. His attention to some cases of fracture about the year 1843 led to the invention of his apparatus known as "Jarvis Adjuster," for the extension and treatment of fractures and dislocations. His invention met with the approval of many of the first surgeons of the country, and was introduced largely into public hospitals.

In 1845 the doctor went to Europe with his invention, spending six months in introducing it to the notice of the profession in England and on the continent. It was well received; and he was awarded, by the Society for the Promotion of Arts and Commerce, the largest gold medal which up to that time had been given to an American citizen. The presentation was made by Prince Albert, then the President of the Society. Dr. Jarvis was entitled to be proud of this distinguished honor.

In his professional relations, Dr. Jarvis was cordial, frank, and without duplicity. Desiring gentlemanly treatment from others, he accorded it in turn to them. The honorable laws of medical ethics were his guide,—professional courtesy his handmaid at all times. The poor and needy received alike, with the opulent, his services as a man and a physician. In his religious life he was a sincere and earnest Christian; an active member of the Episcopal Church in Portland, out of which he will be greatly missed.

In every day life the doctor possessed a large measure of the social element. He was especially fond of the company of younger people, even up to the later months. The labors of the day over—if happily they were not prolonged into the night—he delighted to secure the company of some congenial souls for the evening, and set down with a pungent relish to the relaxation and converse of the hour. This trait of character was so marked and so well cultivated, that few evenings passed without this pleasurable gratification to himself and some of his friends, at his fireside.

A considerable portion of the leisure of the last two or three years of his life was devoted by Dr. Jarvis to the study of those potent forces, Electricity and Ozone. His papers on these subjects evinced original thought and careful observation, and were received with marked attention by members of the profession.

It is but seldom that an active and continued professional career of fifty-eight years is vouchsafed to any of us; and it is likewise but seldom that the physical energies and intellectual faculties continue in such force till the age of nearly eighty, as to permit of daily practice in our profession. This exceptional condition was

accorded to Dr. Jarvis, allowing him to pursue his calling till within a few days of his death, and enabling him to retain the business and confidence of his best families, while surrounded by active and vigorous competition. But that inevitable change, instituted at the beginning and inherent in all finite things, came finally to him, as it comes to all. Yet if we remember that his span of life was full ; that the measure of his days had been nobly rounded, and that he was ready for the opening of the gates into the beyond, we may have the abundant consolation of a life worthy of imitation and respect, as the recompense for his loss. Creditable will it be for us, if we are able to follow closely the line of his excellent example.

MEMOIR OF
J. B. PORTER, M.D., OF COVENTRY.

BY M. B. BENNETT, M.D., OF COVENTRY.

THE subject of this sketch, Dr. J. B. PORTER, was born at Coventry, Conn., July 3d, 1804, and died at the above named place June 15th, 1868. He lived an eventful life of nearly sixty-four years, much of the time having been spent in the service of his country, occupying various posts of honor from Canada to the Gulf, and from the Atlantic to the far West. In early life Dr. Porter suffered much from ill health. Such was the feebleness of his frame, that at the age of fourteen he ceased attending school, but soon having recuperated his health, we find him gaining his preliminary education, under the guidance of his pastor and friend, Rev. G. A. Calhoun. At the age of twenty-two years he commenced the study of medicine with Dr. Hunt, of Coventry, and Dr. Fuller, of Columbia, and received his diploma from Berkshire Medical College, Pittsfield, Mass., in 1829.

His first field of labor was in Marlborough, Ct., where he practiced his profession for nearly three years, winning to himself not only friends, but leaving an honorable record as a practitioner. From this place he removed to Mansfield, where he remained about a year.

Dr. Porter had a natural taste for surgery, and we find from his manuscripts that Dec. 1st, 1833, he had offered his services to his country, and received the appointment of assistant surgeon; while several days later he reported to Lieut. Col. Kearney, 1st Dragoons, at Jefferson Barracks, Mo. From this time until the Mexican war he was stationed at various points, south and west, exposing himself to the various diseases incident to that climate.

In 1834 he was stationed at Fort Gibson, where bilious remittent fever was epidemic; he being the only medical officer able to perform duty, and had the sick ones to care for from nine companies of the 7th Infantry, one company of Dragoons, besides women and children and other followers of the camp. He says, "The hospital

was full—such a summer was never known in that part of the country. The sickness raged until October; not a drop of rain fell from July to September, the cloudless sky and scorching sun were uninterrupted, and the thermometer was as high as 116°.”

In 1846 he received his appointment as *full* surgeon; and during a part of the Mexican war acted as Senior Surgeon in Gen. Worth's division. The duties he was called upon to perform there, with its exposures and privations, in a climate foreign to our own, with its hordes of diseases, no doubt laid the foundation of his ill health.

Being a man prompt to action, unswerving in duty, he needed but the command of his superiors to hasten him to fields more remote. Thus we find that in the interval between the Mexican war and that of the Rebellion he was called upon to brave epidemic cholera at Charleston, S. C., yellow fever at New Orleans, and the exposures of Utah. He was a man of more than ordinary literary ability, as his various writings show. While in the army he contributed many valuable papers for medical publication, one in particular relating to yellow fever. He took great interest in tracing genealogies of families, and at the time of his death had nearly completed a history of his native town. During the whole period of his army life he was absent from his post of duty but a few times, and then on some occasions employed a Surgeon to take his place, paying him from his own private funds.

In 1863, having served 28 years in the cause of his country, and being physically broken down by continued exposures and diseases contracted while in this service, he was placed upon the retired list of Surgeons and came to the home of his nativity to spend the remnant of his days among his own kindred, and at last by them be placed beside his honored ancestors. We remember him as a man large and muscular in frame, being gentlemanly and courteous in bearing, liberal in his views, but positive in opinion, he ever won the esteem of his medical friends and associates. His love for the profession was great, and his counsels and advice to the practitioner were of signal service.

He died of rheumatic carditis after a long and distressing illness. He was a man in every sense of the word true to the convictions of duty he owed to himself, to his family, to his nation and his God.

MEMOIR OF
TIMOTHY DIMOCK, M.D., OF SOUTH COVENTRY.

BY HENRY S. DEAN, M.D., OF SOUTH COVENTRY.

Dr. TIMOTHY DIMOCK, the only son of Capt. Daniel Dimock, a respectable farmer, was born at Coventry, Conn., April 7, 1800, and died in his native town, April 29, 1874. He was the youngest of a family of nine children, of whom but one is now living. In early life, besides attending the district school, he studied the higher English branches and Greek and Latin with Rev. Chauncey Booth, then pastor of the First Congregational Church in Coventry, and afterward continued his studies at Bacon Academy in Colchester, Conn., until he was fitted to enter Yale College. We next find him a medical student in the office of Dr. Chauncey Burgess, of Coventry, and subsequently, for more than a year, "a good student"—as his instructor called him—under the tuition of Prof. Jonathan Knight, M.D., of New Haven. He attended two courses of lectures at the Medical Institution of Yale College, where he graduated in 1823. After practicing his profession a few years at Granby, Mass., he settled, in the spring of 1827, in his native town, where he was a very successful practitioner of medicine and surgery for nearly forty-five years.

Dr. Dimock was a man of superior mental endowments, which had been well improved by use, study and observation. In public estimation he stood high as a man of ability and integrity. As a practitioner he was intelligent, judicious and self-reliant, attending faithfully to his own patients, and answering many calls as consulting physician. His field of practice was extensive, and the number of his patients always large. His good judgment, abundant common sense and large fund of information, made him an able counselor, and together with his uprightness of character and ever gentlemanly bearing, secured him the confidence and esteem of his medical brethren and of the community.

He took a deep interest in public affairs; and his numerous friends manifested their confidence in him, by placing him in sev-

eral positions of trust, the duties of which he discharged in a manner creditable to himself and his constituents. For some years he was surgeon of a regiment of Connecticut militia. He was a member of the House of Representatives in 1838; and was Senator for the Twenty-first District in 1846. He was a member of the Connecticut Medical Society, and in 1858 was elected a member of the Standing Committee on Examinations for Degrees.

The Doctor was endowed with a sound constitution. In person, he was tall, symmetrical in form and prepossessing in appearance. His pleasing address and cordial greeting gladdened many a heart, and whether in the sick room or social gathering—as one of his intelligent neighbors said—“Dr. Dimock was a man who carried a great deal of light with him.”

He was twice married; first to Miss Mary Ann Moody of Granby, Mass.; last to Miss Laura F. Booth, daughter of Rev. Chauncey Booth, a lady of excellent abilities and good sense. He was the father, by each marriage, of a son and two daughters. His last wife died Jan. 15, 1872; none of the daughters survived her. The elder son, Daniel W., during the last two years of the late civil war, was a Volunteer in the Union service; after the close of the war, he studied medicine, and is now a practicing physician. The younger son, Henry F., graduated honorably at Yale College in 1863, studied law, was admitted to the bar, and has since resided in the city of New York, where, besides attaining success in his profession, he has acceptably filled important positions of trust and responsibility.

Dr. Dimock was a Christian. For more than forty years he was a consistent member of the Congregational Church and one of its most efficient supporters. During the last two years of his life, though confined to his house by increasing infirmities, he was usually cheerful, retaining his public spirit, and often participating in conversation upon matters of general interest. Sustained by the Christian's faith, he calmly anticipated the time of his departure. The ennobling influence of his example will long continue.

MEMOIR OF
DENISON HUBBARD, M.D., OF CLINTON.

BY IRA HUTCHINSON, M.D., OF CROMWELL.

DR. DENISON H. HUBBARD was born in Bolton, Tolland Co., Conn., Sept. 1st, 1805, and was the son of Dea. Nathaniel Hubbard of that place. His early opportunities for education were restricted to the common schools, a few terms in Bacon Academy in Colchester, and subsequently to a few month's private instruction in languages by a clergyman. He studied medicine for some months with Dr. J. S. Peters, of Hebron, then or soon after Governor of the State of Connecticut, supporting himself by teaching a private school. He subsequently prosecuted the study under the instruction of Dr. William O. Talcott, of Winsted, in this State, and after completing his term of study, by attending the required courses of lectures in the Yale Medical College, he graduated at that institution in 1829.

He began his practice in Glastonbury, Conn., and in 1832 was married to Miss Pamela A., daughter of Hon. A. C. Hubbard of that place.

Not far from that time he removed to Bloomfield, Conn., where he continued in practice until 1844, when his health failing under arduous professional service, he removed to Clinton, where he resided until the date of his death, Aug. 12th, 1874. Although of a delicate organization, he in his prime possessed powers of endurance that enabled him to accomplish as much if not more of professional work than any of his brethren in his vicinity. It is believed that for years he did not spend on an average four hours in the twenty-four in sleep. Cautious in adopting new remedies and new modes of treatment, he was somewhat conservative in his practice; but estimating it by its results and by the very great confidence reposed in him by the community in which he lived, it can hardly be judged otherwise than as having been eminently judicious. At the bed side of his patient he was a close and discriminating observer of the phenomena of the disease,

careful and correct in his diagnosis, and prompt in applying the appropriate remedy. He strove to keep himself informed with regard to everything progressive in medicine, and as a rule allowed no day to pass without spending more or less time in his study. Ever deeply impressed with the dignity of the profession, its great importance to the well being of the community and of his own individual responsibility as one of its members, it was his constant endeavor, faithfully and conscientiously, to perform all its duties.

But it was the crowning glory of Dr. Hubbard that he was a good man. Descended from a pious ancestry and early instructed in the doctrines and precepts of the Christian religion, he yielded them his hearty assent, and made them the guiding star of his after life. He first made a public profession of his faith in Christ and willing subjection to Him by uniting with the Congregational Church in his native town when about twenty years of age, and he evinced the sincerity of his profession by a life of consistent piety and active benevolence. He considered his vows of consecration as including all that he was and all he possessed, and carried his religion in a marked degree into every department of his life. Once convinced that a thing was right he adhered firmly and unflinchingly to it. He conscientiously abstained from every habit which he deemed useless and wasteful of time and means, not to say injurious and debasing, no matter how prevalent or how fashionable it might be, and he gave the full weight of his example and influence in favor of such abstinence. Diligent and faithful in the performance of every duty, whether professional or otherwise, he yet felt that unless his well meant efforts were supplemented by the Divine blessing, they would prove unavailing of any good, and that blessing it is believed he habitually invoked.

He faithfully observed the Lord's Day, always endeavoring so to arrange his business as to attend as few calls as possible on that day, rising early and promptly and rapidly discharging such professional duties as were obligatory. He was oftener found in the sanctuary on the Sabbath than the majority of his brethren with less arduous duties. He held views on the subject of giving somewhat unusual, it being a part of his creed that beyond a reasonable providence for the uncertainties of the future, a Christian had no right to accumulate property; and his practice seems to have been in exact conformity to his creed. For while he was economical in

the management of his affairs, and for more than forty years received a fair income from his business, he left comparatively but little property. Besides being kind and considerate to the poor and rendering them an unusual amount of gratuitous professional service, he was a constant, systematic, and liberal contributor to the various benevolent organizations of the day, and a short time before his death he gave six hundred dollars to the ecclesiastical organization of which he had so long been a member and firm supporter.

It is believed that for the greater part of his life his contributions to various religious and other benevolent objects amounted to one-tenth of his income, and that the last ten years of his life they considerably exceeded that. One who knew him well and had had excellent opportunity to observe him for many years, writes: "I believe him to be one of the best men I ever knew. He was a good man socially, professionally, politically and religiously. He was a good husband and father and friend, was a good member of the entire community in which he moved. He was a good physician with a large practice, and with his patients was faithful, successful, agreeable and reasonable. Among his professional brethren he was kind and strictly honorable. In politics he was conscientious, and went for the best interests of the entire community. As a member of the church he was zealous and active in the discharge of the duties which belong to the true and faithful members of that organization, including his liberal pecuniary contributions to the poor and to those public institutions which have for their object the present good and final salvation of men."

About ten years before his death he was called in the providence of God to experience a series of sore bereavements; wife, son and only daughter being taken from him within the period of four months. He did not marry again, but his mind appeared in a noticeable degree to be occupied with thoughts and anticipations of the life that is beyond.

In 1872 he had an attack of hemiplegia from which he never fully recovered, although able to attend to a limited amount of business. In March 1874, he had a renewed attack, which terminated in death, Aug. 12th of the same year.

His end, as befitting such a life, was peace, and his memory is blessed.

In thus briefly reviewing the character and life of our departed friend, we can scarcely fail to be impressed with the idea that

while good natural abilities, a power of physical endurance, and a competent knowledge, both theoretical and practical, of the various branches of medical science, are indispensable prerequisites to the skillful performance of the duties of a practicing physician, *yet it is only when those qualifications are blended with moral purity*, and a life spent in the interests of humanity, that the highest honor is reflected on the medical profession.

MEMOIR OF
HUBERT VINCENT CLAIRBORNE HOLCOMBE, M.D.,
OF BRANFORD.

DR. HUBERT VINCENT CLAIRBORNE HOLCOMBE was born in West Granville, Mass., Jan. 5, 1828, and was the son of Dr. Vincent Holcombe, for many years the leading physician and Surgeon in Granville and the surrounding country. Dr. Holcombe in his early manhood decided to follow the profession of his father. He studied with his father, and at Lee, Mass. He attended lectures at the Medical Institution of Yale College and at Castleton, Vt., at which latter place he received the degree of Doctor of Medicine. During the time of his preparation for the practice of his profession he joined a company gotten up to visit the country of Mexico on a trading expedition. In this enterprise he was engaged some two years, and in many instances endured exposures, hardships, and often had his life endangered at the hands of the merciless natives. He was in Mexico when peace was declared between that country and the United States, and not engaged in the war as we have heretofore understood. Returning from Mexico he completed his college course, and immediately after commenced the practice of his profession with his father at Granville, and continued with him until the spring of 1854, when he came to Branford and resumed the practice of his profession. He first came on a visit with his wife, who was a daughter of the late O. D. Squire. During his visit here, which was of some two or three weeks' duration, he was called to attend to a case of broken bones, which he adjusted in a most satisfactory manner. It was a little remarkable that during his visit here there occurred a number of cases of broken and misplaced bones, which he was called to attend. Proving so successful in every case which he was called to attend, his fame was soon made known throughout the town and adjoining country. By urgent request of friends he moved to Branford, and as a skillful physician and surgeon he soon obtained an extensive practice. During the late rebellion he was appointed surgeon of the Fifteenth Connecticut regiment,

and with them entered the battlefield in the summer of 1862. When the yellow fever broke out among the soldiers in Newbern, Dr. Holcombe was post surgeon, and the first to announce its appearance. He reported at headquarters that there were cases of yellow fever in the hospital, but other physicians of more or less importance, after a rigid examination, decided that Dr. Holcombe was in error, and that the cases reported were not yellow fever. For making this report Dr. Holcombe was put under arrest for three days, as the announcement tended to create a panic in the large number of men then stationed at Newbern. However, the report proved too true, and from that terrible disaster, thousands were hurried to an early grave. The treatment of this disease under the instructions of Dr. Holcombe, proved very successful. It is said that where different means of treatment were employed to stay the progress of this fever, that the instances of mortality were appalling. In the treatment of this particular fever Dr. Holcombe gained great popularity, and afterward, when any of the men were feeling ill, they secured, if possible, the services of Dr. Holcombe. At the battle of Fredericksburg Dr. Holcombe rendered valuable service in amputating hundreds of limbs. He remained with the regiment during the three years' campaign, and returned home July 4, 1865, with an honored name, and with the consolation that he had done all in his power for the relief of suffering humanity. On his return to Branford he was hailed with welcome, and again resumed his practice, which he continued up to within two years, during which time he has been more or less confined to the house in consequence of declining health. He died at Branford, August 4th, 1875.

The funeral of Dr. H. V. C. Holcombe was largely attended from his late residence Friday afternoon, August 7. The funeral was attended with masonic honors by Widow's Son Lodge, No. 66, of which he was Past Master. Rev. Dr. Olmstead, of Trinity Parish, was the officiating clergyman. The following gentlemen, officers of the Fifteenth Connecticut Regiment, of which the deceased was surgeon, were present: Colonel Charles L. Upham, Lieutenant-Colonel Samuel Tolles, Lieutenant Charles F. Bowman, Lieutenant Beecher, Captain Butricks, Captain White and Captain Robert O. Bradley. Rev. D. D. Bishop, formerly Rector of Trinity Parish was also present.

Although passed from earth, Dr. Holcombe will be long and kindly remembered by a large circle of relatives and friends.

Νεκρολογία

De Mortuis nil nisi bonum

NORMAN BRIGHAM, M.D.

Born in South Coventry, Conn.,
Licensed by the Conn. Medical Society,
Practiced in Mansfield,
Died at Mansfield Depot,

April 16, 1790
October 5, 1813
1813—1871
October 15, 1871

SHELDON BEARDSLEY, M.D.

Born at Long Hill, Trumbull, Conn.,
Graduated in Arts at Yale College,
Received A.M. and M.D. at Yale College,
Practiced in New Milford,
Practiced in North Branford,
Died in North Branford,

1803
1828
1831
1831—1832
1832—1872
Jan. 26, 1872

OLIVER K. ISHAM, M.D.

Born in Tolland, Conn.,
Received M.D. at Yale College,
Practiced in Coventry and Tolland,
Died in Tolland,

March 27 1797
1822
1822—1872
March 10, 1872

DAVID E. BOSTWICK, M.D.

Born at New Milford, Conn.,
Received M.D. at Albany,
Practiced at South Farms,
Practiced in Litchfield,
Died in Litchfield,

Feb. 23, 1821
1846
1846—1848
1848—1872
March 17, 1872

Pallida

Mors æquo

pulsat

pede

pauperum

tabernas

regumque

turres.



PROCEEDINGS.

THE *Eighty-first* Annual Meeting of the President and Fellows of the Connecticut Medical Society was held at the City Hall in New Haven, May 22, 1872. The meeting was called to order at 3 P. M. by the President, G. W. Russell, M.D.

B. F. Harrison, M.D., and H. S. Fuller, M.D., were appointed a Committee on Credentials. The Committee reported the list of Fellows, which was approved and read by the Secretary as follows, viz:—

List of Fellows Ex-Officio.

PRESIDENT.

G. W. RUSSELL, M.D.

VICE PRESIDENTS.

H. W. BUEL, M.D.

B. F. HARRISON, M.D.

WM. WOOD, M.D.

A. WOODWARD, M.D.

*JUSTIN HAMMOND, M.D.

*J. W. BIDWELL, M.D.

WM. N. CLARK, M.D.

IRA GREGORY, M.D.

TREASURER.

SECRETARY.

J. C. JACKSON, M.D.

MOSES C. WHITE, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

H. A. CARRINGTON, M.D. H. W. BUEL, M.D.

*F. D. EDGERTON, M.D.

Fellows Elected in 1872.

NEW HAVEN COUNTY.

Chas. A. Lindsley, M.D.

Edward Bulkley, M.D.

P. A. Jewett, M.D.

A. H. Churchill, M.D.

Joel Canfield, M.D.

* Absent.

HARTFORD COUNTY.

Geo. C. Jarvis, M.D.	H. S. Fuller, M.D.
*H. C. Bunce, M.D.	E. B. Lyon, M. D.
*Henry Gray, M.D.	

NEW LONDON COUNTY.

A. W. Nelson, M.D.	A. Woodward, M.D.
Chas. M. Carleton, M.D.	*Patrick Cassida, M.D.
*A. T. Chapman, M.D.	

FAIRFIELD COUNTY.

A. L. Williams, M.D.	Ira Gregory, M.D.
James Baldwin, M.D.	*O. S. Hickok, M.D.
*R. M. Gray, M.D.	

LITCHFIELD COUNTY.

Wm. Porter, M.D.	*Wm. W. Knight, M.D.
*H. E. Gates, M.D.	*Remus Fowler, M.D.
*Walter S. Munger, M.D.	

MIDDLESEX COUNTY.

*Geo. O. Jarvis, M.D.	J. H. Grannis, M.D.
S. W. Noyes, M.D.	

TOLLAND COUNTY.

G. H. Preston, M.D.	J. N. Parker, M.D.
A. R. Goodrich, M.D.	

WINDHAM COUNTY.

Samuel Hutchins, M.D.	*John Witter, M.D.
Edwin A. Hill, M.D.	*Chas. Hosford, M.D.
John B. Kent, M.D.	

The President then appointed as the *Business Committee*, C. A. Lindsley, M.D., M. C. White, M.D., and Wm. Porter, M.D.

Nominating Committee (appointed by the County Delegations), Geo. C. Jarvis, M.D., P. A. Jewett, M.D., A. L. Williams, M.D., C. M. Carleton, M.D., S. W. Noyes, M.D., S. Hutchins, M.D., A. R. Goodrich, M.D., and Wm. Porter, M.D.

The Committee (appointed last year) to harmonize the By-Laws reported that, to correct discrepancies, it was desirable to

correct Chap. VI, sec. 2, last line but one, after the word chosen, by inserting—"Shall enter upon their duties at the close of the Convention, and." The report was accepted, and the proposed correction was adopted.

The whole sentence as corrected will read :

"When a choice is made, the persons chosen shall enter upon their duties at the close of the Convention, and shall hold their offices during one year, and until others shall be elected."

Dr. Carrington, from the Committee of Arrangements, announced that the President and Fellows were invited to attend a reception by the New Haven Medical Association at 8 P. M., at the Art Gallery, to be followed by a collation at the Medical College. Invitation accepted.

The President appointed as *Committee on County Resolves*, A. Woodward, M.D., A. H. Churchill, M.D. and E. A. Hill, M.D. Various resolutions were presented and referred to this Committee.

Committee to Nominate Essayists, C. M. Carleton, M.D., and A. R. Goodrich, M.D.

D. A. Tyler, M.D., presented the Report of the Examining Committee, which was referred to the Committee of Publication. See Appendix A.

The Treasurer, J. C. Jackson, M.D., presented his Annual Report, which was referred to J. Canfield, M.D. and E. B. Lyon, M.D., as Auditing Committee, who reported that they found the Treasurer's Accounts correct. The Report of the Treasurer was then approved and ordered *on file*.

Summary of Treasurer's Report.

May 25, 1871. Balance in Treasury,.....	\$298.79½
May 22, 1872. Received during the year,.....	331.58
	\$630.37½
May 22, 1872. Disbursements during the year,.....	338.77
	\$291.60½
Balance carried to new account,.....	\$1,747.71
Due from Clerks and ex-Clerks,.....	
Deduct three-fourths of this for abatements, commissions, bad debts, etc.,	1,319.44 428.26½
	\$719.87
The Society owes for Debentures, outstanding,.....	150.62½
	\$569.24½
Balance last year,.....	519.45½
	\$49.79
Increase of balance over last year,.....	

The following gentlemen were appointed as the *Committee on Gratuitous Students*, viz: Geo. C. Jarvis, M.D., E. Bulkley, M.D., A. W. Nelson, M.D., J. Baldwin, M.D., H. E. Gates, M.D., J. H. Grannis, M.D., J. B. Kent, M.D., A. R. Goodrich, M.D.

Voted, That the *Annual Tax* be two dollars, payable June 1st, 1872.

Voted, That the number of copies of Proceedings to be published this year be left to the decision of the President, Treasurer, and Secretary to be elected.

The President appointed as *Committee on Honorary Degrees and Honorary Membership*—H. W. Bucl, M.D., A. Woodward, M.D., and Ira Gregory, M.D.

The *Nominating Committee* made their Report, and the following officers for the ensuing year were elected:

President—HENRY W. BUEL, M.D.

Vice-President—IRA HUTCHINSON, M.D.

Treasurer—JAMES C. JACKSON, M.D.

Secretary—MOSES C. WHITE, M.D.

On Committee of Examination—Geo. C. Jarvis, M.D., and Robert Hubbard, M.D.

On Committee to Nominate Professors to the Medical Institution of Yale College—C. M. Carleton, M.D., and H. S. Fuller, M.D.

On Committee to Nominate Physician to the Retreat for the Insane—Wm. Porter, M.D., and E. K. Hunt, M.D.

Committee on Matters of Professional Interest in the State—H. A. Carrington, M.D., L. S. Wilcox, M.D., and A. W. Nelson, M.D.

Committee of Publication—M. C. White, M.D., G. W. Russell, M.D., and L. J. Sanford, M.D.

Committee of Arrangements—G. W. Russell, M.D. (Anniversary Chairman), J. C. Jackson, M.D., and W. A. M. Wainwright, M.D.

Dissertator—L. J. Sanford, M.D.

Alternate—Wm. Porter, M.D.

Delegates to other Societies were elected as follows, viz:—

To the American Medical Association—Wm. H. Cogswell, M.D., H. M. Knight, M.D., E. K. Hunt, M.D., Levi Ives, M.D., and E. P. Bennett, M.D.

To the Maine Medical Association—C. M. Carleton, M.D., and J. B. Kent, M.D.

To the New Hampshire Medical Society—E. A. Hill, M.D., and G. H. Preston, M.D.

To the Vermont Medical Society—Walter Munger, M.D., and C. A. Lindsley, M.D.

To the Massachusetts Medical Society—Wm. Woodruff, M.D., and M. Storrs, M.D.

To the Rhode Island Medical Society—Samuel Hutchins, M.D., and A. R. Goodrich, M.D.

To the New York Medical Society—M. C. Hazen, M.D., James Welch, M.D., D. A. Tyler, M.D., P. A. Jewett, M.D., and C. F. Sumner, M.D.

To the New Jersey Medical Society—Ira Gregory, M.D., and E. A. Park, M.D.

To the Pennsylvania Medical Society—W. C. Bennett, M.D., E. H. Bishop, M.D., and A. H. Churchill, M.D.

The Committee on Honorary Membership proposed the names of Geo. F. Horton, M.D., Delegate from Pennsylvania, and Gurdon Buck, M.D., of New York City.

By the rules of the Society, these nominations lie over for action next year.

The case of Dr. Bowen, nominated two years ago for Honorary Membership, having been called up, it was

Voted, That, whereas there is no provision in the By-Laws for the appointment of persons residing in this State to Honorary Membership,

Resolved, That the case of Dr. Bowen be indefinitely postponed.

The Committee on County Resolves, &c., made a report which was recommitted to the Committee, with instructions to present their report to the Convention to-morrow.

Voted, That in case any further business be required to be transacted by the Fellows, they shall be called together again to-morrow by request of the Secretary.

Adjourned.

By invitation of the New Haven Medical Association at 8 P. M., the President and Fellows visited the Art Gallery in the Yale School of Fine Arts, and at 9 P. M. enjoyed the hospitalities of the Association at the Medical College.

Thursday, May 23.

By request of the Secretary, the Fellows were called to order by the President, G. W. Russell, M.D.

ASYLUM FOR INEBRIATES.

The Committee on County Resolves, who had had under consideration certain resolutions from the Hartford County Associa-

tion in relation to an asylum for inebriates, reported that in their opinion this Society should use its influence with the Legislature to secure the erection of an Inebriate Asylum, whereupon it was unanimously

Resolved, That a Committee of one from each County be appointed to collect statistics in regard to the number of inebriates in the State, and their claims to the sympathy and aid of the public, and present the matter to this Society next year, in such form that they may take suitable action thereon and present the subject to the Legislature at its next session.

The President appointed on this Committee,

B. N. Comings, M.D., of New Britain.

Wm. B. DeForest, M.D., of New Haven.

H. W. Buel, M.D., of Litchfield.

S. Hutchins, M.D., West Killingly.

G. H. Preston, M.D. of Tolland.

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

R. Hubbard, M.D., of Bridgeport.

F. D. Edgerton, M.D., of Middletown.

PRELIMINARY EDUCATION OF MEDICAL STUDENTS.

The Committee further reported that they had carefully considered a communication from the American Medical Association, accompanied by the following resolution adopted by that Association at its Annual Meeting in 1871, viz:—

“*Resolved*, That each State and Local Medical Society be requested to provide, as a permanent part of its organization, a Board of Censors for determining the educational qualifications of such young men as propose to commence the Study of Medicine, and that no member of such societies be permitted to receive a student into his office, until such student presents a certificate of proper preliminary education from the Censors appointed for that purpose, or a degree from some literary college of known good standing.”

Your Committee recommend the appointment of *three Censors*, by each County Association, to act in accordance with the above resolution of the American Medical Association.

The Report of the Committee was adopted, and the appointment of Censors was referred to the County Associations.

The Annual Meeting of the Fellows then adjourned to the fourth Wednesday in May, 1873.

Attest:

M. C. WHITE, M.D., *Secretary*.

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held in the Common Council Chamber at the City Hall, New Haven, May 23, 1872.

The Convention was called to order at 9½ A. M., by the President, G. W. Russell, M.D.

The list of officers was read, and the Vice-Presidents took their seats upon the stage.

H. W. BUEL, M.D., Vice-President and President-elect.

IRA HUTCHINSON, M.D., Vice-President-elect.

Wm. Wood, M.D.

B. F. Harrison, M.D.

A. Woodward, M.D.

Ira Gregory, M.D.

J. Hammond, M.D.

J. W. Bidwell, M.D.

Wm. N. Clark, M.D.

Vice-Presidents,
ex-officio.

Credentials of Delegates from other Societies were read, and the Delegates were introduced to the Convention, viz:

Robert Newman, M.D., New York State Medical Society.

A. T. Douglas, M.D., " " " " "

J. P. Garrish, M.D., " " " " "

*Ferris Jacobs, M.D., " " " " "

Samuel H. Pennington, M.D., Medical Society of New Jersey.

Geo. F. Horton, M.D., Medical Society of Pennsylvania.

NEW MEMBERS.

The following gentlemen have united with the Society during the year, viz:

Walter Judson, M.D., New Haven, Coll. Phys. and Surg., N. Y.,
March, 1870.

Ira S. Smith, M.D., New Haven, Harvard, July, 1869.

D. C. Leavenworth, M.D., New Haven, Yale College, Jan., 1865.

F. P. Blodgett, M.D., Ansonia, Yale College, July, 1871.

S. R. Burnap, M.D., Windsor Locks, Coll. Phys. and Surg., N. Y.

E. W. Chamberlain, M.D., Hartford, " " " "

E. P. Swansey, M.D., New Britain, " " " "

James Campbell, M.D., Hartford, Univ. of Vermont.

Wm. H. Mathed, M.D., Suffield, Univ. of N. Y.

L. Tudor Platt, M.D., Terryville, Philadelphia.

Elias B. Heady, M.D., Cornwall Bridge, Yale College, Jan., 1872.

* Not present, but sent a letter of fraternal greeting.

DEATHS.

For list of those who have died during the year, see Mortuary Tablet.

The Committee to Nominate Essayists made the following nominations, which were adopted, viz :

G. S. Butler, M.D., On Prevention of Insanity.

J. C. Jackson, M.D., On Life Insurance.

P. A. Jewett, M.D., On Recto and Vesico-Vaginal, Fistulæ and Rupture of the Perinæum.

E. C. Kinney, M.D., On Bright's Disease.

Geo. F. Barker, M.D., On Modern Methods in Toxicology.

Chas. L. Ives, M.D., On Modern Medicine.

Chas. M. Carleton, M.D., On Ovariectomy.

P. M. Hastings, M.D.,

C. A. Lindsley, M.D.,

A. W. Nelson, M.D.,

} On Small Pox and Vaccination.

The Vice-President, H. W. Buel, M.D., then took the chair, and the President, G. W. Russell, M.D., delivered the Annual Address, "*On Some of the Causes of Disease.*"

MEDICAL EXPERTS IN CASES OF ALLEGED INSANITY.

On motion of P. A. Jewett, M.D., it was

Resolved, That so much of the President's Address as relates to the question of employing Medical Experts to examine *Cases of Alleged Insanity* in criminal trials, be referred to a Committee of three, whose duty it shall be to present the subject to the Legislature with the view of securing appropriate legislation. The Committee appointed to present the subject to the Legislature are S. G. Hubbard, M.D., Abraham Shew, M.D., and Francis Bacon, M.D.

H. A. Carrington, M.D., read the Report of the Committee on Matters of Professional Interest in the State, which was referred to the Committee of Publication.

Wm. B. DeForest, M.D., then read the Report on Public Hygiene.

On motion, the thanks of the Society were tendered to Dr. DeForest, and a copy of his report was requested for publication.

Dr. S. G. Hubbard offered the following preamble and resolution which was unanimously adopted, and referred to the Committee of Publication, viz :

Whereas, The prevalence in this State at the present time of pleuro-pneumonia, cerebro-spinal meningitis, and other infectious diseases among domestic animals to an unusual degree is well known, and is causing great pecuniary losses, besides directly endangering the health of the community; therefore,

Resolved, That we recognize and appreciate the labors of the State Board of Agriculture, and particularly of Noah Cressy, M.D., as the pathologist of that Board, in their efforts to detect and circumscribe these diseases, thus protecting the public health; and we do hereby earnestly commend them to the hearty co-operation of the profession throughout the State.

W. L. Bradley, M.D., read an essay on "The Treatment of Puerperal Convulsions."

The thanks of the Society were voted to Dr. Bradley, and a copy of his paper was requested for publication.

Dr. L. S. Wilcox stated that if a patient in labor is taken with convulsions, he immediately places her under the influence of chloroform, and effects delivery in about half an hour without ever allowing the occurrence of a second convulsion.

H. M. Knight of Lakeville then read the Annual Dissertation, entitled "Hallucinations of Childhood."

The thanks of the Society were tendered to Dr. Knight for his dissertation on this new and interesting topic, and a copy was requested for publication.

Henry Bronson, M.D., then read a "History of Intermittent Fever in the New Haven Region."

The thanks of the Society were tendered to Dr. Bronson for his valuable paper, and a copy was requested for publication.

The thanks of the Society were voted to the Mayor and Common Council for the use of their Council Chamber for the meetings of the Society.

The Society then adjourned.

Attest: MOSES C. WHITE, M.D., *Secretary*.

OFFICERS OF THE SOCIETY
FOR 1872--73.

PRESIDENT,
HENRY W. BUEL, M.D., OF LITCHFIELD.

VICE-PRESIDENT,
IRA HUTCHINSON, M.D., OF CROMWELL.

VICE-PRESIDENTS, *Ex-officio*,
WM. WOOD, M.D., OF EAST WINDSOR HILL.
B. F. HARRISON, M.D., OF WALLINGFORD.
ASHBEL WOODWARD, M.D., OF FRANKLIN.
IRA GREGORY, M.D., OF NORWALK.
JUSTIN HAMMOND, OF KILLINGLY.
J. W. BIDWELL, OF WEST WINSTED.
IRA HUTCHINSON, M.D., OF CROMWELL.
WILLIAM N. CLARK, OF STAFFORD.

TREASURER,
JAMES C. JACKSON, M.D., OF HARTFORD.

SECRETARY,
MOSES C. WHITE, M.D., OF NEW HAVEN.

STANDING COMMITTEES.

Committee of Examination.

HENRY W. BUEL, M.D., *Ex-officio*.
RUFUS BAKER, M.D.
LOWEL HOLBROOK, M.D.
F. L. DICKINSON, M.D.
T. S. HANCHETT, M.D.
DAVID A. TYLER, M.D.
GEO. C. JARVIS, M.D.
ROBERT HUBBARD, M.D.

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

H. W. BUEL, M.D.
E. B. NYE, M.D.
SAMUEL LYNES, M.D.
C. W. CARLETON, M.D.
H. S. FULLER, M.D.

Committee to Nominate Physician to the Retreat for the Insane.

G. L. PLATT, M.D.
C. M. CARLETON, M.D.
J. B. WHITCOMB, M.D.
WM. PORTER, M.D.
E. K. HUNT, M.D.

Committee on Matters of Professional Interest in the State.

H. A. CARRINGTON, M.D.
L. S. WILCOX, M.D.
A. W. NELSON, M.D.

Committee of Publication.

M. C. WHITE, M.D., *Ex-officio.*
G. W. RUSSELL, M.D.
L. J. SANFORD, M.D.

Committee of Arrangements.

G. W. RUSSELL, M.D., *Anniversary Chairman.*
J. C. JACKSON, M.D.
W. A. M. WAINWRIGHT, M.D.

Reporters on Medical Science.

G. S. BUTLER, M.D., on *Prevention of Insanity.*
J. C. JACKSON, M.D., on *Life Insurance.*
P. A. JEWETT, M.D., on *Recto and Vesico-vaginal Fistulæ and
Rupture of the Perinæum.*
E. C. KINNEY, M.D., on *Bright's Disease.*
GEO. F. BARKER, M.D., on *Modern Methods in Toxicology.*
C. L. IVES, M.D., on *Modern Medicine.*
C. M. CARLETON, M.D., on *Ovariectomy.*
P. M. HASTINGS, M.D., }
C. A. LINDSLEY, M.D., } on *Small Pox and Vaccination.*
A. W. NELSON, M.D., }

Dissertator—L. J. SANFORD, M.D.
Alternate—WM. PORTER, M.D.

MEMBERS OF THE SOCIETY.

HONORARY MEMBERS.

*FELIX PASCALIS,	-	-	-	New York City.
JAMES JACKSON,	-	-	-	Boston, Mass.
*JOHN C. WARREN,	-	-	-	Boston, Mass.
*SAMUEL L. MITCHELL,	-	-	-	New York City.
*DAVID HOSACK,	-	-	-	New York City.
*WRIGHT POST,	-	-	-	New York City.
*BENJAMIN SILLIMAN,	-	-	-	New Haven.
*GEORGE M'CLELLAN,	-	-	-	Philadelphia, Pa.
*JOHN MACKIE,	-	-	-	Providence, R. I.
*CHARLES ELDREDGE,	-	-	-	East Greenwich, R. I.
*THEODORIC ROMEYN BECK,	-	-	-	Albany, N. Y.
*JAMES THACHER,	-	-	-	Plymouth, Mass.
EDWARD DELAFIELD,	-	-	-	New York City.
JOHN DELAMATER,	-	-	-	Cleveland, O.
*WILLIAM P. DEWEES,	-	-	-	Philadelphia, Pa.
*JOSEPH WHITE,	-	-	-	Cherry Valley, N. Y.
JACOB BIGELOW,	-	-	-	Boston, Mass.
WALTER CHANNING,	-	-	-	Boston, Mass.
*PHILIP SYNG PHYSIC,	-	-	-	Philadelphia, Pa.
*LEWIS HERMAN,	-	-	-	U. S. Navy.
*DANIEL DRAKE,	-	-	-	Cincinnati, O.
*HENRY MITCHELL,	-	-	-	Norwich, N. Y.
NATHAN RYNO SMITH,	-	-	-	Baltimore, Md.
*VALENTINE MOTT,	-	-	-	New York City.
*SAMUEL WHITE,	-	-	-	Hudson, N. Y.
*REUBEN D. MUSSEY,	-	-	-	Cincinnati, O.
*WILLIAM TULLY,	-	-	-	Springfield, Mass.
RICHMOND BROWNELL,	-	-	-	Providence, R. I.
*WILLIAM BEAUMONT,	-	-	-	St. Louis, Mo.
SAMUEL HENRY DICKSON,	-	-	-	Philadelphia, Pa.
*SAMUEL B. WOODWARD,	-	-	-	Northampton, Mass.
*JOHN STEARNS,	-	-	-	New York City.
*STEPHEN W. WILLIAMS,	-	-	-	Deerfield, Mass.
*HENRY GREEN,	-	-	-	Albany, N. Y.
*GEORGE FROST,	-	-	-	Springfield, Mass.
WILLARD PARKER,	-	-	-	New York City.
*BENAJAH TICKNOR,	-	-	-	U. S. Navy.
*ALDEN MARCH,	-	-	-	Albany, N. Y.
*AMOS TWITCHELL,	-	-	-	Keene, N. H.
*CHARLES A. LEE,	-	-	-	New York City.
*DAVID S. C. H. SMITH,	-	-	-	Providence, R. I.

* Deceased.

*JAMES M. SMITH,	-	Springfield, Mass.
*HENRY D. BULKLEY,	- - -	New York City.
J. MARION SYMS,	- - -	New York City.
*JOHN WATSON,	-	New York City.
FRANK H. HAMILTON,	- - -	Brooklyn, L. I.
*ROBERT WATTS,	- - -	New York City.
J. V. C. SMITH,	- - -	New York City.
O. WENDELL HOLMES,	-	Boston, Mass.
JOSEPH SARGENT,	- - -	Worcester, Mass.
*MASON F. COGSWELL,	-	Albany, N. Y.
FOSTER HOOPER,	- - -	Fall River, Mass.
*THOMAS C. BRINSMADE,	-	Troy, N. Y.
GEORGE CHANDLER,	- - -	Worcester, Mass.
GILMAN KIMBALL,	- - -	Lowell, Mass.
JAMES McNAUGHTON,	- - -	Albany, N. Y.
*USHER PARSONS,	-	Providence, R. I.
*S. D. WILLARD,	- - - -	Albany, N. Y.
*JOHN WARE,	- - -	Boston, Mass.
EBENEZER ALDEN,	- - -	Randolph, Mass.
B. FORDYCE BARKER,	- - -	New York City.
JOHN G. ADAMS,	-	New York City.
JARED LINSLEY,	-	New York City.
A. J. FULLER,	- - -	Bath, Me.
SAMUEL H. PENNINGTON,	-	Newark, N. J.
FREDERICK N. BENNETT,	-	Orange, N. J.
*THOMAS W. BLATCHFORD,	- - -	Troy, N. Y.
THOMAS C. FINNELL,	- - - -	New York City.
N. C. HUSTED,	-	New York City.
JACOB P. WHITEMORE,	- - -	Chester, N. H.
JOHN GREEN,	- - -	Worcester, Mass.
THOMAS SANBORN,	- - -	Newport, N. H.
WILLIAM PIERSON,	-	Orange, N. J.
ARTHUR WARD,	- - -	Belleville, N. J.
HIRAM CORLISS,	-	Washington, N. Y.
E. K. WEBSTER,	- - -	Boscawen, N. H.
P. A. STACKPOLE,	- - -	Dover, N. H.
S. F. L. SIMPSON,	- - - -	Concord, N. H.
A. T. WOODWARD,	- - - -	Brandon, Vt.
WM. McCULLOM,	- - -	Woodstock, Vt.
J. C. HUTCHINSON,	-	Brooklyn, N. Y.
BENJ. E. COTTING,	- - -	Boston, Mass.
HENRY L. BOWDITCH,	-	Boston, Mass.
SETH SHOVE,	- - -	Katanah, N. Y.
SAMUEL T. HUBBARD,	- - -	New York City.

PROPOSED FOR HONORARY MEMBERSHIP.

GEORGE F. HORTON, M.D.,	-	Penn.
GURDON BUCK, M.D.,	-	New York City.

ORDINARY MEMBERS.

—◆◆—
The names of those who have been Presidents are in Capitals.
 —◆◆—

HARTFORD COUNTY.

WM. WOOD, M.D., of East Windsor Hill, President.

W. A. M. WAINWRIGHT, M.D., of Hartford, Clerk.

HARTFORD, S. B. BERESFORD,*	G. B. Warehouse Point, Marcus L. Fisk.
Hawley, G. W. RUSSELL, David	ENFIELD, Thompsonville, Edward F. Par-
Crary, P. W. Ellsworth, E. K. HUNT,	sons, Rial L. Strickland, Henry E.
J. S. Butler,* J. C. Jackson, A. W.	Childs.
Barrows, Thomas Miner,* William R.	FARMINGTON, Frank Wheeler, Charles
Brownell, P. M. Hastings, W. H. Tre-	Carrington.
maine, Lucian S. Wilcox, Henry P.	PLAINVILLE, G. A. Moody.
Stearns, S. C. Preston, Irving W. Lyon,	GRANBY, (North,) Francis F. Allen,* G.
Daniel Poll, Melancthon Storrs, Horace	W. Edwards.
S. Fuller, John O'Flaherty, Nathan	GLASTENBURY, H. C. Bunce.
Mayer, Wm. M. Hudson, Geo. C. Jar-	South Glastenbury, G. A. Hubbard, H.
vis, C. R. Hart, Morton W. Easton, W.	M. Rising.
A. M. Wainwright, E. M. Dunbar,	MANCHESTER, William Scott.*
David Crary, Jr., George F. Hawley,	NEW BRITAIN, B. N. Comings, S. W. Hart,
J. B. Lewis, D. T. Bromley, James H.	Geo. Clary, E. B. Lyon, G. S. Stone,
Denny, Geo. P. Davis, C. W. Chamber-	Erastus P. Swansey.
lain, James Campbell.	ROCKY HILL, R. W. Griswold.
BERLIN, E. Brandegee.	SIMSBURY, Tariffville, G. W. Sanford.*
BLOOMFIELD, Henry Gray.	Weatogue, R. A. White.
BROADBROOK, E. R. Leonard.	SOUTHRINGTON, N. H. Byington,* F. A.
CANTON, Collinsville, R. H. Tiffany, Geo.	Hart.
R. Shepherd.	SUFFIELD, Aretas Rising,* J. K. Mason,
EAST GRANBY, Chester Hamlin.*	Wm. H. Mather.
EAST HARTFORD, S. L. Childs, Edward R.	WEST HARTFORD, Edward Brace.*
Brownell, L. W. McIntosh.	WETHERSFIELD, A. S. Warner.
EAST WINDSOR HILL, Sidney W. Rock-	WINDSOR, A. Morrison, S. A. Wilson.
well, William Wood.	Windsor Locks, S. R. Burnap.

* Over sixty years of age.

NEW HAVEN COUNTY.

B. F. HARRISON, M.D., of Wallingford, President.

EDWARD BULKLEY, M.D., of New Haven, Clerk.

NEW HAVEN, E. H. Bishop,* Levi Ives, P. A. Jewett, David L. Daggett, Geo. O. Sumner,* David A. Tyler, HENRY BRONSON,* E. A. Park, S. G. Hub- bard, H. W. E. Matthews, C. A. Linds- ley, T. H. Totton, John Nicoll, Moses C. White, H. Pierpoint, J. H. Beecher, Leonard J. Sanford, Charles L. Ives, Edward Bulkley, W. B. DeForest,* F. L. Dibble, T. Beers Townsend, T. H. Bishop, Eli W. Blake, Henry A. Du- Bois, Francis Bacon, C. O. Stockman, Charles A. Gallagher, W. Lockwood Bradley, A. E. Winchell, H. A. Car- rington, George F. Barker, O. W. Peck, L. M. Gilbert, Robert S. Ives, F. J. Whittemore, Arthur Ruckoldt, H. L. Wixon, Stephen H. Bronson, Willis G. Alling, Frank Gallagher, Walter R. Bartlett, Walter Judson, Ira S. Smith, D. C. Leaveuworth.	DERBY, Charles H. Pinney. Birmingham, Ambrose Beardsley. Ansonia, F. P. Blodgett. GUILFORD, Joel Canfield,* Alvan Talcott, G. P. Reynolds. North Guilford, Justin Smith. HAMDEN, Edwin D. Swift, O. F. Tread- well. MADISON, D. M. Webb. MERIDEN (West), B. H. CATLIN, Asa H. Churchill, Jas. J. Averill, Frederick J. Fitch, C. H. S. Davis, Charles H. Gaylord. MILFORD, Hull Allen,* L. N. Beardsley, Thomas Dutton. NAUGATUCK, J. D. Mears.* NORTH HAVEN, R. F. Stillman. ORANGE, West Haven, J. Martin Aimes. OXFORD, Lewis Barnes. SEYMOUR, Thos. Stoddard, S. C. Johnson, Joshua Kendall.
Fair Haven, Charles S. Thomson,* W. H. Thomson, Wm. M. White. Westville, J. W. Barker. BRANFORD, H. V. C. Holcomb, Newton B. Hall. CHESHIRE, A. J. Driggs, M.N. Chamberlin.	SOUTHBURY, A. B. Burritt.* South Britain, N. C. Baldwin. WALLINGFORD, Nehemiah Banks, B. F. Harrison. WATERBURY, G. L. Platt, John Deacon, George E. Perkins, Thos. Dougherty, Alfred North, Edward L. Griggs.

NEW LONDON COUNTY.

ASHBEL WOODWARD, M.D., of Franklin, President.

ALBERT T. CHAPMAN, M.D., of Mystic, Clerk.

NEW LONDON, ISAAC G. PORTER,* D. P. Francis, Robert A. Manwaring, A. W. Nelson, F. N. Braman, Henry Potter. BOZRAH, Samuel Johnson.* COLCHESTER, Ezekiel W. Parsons,* Frederick Morgan.* FRANKLIN, ASHBEL WOODWARD. Greenville, Wm. Witter. GROTON, Mystic River, A. W. Coates, John Gray. LEBANON, Ralph Green.*	MYSTIC, Mason Manning,* Albert T. Chapman. NORWICH, Elijah Dyer,* Elisha Phinney,* A. B. Haile,* Lewis S. Paddock, Chas. M. Carleton, Wm. S. C. Perkins, Patrick Cassida, Levi Warren, E. C. Kinney. OLD LYME, Richard Noyes,* George W. Harris. STONINGTON, William Hyde,* H. W. Craudall. Mystic Bridge, E. Frank Coates.
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* Over sixty years of age.

FAIRFIELD COUNTY.

IRA GREGORY, M.D., of Norwalk, President.

GEORGE L. BEERS, M.D., of Bridgeport, Clerk.

Southport, Justus Sherwood.*	NORWALK, Ira Gregory,* Samuel Lynes,
BRIDGEPORT, William B. Nash,* David	James G. Gregory, James E. Barbour,
H. Nash, Robert Hubbard, H. L. W.	W. A. Lockwood, John W. McLean.
Burritt, Elijah Gregory, Geo. L. Beers,	South Norwalk, M. B. Pardee, R. L. Hig-
Andrew J. Smith, Augustus H. Aber-	gins, John Hill.
nethy, Geo. F. Lewis, James R.	RIDGEFIELD, O. S. Hickok, Wm. S. Todd.
Cumming, Gustave Ohnesorg, George	STAMFORD, N. D. Haight,* Jas. H. Hoyt,
L. Porter, Robert Lauder, Francis J.	E. H. Winslow.
Young.	North Stamford, Geo. W. Birch, W. H.
BROOKFIELD, A. L. Williams.	Trowbridge.
DANBURY, E. P. Bennett,* James Bald-	STRATFORD, Roger M. Gray.
win,* William C. Bennett.	TRUMBULL, George Dyer.*
DARIEN, Samuel Sands.	WESTPORT, George Blackman.* George
NEW CANAAN, Samuel S. Noyes,* Lewis	B. Bouton.
Richards,* William G. Brownson.	WILTON, A. E. Emery.
BETHEL, A. D. Barber.	HUNTINGTON, Gould A. Shelton.

WINDHAM COUNTY.

JUSTIN HAMMOND, M.D., of Killingly, President.

SAMUEL HUTCHINS, M.D., of West Killingly, Clerk.

WINDHAM, E. Huntington.	PUTNAM, H. W. Hough,* Daniel B.
ASHFORD, John H. Simmons.	Plympton, John B. Kent.
BROOKLYN, James B. Whitcomb,* Wm.	PLAINFIELD, Moosup, Wm. A. Lewis,
Woodbridge.	Charles H. Rogers, H. E. Balcam.
CANTERBURY, Elijah Baldwin.	THOMPSON, Lowell Holbrook, Charles
CHAPLIN, Orrin Witter.	Hosford.
HAMPTON, Dyer Hughes.*	VOLUNTOWN, Harvey Campbell.*
KILLINGLY, Justin Hammond.*	WESTFORD, Farnam O. Bennett.
South Killingly, Daniel A. Hovey.*	WOODSTOCK, Lorenzo Marcy.*
West Killingly, Samuel Hutchins, C. C.	East Woodstock, John Witter.
Crandall, R. Robinson, A. A. Reinfut.	West Woodstock, Milton Bradford.*
East Killingly, Edwin A. Hill.	WINDHAM, Willimantic, Fred. Rogers.
PLAINFIELD, WM. H. COGSWELL.*	T. Morton Hills, L. F. Bugbee.
POMFRET, Lewis Williams.	Woodstock Valley, Wm. H. Emery.

* Over sixty years of age.

LITCHFIELD COUNTY.

J. W. BIDWELL, M.D., of West Winsted, President.

Wm. PORTER, M.D., of Litchfield, Clerk.

LITCHFIELD, H. W. Buel, H. E. Gates, Wm. Porter, W. J. Beach.	Lakeville, Benj. Welch,* W. Bissell, H. M. Knight.
Northfield, D. B. W. Camp.*	SHARON, Ralph Deming,* William W. Knight.
BETHLEHEM, Franklin Booth.	Wolcottville, Erastus Bancroft,* Jeremiah W. Phelps, T. S. Hanchett.
CORNWALL, Burritt B. North.*	WARREN, John B. Derickson.
Cornwall Bridge, Elias B. Heady.	WASHINGTON, Remus M. Fowler,* Orlando Browne.
West Cornwall, Edward Sanford.	New Preston, Sidney H. Lyman, Edward P. Lyman.
HARWINTON, Robert E. Ensign.	WATERTOWN, W. S. Munger.
MORRIS, Garry H. Miner,* Wm. Deming.	WINCHESTER, West Winsted, Jas. Welch,* John W. Bidwell.
NEW MILFORD, J. K. Bacon.	WOODBURY, Charles H. Webb, Harmou W. Shove.
Gaylord's Bridge, G. H. St. John,* Chas. Couch.	Terryville, Coruelius W. Bull, L. Tudor Platt.
NORFOLK, Wm. W. Welch.	
PLYMOUTH, Samuel T. Salisbury.	
Thomaston, William Woodruff,* Ralph S. Goodwin.	
ROXBURY, Myron Downs.*	
SALISBURY, John H. Blodget.	

MIDDLESEX COUNTY.

IRA HUTCHINSON, M.D., of Cromwell, President.

MINER C. HAZEN, M.D., of Haddam, Clerk.

MIDDLETOWN, Elisha B. Nye, George W. Burke, Rufus Baker, F. D. Edgerton, Noah Cressy, Abraham M. Shew, Win- throp B. Halleck, Joseph W. Alsop, jr., Daniel A. Cleaveland, John Morgan	CROMWELL, Ira Hutchinson,* Selden W. Noyes.
CHATHAM, Middle Haddam, Albert B. Worthington.	DURHAM, R. W. Mathewson.
CHESTER, Sylvester W. Turner.	ESSEX, Alanson H. Hough,* Charles H. Hubbard.
CLINTON, Denison H. Hubbard.*	HADDAM, Miner C. Hazeu.
	OLD SAYBROOK, J. H. Grannis.
	PORTLAND, George O. Jarvis,* C. A. Sears, Cornelius E. Hammond.
	SAYBROOK, Deep River, Edwin Bidwell.*

TOLLAND COUNTY.

WILLIAM N. CLARK, M.D., of Stafford, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

TOLLAND, G. H. Preston.	Mansfield Depot, Julian N. Parker.
BOLTON, CHAS. F. SUMNER.	SOMERS, Orson Wood.*
COVENTRY, Maurice B. Bennett.	STAFFORD Wm. N. Clark.*
South Coventry, Timothy Dimock,* Henry S. Dean.	West Stafford, Joshua Blodgett.*
ELLINGTON, J. A. Warren.	Stafford Springs, C. B. Newton.
MANSFIELD, Wm. H. Richardsou.*	Vernon Depot, A. R. Goodrich.
Mansfield Center, O. B. Griggs.	Rockville, Stephen G. Risley, Francis L. Dickinson.

* Over sixty years of age.

Summary of Members, May, 1872.

	Members.	Deaths.	New Members.
Hartford County,-----	79	0	5
New Haven County,-----	88	1	4
New London County,-----	30	0	0
Fairfield County,-----	46	0	0
Windham County,-----	33	0	0
Litchfield County,-----	40	1	2
Middlesex County,-----	24	0	0
Tolland County,-----	16	2	0
Total,-----	356	4	11



Corrections and Additions to Medical Register published in
APPENDIX B, 1871.

Names.	Residences.	Where Graduated.	Date of Diploms.
S. R. Burnap,	Windsor Locks,	Coll. Phys. & Surg., N. Y.	
E. W. Chamberlain,	Hartford,	" " " "	
E. P. Swansey,	New Britain,	" " " "	
Jas. Campbell,	Hartford,	University of Vermont.	
Wm. H. Mather,	Suffield,	University of New York.	
F. P. Blodgett,	Ansonia,	Yale,	July, 1871
Walter Judson,	New Haven,	Coll. Phys. & Surg., N. Y.,	Mar., 1870
D. C. Leavenworth,	"	Yale,	Jan., 1865
Ira S. Smith,	"	Harvard,	July, 1869
L. T. Platt,	Terryville,		
E. B. Heady,	Cornwall Bridge,	Yale,	Jan., 1872
R. W. Mathewson,	Durham,	Coll. Phys. & Surg., N. Y.,	1835
Ch. C. Cundall,	West Killingly,	N. Y. Univ.,	1858
Wm. H. Emery,	Woodstock,	Harvard,	1869
J. Hammond,	Killingly,	"	1830
Miss Ellen F. Hammond,	"	N. Y. F. Med. Coll.,	1872
S. Hutchins,	West Killingly,	Harvard,	1841
J. B. Kent,	Putnam,	"	1869
Kienzi Robinson,	West Killingly,	L. I. Med. Coll.,	1869
A. A. Reinfut,	"	Montreal, Ca.,	1868
Orrin Witter,	Chaplin,	Coll. Phys. & Surg., N. Y.	

APPENDIX A.

REPORT OF THE COMMITTEE ON EXAMINATION.

THE Committee held their Semi-Annual Session at the Medical College, July 11th, 1871, at 2 o'clock P. M. Present on the part of the State Medical Society, Gurdon W. Russell, M.D., præses *ex-officio*, Lucian S. Wilcox, M.D., Francis L. Dickinson, M.D., David A. Tyler, M.D., and Thacher S. Hanchett, M.D. On the part of Yale College, Professors Silliman, Hubbard, Lindsley, White, Bacon, and Sanford.

Three candidates were examined and recommended for the degree of Doctor of Medicine:

1. NORMAN BRIGHAM BAYLEY, Coventry, Ct. Thesis—"Diagnosis of the Eruptive Fevers."
2. SAMUEL DUTTON GILBERT, Wallingford, Ct. Thesis—"The Cause and Treatment of Intermittent Fever."
3. GEORGE BACHELOR PECK, M.A. (Brown University.) Thesis—"Æsculapian Art—Its Habitude—Its Eputation."

The Degrees were publicly conferred by President Woolsey on Commencement day.

It was also voted to recommend EDWARD THOMAS BARBER, M.D., of Eureka, California, to receive the Ad Eundem degree from this College.

The Annual Examination was held at the Medical College at 11 o'clock on Thursday, the 11th day of January, 1872. Present on the part of the State Medical Society, Gurdon W. Russell, M.D., president, Ashbel Woodward, M.D., Lucian S. Wilcox, M.D., Rufus Baker, M.D., Francis L. Dickinson, M.D., and David A. Tyler, M.D. On the part of the College, Professors Silliman, Hubbard, Lindsley, White, Ives, Bacon, Sanford and Barker.

Four candidates were recommended for the Degree of Doctor in Medicine, viz :

FREDERICK BELLOSA, New Haven, Ct. Thesis—"Hernia."

ELIAS BUEL HEADY, Norfolk, Ct. Thesis—"Epilepsy."

WILLIAM HENRY HOTCHKISS, A.B., Yale, New Haven, Ct. Thesis—"Scarlet Fever."

JOSEPH MANSFIELD HOMISTON, Brooklyn, N. Y. Thesis—"Albuminuria."

One other candidate was examined, and the committee voted unanimously not to recommend.

No public exercises were held, and the gentlemen appointed the previous year to address the graduates were continued.

Dr. D. A. Tyler was appointed to report the proceedings of this Board to the Convention of the State Medical Society.

The Board adjourned *sine die*.

D. A. TYLER.

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 President.

Unfinished business of previous year disposed of.

Committee on Nominations, appointed by county delegations.

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.

Reports 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 Reports, 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 this 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 Proceedings, page vi, 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.

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.

M. C. WHITE, *Secretary.*

EDITORIAL NOTICES.

In presenting to the Connecticut Medical Society the PROCEEDINGS OF THE EIGHTY-FIRST ANNUAL CONVENTION, the Committee of Publication would congratulate the Society on the increasing value and importance of our transactions. We notice also with pleasure the increasing number of physicians attached to the Society. Yet, comparing our members with the list of Regular Practitioners in the State, we regret to find that many physicians, graduates of colleges of high standing, are doing nothing to aid, by combined and united action, the dignity of the profession as a whole. Whether they write for the periodical press we cannot tell, but we think that professional pride and friendly invitations from our members ought to induce every physician in regular standing to unite in supporting our State Society. He who helps sustain and build up the profession as a whole, gains dignity and honor to himself.

To our contributors, we would say that the position of the Publishing Committee is oftentimes one of *sore trial*. Occasionally we omit to publish some papers for whose authors we have great respect and whose labors we desire to encourage, because, though well written, they can hardly be said to add much to the sum of human knowledge.

The SOREST TRIALS we have are when we are obliged to wait, as we have too often done, *one, two or even three months* for the receipt of a paper which should have been ready for the Committee on the adjournment of the Convention.

A rule of the Society requires all papers read before County Associations, that are offered for publication, to be presented to the Committee one week before the meeting of the Annual Convention.

The Committee regard all papers read before the Convention as the property of the Society, even though the thanks of the Society are tendered to the authors and a copy *requested* for publication.

The Committee believe they would be justified in refusing to publish any papers, essays or address that is not placed in their hands *within one week at the longest* after the adjournment of the Convention.

Still again, while the Committee are thankful to the authors of papers who are willing to examine the proofs of their papers as they pass through the press, they cannot feel satisfied to have authors keep a second proof a week or ten days before returning it.

As a general thing, authors are expected to send for *only one proof*, and the Committee undertake to see that all the author's corrections are carefully inserted by the printers.

With these hints at the difficulties encountered by the Committee of Publication, we say to those who complain of the long delay in issuing the Proceedings, we have done our best to serve you without fee or reward, as sleepless nights and unnumbered letters of importunity to delinquent writers and proof readers and to collect statistics neglected by others would abundantly testify.

In conclusion, the Committee would express the hope, that hereafter every physician who prepares a paper which he thinks worthy of the attention of the State Society, will have it READY FOR THE PRINTER before the meeting of the *Annual Convention*.

The Proceedings are sent by mail to all members of the Society not in arrears for taxes, to all Honorary Members and to Delegates from other Societies, to the Secretaries of other State Societies, and to Editors of Medical Journals who desire them.

Persons entitled to the Proceedings who fail to receive them are requested to send their names and Post Office address to the Secretary.

In behalf of Committee of Publication,

M. C. WHITE,
Secretary of the Conn. Med. Society.

113 George Street, New Haven, Conn.

Νεκρολογία

De Mortuis nil nisi bonum

LEVI WARREN, M.D.

Born in Patterson, N. Y.,	1831
Received M.D. at New York University,	1854
Practiced in Lyme, Ct.,	1854-1862
Served 9 months as Surgeon in the C. V., U. S. Army,	1862-1863
Practiced in Norwich, Ct.,	1863-1873
Died at Norwich,	Feb. 22, 1873

CHESTER HAMLIN, M.D.

Born at Farmington, Ct.,	March 14, 1795
Licensed by Conn. Medical Society,	March, 1823
Practiced in Haddam,	1824-1827
Practiced in Burlington,	1827-1832
Practiced in East Granby,	1832-1872
Died at East Granby,	Oct. 5, 1872

JOSIAH HALL BEECHER, M.D.

Born in Barkhamsted, Conn.,	1825
Received M.D. at Yale College,	1846
Practiced in East Haven and Fair Haven,	1846-1856
Practiced in New York City,	1856-1857
Practiced in New Haven,	1857-1873
Died in New Haven,	March 14, 1873

ALFRED EASTMAN WALKER, M.D.

Born in New Haven, Conn.,	Jan. 5, 1842
Received M.D. at Yale College,	1867
Practiced in Worcester, Mass., in Washington Territory, in Chicago,	1871-1873
Practiced in New Haven,	March 5, 1873
Died in New Haven,	

Pallida

Mors aequo

pulsat

pede

pauperum

tabernas

regnumque

turres.



PROCEEDINGS.



THE *Eighty-second* Annual Meeting of the President and Fellows of the Connecticut Medical Society was held at Reilly's Hall, in the City of Hartford, May 28th, 1873. The meeting was called to order at 3 P. M., by the President, H. W. Buel, M.D.

H. A. Carrington, M.D., and M. C. White, M.D., were appointed a Committee on Credentials. The Committee reported the list of Fellows, which was approved and read by the Secretary, as follows, viz:—

List of Fellows Ex-Officio.

PRESIDENT.

HENRY W. BUEL, M.D.

VICE PRESIDENTS.

IRA HUTCHINSON, M.D.

W. R. GRISWOLD, M.D. *E. HUNTINGTON, M.D.
L. J. SANFORD, M.D. ORLANDO BROWN, M.D.
*ISAAC G. PORTER, M.D. D. H. HUBBARD, M.D.
*ROBERT HUBBARD, M.D. S. G. RISLEY, M.D.

TREASURER.

J. C. JACKSON, M.D.

SECRETARY.

MOSES C. WHITE, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

H. A. CARRINGTON, M.D.

*L. S. WILCOX, M.D. *A. W. NELSON, M.D.

Fellows Elected in 1873.

HARTFORD COUNTY.

Henry Gray, M.D. H. S. Fuller, M.D.
G. B. Hawley, M.D. R. L. Strickland, M.D.
W. A. M. Wainwright, M.D.

* Absent.

NEW HAVEN COUNTY.

*S. G. Hubbard, M.D.	H. A. Carrington, M.D.
Alvan Talcott, M.D.	Alfred North, M.D.
*Fred. J. Fitch, M.D.	

NEW LONDON COUNTY.

*E. C. Kinney, M.D.	F. N. Braman, M.D.
*A. T. Chapman, M.D.	A. Woodward, M.D.
*A. B. Haile, M.D.	

FAIRFIELD COUNTY.

*George L. Beers, M.D.	*Andrew J. Smith, M.D.
*A. H. Abernethy, M.D.	*George F. Lewis, M.D.
James R. Cumming, M.D.	

LITCHFIELD COUNTY.

Orlando Brown, M.D.	*Luther H. Wood, M.D.
*T. G. Wright, M.D.	*J. B. Derickson, M.D.
*William Deming, M.D.	

MIDDLESEX COUNTY.

S. W. Turner, M.D.	C. H. Hubbard, M.D.
Elisha B. Nye, M.D.	

WINDHAM COUNTY.

Wm. A. Lewis, M.D.	T. Morton Hills, M.D.
F. O. Bennett, M.D.	*B. Robinson, M.D.
E. Baldwin, M.D.	

TOLLAND COUNTY.

S. G. Risley, M.D.	O. B. Griggs, M.D.
M. B. Bennett, M.D.	

The President appointed as the *Business Committee*, W. A. M. Wainwright, M.D., Orlando Brown, M.D., and M. C. White, M.D.

The County Delegations reported the following as *Nominating Committee*, viz:—W. A. M. Wainwright, M.D., A. Talcott, M.D., A. Woodward, M.D., J. R. Cumming, M.D., O. B. Griggs, M.D., Orlando Brown, M.D., and E. B. Nye, M.D.

The President appointed as *Committee on County Resolves, &c.*, G. B. Hawley, M.D., A. North, M.D., F. N. Braman, M.D.

Committee to Nominate Essayists, A. Talcott, M.D., Wm. A. Lewis, M.D.

The Treasurer, J. C. Jackson, M.D., presented his Annual Report, which was referred to O. B. Griggs, M.D., and H. S. Fuller, M.D., who reported the Treasurer's accounts to be correct. The Report of the Treasurer was then approved and ordered *on file*.

Summary of Treasurer's Report.

May 22, 1872. Balance in Treasury,.....	\$291.60½
May 27, 1873. Received during the year,.....	402.45
	<hr/>
	\$694.05½
May 27, 1873. Disbursements during the year,.....	428.41
	<hr/>
Balance carried to new account,.....	\$265.64½

It having been stated by the Treasurer that the Litchfield County Association had endeavored to settle all old accounts for taxes (old accounts having been lost through carelessness of a clerk who had left the State), some members having paid considerable sums in addition to their own taxes, it was unanimously

Resolved, That all accounts for taxes due from Litchfield County up to June, 1872, be abated.

It was also

Resolved, That the accounts due from the following clerks be abated, they having used all proper diligence to collect what could be collected from members, viz :—

H. F. Stearns, M.D.,	\$7.80
H. S. Fuller, M.D.,.....	16.55
Irving W. Lyon, M.D.,.....	32.42

The Committee on County Resolves reported, recommending that the action of New London County Association be approved, and that David P. Francis be *expelled* from the Connecticut Medical Society. The Report was adopted.

The same Committee recommended that the action of the Hartford County Association be approved, and that Henry E. Childs be *expelled* from the Connecticut Medical Society. The Report was adopted.

On recommendation of the same Committee, the action of Litchfield County Association was approved, and *honorable dismissal* from the Connecticut Medical Society was granted to John H. Blodgett, M.D., at his own request.

B. N. Comings, M.D., presented and read the Report of the Committee on an Asylum for Inebriates. (See Medical Communications, Art. IX.)

Adjourned to 8 P. M.

Evening Session.

At 8 P. M. the Fellows were called to order by the President.

The President appointed as *Committee on Gratuitous Students*, Alvan Talcott, M.D., and F. O. Bennett, M.D.

The Report of Committee on Examinations for Degrees was presented, and referred to the Committee of Publication. (See Appendix A.)

The Committee to Nominate Physician to the Retreat for the Insane was also presented, and referred to the Committee of Publication. (See Appendix B.)

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

President—IRA HUTCHINSON, M.D.

Vice-President—LOWELL HOLBROOK, M.D.

Treasurer—J. C. JACKSON, M.D.

Secretary—M. C. WHITE, M.D.

On Committee of Examination—B. B. North, M.D., S. W. Turner, M.D.

On Committee to Nominate Professors in the Medical Institution of Yale College—G. B. Hawley, M.D., and H. W. Buel, M.D.

On Committee to Nominate Physician to the Retreat for the Insane—James R. Cumming, M.D., and Wm. Deming, M.D.

Committee on Matters of Professional Interest in the State—H. A. Carrington, M.D., L. S. Wilcox, M.D., and A. W. Nelson, M.D.

Committee of Publication—M. C. White, M.D., *ex-officio*, G. W. Russell, M.D., and L. J. Sanford, M.D.

Committee of Arrangements—Henry A. Carrington, M.D., R. S. Ives, M.D., and Geo. B. Farnam, M.D.

Dissertator—Robert Hubbard, M.D.

Alternate—P. M. Hastings, M.D.

Delegates to other Societies were elected as follows, viz:—

To the American Medical Association—E. K. Hunt, M.D., Alvan Talcott, M.D., C. M. Carleton, M.D., T. S. Hanchett, M.D.

To the Maine Medical Association—Rufus Baker, M.D., F. O. Bennett, M.D.

To the New Hampshire Medical Society—S. G. Risley, M.D.,
Wm. H. Mather, M.D.

To the Vermont Medical Society—L. F. Bugbee, M.D.,
B. H. Catlin, M.D.

To the Massachusetts Medical Society—Orlando Brown, M.D.,
O. B. Griggs, M.D.

To the Rhode Island Medical Society—Wm. A. Lewis, M.D.,
T. Morton Hills, M.D.

To the New York Medical Society—W. A. M. Wainwright,
M.D., Erastus P. Swasey, M.D., Francis Bacon, M.D., James R.
Cumming, M.D., Remus M. Fowler, M.D.

To the New Jersey Medical Society—Henry W. Buel, M.D.,
Ira Hutchinson, M.D.

To the Pennsylvania Medical Society—T. G. Wright, M.D.,
J. C. Jackson, M.D., A. Woodward, M.D.

It was *voted* that the *Annual Tax* be *Two Dollars*, payable
June 1, 1873.

Voted, That 550 copies of Proceedings be published this year.

Honorary Members were elected as follows:—George F. Horton,
M.D., of Terrytown, Pa.; Gurdon Buck, M.D., of New York.

The Committee on Gratuitous Students reported that Charles
W. Fitch, of Southington, had been duly appointed by New
Haven County Association. The Committee recommended that
Arthur H. Adams, of New Haven, be also appointed. The Report
was adopted.

The *Report on Inebriate Asylums* (read by Dr. B. N. Comings)
was taken up, and on motion of Dr. G. B. Hawley it was

Resolved, That a Committee of three be appointed to confer
with the General Assembly, in order to secure action at the present
session, looking to the establishment of an Inebriate Asylum.

The President appointed the Committee as follows, viz:—
B. N. Comings, M.D., G. B. Hawley, M.D., G. W. Russell, M.D.

Voted, That the next Annual Meeting of the President and
Fellows of the Connecticut Medical Society be held in New Haven,
at 3 P. M., the fourth Wednesday in May, 1874.

Adjourned.

Attest:

M. C. WHITE, M.D., *Secretary*.

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held at Reilly's Hall, in Hartford, May 29th, 1873.

The Convention was called to order at 9 A. M., by the President, Henry W. Buel, M.D.

ORGANIZATION.

President, H. W. BUEL, M.D.

Vice-President, IRA HUTCHINSON, M.D.

Vice-Presidents, *ex-officio*.

W. R. Griswold, M.D.

L. J. Sanford, M.D.

Isaac G. Porter, M.D.

Robert Hubbard, M.D.

Eliphalet Huntington, M.D.

Orlando Brown, M.D.

D. H. Hubbard, M.D.

S. G. Risley, M.D.

The Secretary read the list of new members who have been admitted during the year, viz:—

James H. Dewey, M.D., Harvard, 1867, of Hartford.

G. W. Avery, M.D., Yale, 1860, of Hartford.

A. C. Carson, M.D., Coll. Phys. and Surg., N. Y., 1865, of Hartford.

H. P. Atherton, M.D., Harvard, 1871, of Hartford.

Eli Warner, M.D., Coll. Phys. and Surg., N. Y., 1867, of Hartford.

Owen Lane, M.D., Victoria Med. Coll., Montreal, Canada, 1872.

Residence, Putnam, Ct.

A. S. Leonard, M.D., Coll. Phys. and Surg., N. Y., 1866, West Woodstock.

Thos. O. Farrell, M.D., Univ. Pa., 1852, Middletown.

Albert Fields, M.D., L. I. Coll., 1867, of East Hampton.

Luther H. Wood, M.D., Yale, 1869, Wolcottville.

Theodore G. Wright, M.D., N. Y. Univ., 1865, Plymouth.

Samuel Dutton Gilbert, M.D., Yale, 1871, Fair Haven.

Chas. H. Gaylord, M.D., Yale, 1872, Branford.

J. F. Lines, M.D., Yale, 1862, New Haven.

Geo. B. Farnam, M.D., Yale, 1869, New Haven.

Frederick Bellosa, M.D., Yale, 1872, New Haven.

For the names of those who have died during the year, see Mortuary Tablets.

The Vice-President, Ira Hutchinson, M.D., took the chair, and the President, H. W. Buel, M.D., delivered the *Annual Address*, on the Advancement of the Medical Profession.

On motion, the thanks of the Convention were tendered to the President for his Address, and a copy was requested for publication.

The President resumed the chair, and on motion of Dr. Carleton, it was

Resolved, That in our annual list we publish hereafter only the names of practitioners who are members of this Society.

J. C. Hutchinson, M.D., Delegate from the Medical Society of New York, was introduced and addressed the Convention.

Robert Newman, M.D., a former delegate from New York, was also welcomed by the Convention.

H. A. Carrington, M.D., presented the Report of the Committee on Matters of Professional Interest in the State, which was accepted, and a copy requested for publication.

C. A. Lindsley, M.D., read an interesting Report of his visit to the Medical Society of New Jersey, which was accepted and referred to the Committee of Publication.

On motion of G. W. Russell, M.D., it was

Resolved, That a Committee of three be appointed to consider the propriety of discontinuing the practice of granting Honorary Degrees and Licenses to persons who have not pursued a regular course of Medical education, said Committee to report to the next Annual Convention. G. W. Russell, M.D., H. A. Carrington, M.D., and C. M. Carleton, M.D., were appointed said Committee.

P. M. Hastings, M.D., read a Report on Vaccination, which was referred to the Committee of Publication.

Voted, That Dr. A. W. Nelson, who had charge of preparing the Report on Small Pox, but who was not present, be requested to present his paper to the Committee of Publication.

[The last paper referred to has not been received by the Committee of Publication.]

MEDICAL INSTITUTION OF YALE COLLEGE.

Prof. C. A. Lindsley, M.D., announced that a Committee from the Corporation of Yale College were present for the purpose of conferring with the Society in regard to the interests of the Medical Institution of Yale College.

The Committee, consisting of Rev. Noah Porter, D.D., LL.D., Rev. Leonard Bacon, D.D., Rev. Samuel G. Willard, A.M., were most cordially welcomed, and invited to take seats upon the stage.

The several members of the Committee then addressed the Convention, rehearsing the history of the original organization of the Medical Institution by the joint action of the President and Fellows of the Connecticut Medical Society, and the President and Fellows of Yale College. The Committee referred to the harmonious and successful management of the College for over sixty years, the Medical Society always having had an equal voice in the appointment of professors and the recommendation for degrees. The plans and wishes of the Faculty in regard to a higher course of education were referred to, and also the efforts of the President and Fellows to maintain Yale College as a university of the first rank in America. The Committee stated that the Medical Institution had immediate and pressing need of an endowment of at least *one hundred thousand dollars*, and that the Committee believed that, with proper representations, aid might be obtained from the Legislature at its present session, and that other donations might be obtained from the friends of the Medical Institution.

After an interesting and harmonious discussion by the Committee, and by members of the Convention, it was unanimously

Resolved, That a Committee of three be appointed by this Society to coöperate with the Committee appointed by the President and Fellows of Yale College, with power to act in such manner as the joint Committee may think proper, to raise funds for the endowment of the Medical Institution of Yale College.

G. B. Hawley, M.D., H. W. Buel, M.D., and C. A. Lindsley, M.D., were appointed as said Committee.

Henry W. Williams, M.D., of Boston, delegate from the Massachusetts Medical Society, was introduced and addressed the Convention.

L. J. Sanford, M.D., read the Annual Dissertation, "On Medical Education." The thanks of the Society were tendered to Dr. Sanford, and a copy was requested for publication. The Committee of Publication were authorized at their discretion to publish extra copies for distribution in a separate pamphlet.

F. N. Braman, M.D., read a paper on "Hot Pack in Eclampsia from Bright's Disease." This paper was also referred to the Committee of Publication.

Elijah Baldwin, M.D., read an essay on the Physiology of Sleep. The essay was referred to the Committee of Publication.

A telegram was received from P. A. Jewett, M.D., stating that he had been unexpectedly detained and prevented from being present to read his essay on Vesieo-Vaginal Fistulæ; whereupon it was voted that Dr. Jewett be invited to present his paper to the Committee of Publication. (The paper has not been received by the Com. of Pub.)

The Committee on Essayists for the ensuing year presented the names of Drs. A. Woodward, Elijah Baldwin, Orlando Brown, C. A. Lindsley, in addition to several unfulfilled appointments of last year. The report was adopted.

On motion the Convention adjourned to meet in New Haven at the usual time in 1874.

Attest : MOSES C. WHITE, M.D., *Secretary*.

ANNUAL DINNER.

The Society then repaired to the Allyn House, where a bountiful repast had been prepared by the Society's Committee.

James C. Jackson, M.D., in behalf of the Committee, presented the following address of welcome :

Gentlemen, Members and Friends of the Connecticut Medical Society :

It has become my duty, on account of the illness of the Chairman of your Committee, to preside over the annual festivity of this Society.

This is the Eighty-second Annual Convention of this organization, the influence of which has made a powerful impress upon the benevolent institutions of the State, and we can but believe, stimulated by its organized efforts, it has conferred incalculable benefits upon its members and upon those who have sought relief at their hands.

To specify in detail all the objects of benevolence it has originated and actively cherished by its constant effort and continued care and support, would require more time than could be devoted to its consideration on this occasion. Some of them, however, may be mentioned to indicate that the medical profession has not been idle in its efforts to advance the science of medicine, and reduce its practice to principles of an intelligent pathology.

Schools of medicine have been established and encouraged by its influence and material support;—institutions to reclaim to intelligence and society the intellect shattered and dethroned by disease;—asylums, where the mute and the blind may be brought from a life of darkness to the twilight of intelligence, to usefulness, intercourse and sympathy with their fellow beings;—hospitals, where the sick and wounded may receive the care and nursing of a home;—dispensaries;—boards of health;—sanitary commissions;—systems of sewerage;—ample sup-

plies of pure water and public baths are among the more important objects of its origin and support.

Since the birth of this Society, the inestimable discovery of Jenner has almost banished from the world one of the scourges of the human race. The discovery of anæsthesia made the knife and the saw tolerable. The stethoscope revealed what previously was obscure. The microscope opened an entire new field in anatomical and pathological investigation. The ophthalmoscope and laryngoscope enable us to see with our own eyes in the living subject what before was beheld only in the dead. Chemistry has been constantly revealing its wonderful results in the field of *materia medica*, as well as in animal tissues, giving us new and more definite knowledge of diseased structures and better means for their relief. Such achievements are indeed worthy of an occasional celebration, when our attention shall recall such triumphs of our profession, and make us feel that the science of medicine is not altogether experimental or empirical, but may take equal rank among such other sciences as astronomy, chemistry, &c. If the nebular theory in the one, and the atomic theory in the other, admit of doubt, in what respect have they claims as sciences superior to our own?

Now, gentlemen, let us enjoy the present occasion, for there are few who can appreciate such social reunions as this more keenly than those who have tastes for the æsthetics of life, but who have so few opportunities to indulge them as the busy members of the medical profession.

After INVOCATION OF THE DIVINE BLESSING, the Society and guests did ample justice to the well loaded tables; and toasts and speeches, full of wit and wisdom, made this dinner one of the pleasantest it has been our good fortune to attend for many a year.

OFFICERS OF THE SOCIETY
FOR 1873--74.

PRESIDENT.

IRA HUTCHINSON, M.D., OF CROMWELL.

VICE-PRESIDENT.

LOWEL HOLBROOK, M.D., OF THOMPSON.

VICE-PRESIDENTS, *Ex-officio*.

W. R. GRISWOLD, M.D., OF ROCKY HILL.

L. J. SANFORD, M.D., OF NEW HAVEN.

ISAAC G. PORTER, M.D., OF NEW LONDON.

ROBERT HUBBARD, M.D., OF BRIDGEPORT.

E. HUNTINGTON, M.D., OF WINDHAM.

ORLANDO BROWN, M.D., OF WASHINGTON.

D. H. HUBBARD, M.D., OF CLINTON.

S. G. RISLEY, M.D., OF ROCKVILLE.

TREASURER.

JAMES C. JACKSON, M.D., OF HARTFORD.

SECRETARY.

MOSES C. WHITE, M.D., OF NEW HAVEN.

STANDING COMMITTEES.

Committee of Examination.

IRA HUTCHINSON, M.D., *Ex-officio*.

F. L. DICKINSON, M.D.

T. S. HANCHETT, M.D.

DAVID A. TYLER, M.D.

GEO. C. JARVIS, M.D.

ROBERT HUBBARD, M.D.

B. B. NORTH, M.D.

S. W. TURNER, M.D.

MEMBERS OF THE SOCIETY.

HONORARY MEMBERS.

*FELIX PASCALIS,	- - -	New York City.
*JAMES JACKSON,	- - . - -	Boston, Mass.
*JOHN C. WARREN,	- - - - -	Boston, Mass.
*SAMUEL L. MITCHELL,	- - - - -	New York City.
*DAVID HOSACK,	- - - - -	New York City.
*WRIGHT POST,	- - - - -	New York City.
*BENJAMIN SILLIMAN,	- - - - -	New Haven.
*GEORGE MCLELLAN,	- - - - -	Philadelphia, Pa.
*JOHN MACKIE,	- - - - -	Providence, R. I.
*CHARLES ELDREDGE,	- - .	East Greenwich, R. I.
*THEODORIC ROMEYN BECK,	- - - - -	Albany, N. Y.
*JAMES THACHER,	- - - - -	Plymouth, Mass.
EDWARD DELAFIELD,	- - - - -	New York City.
JOHN DELAMATER,	- - - - -	Cleveland, O.
*WILLIAM P. DEWEES,	- - - - -	Philadelphia, Pa.
*JOSEPH WHITE,	- - - - -	Cherry Valley, N. Y.
JACOB BIGELOW,	- - . . -	Boston, Mass.
WALTER CHANNING,	- - - - -	Boston, Mass.
*PHILIP SYNG PHYSIC,	- - .	Philadelphia, Pa.
*LEWIS HERMAN,	- - - - -	U. S. Navy.
*DANIEL DRAKE,	- - - - -	Cincinnati, O.
*HENRY MITCHELL,	- - - - -	Norwich, N. Y.
NATHAN RYNO SMITH,	- - - - -	Baltimore, Md.
*VALENTINE MOTT,	- - - - -	New York City.
*SAMUEL WHITE,	- - - - -	Hudson, N. Y.
*REUBEN D. MUSSEY,	- - - - -	Cincinnati, O.
*WILLIAM TULLY,	- - - - -	Springfield, Mass.
RICHMOND BROWNELL,	- - - - -	Providence, R. I.
*WILLIAM BEAUMONT,	- - - - -	St. Louis, Mo.
SAMUEL HENRY DICKSON,	- - - - -	Philadelphia, Pa.
*SAMUEL B. WOODWARD,	- - - - -	Northampton, Mass.
*JOHN STEARNS,	- - - - -	New York City.
*STEPHEN W. WILLIAMS,	- - - - -	Deerfield, Mass.
*HENRY GREEN,	- - - - -	Albany, N. Y.
*GEORGE FROST,	- - - - -	Springfield, Mass.
WILLARD PARKER,	- - - - -	New York City.
*BENAJAH TICKNOR,	- - - - -	U. S. Navy.
*ALDEN MARCH,	- - - - -	Albany, N. Y.
*AMOS TWITCHELL,	- - - - -	Keene, N. H.
*CHARLES A. LEE,	- - - - -	New York City.

* Deceased.

*DAVID S. C. H. SMITH,	. . . . .	Providence, R. I.
*JAMES M. SMITH,	. . . . .	Springfield, Mass.
*HENRY D. BULKLEY,	. . . . .	New York City.
J. MARION SIMS,	. . . . .	New York City.
*JOHN WATSON,	. . . . .	New York City.
FRANK H. HAMILTON,	. . . . .	Brooklyn, L. I.
*ROBERT WATTS,	. . . . .	New York City.
J. V. C. SMITH,	. . . . .	New York City.
O. WENDELL HOLMES,	. . . . .	Boston, Mass.
JOSEPH SARGENT,	. . . . .	Worcester, Mass.
*MASON F. COGSWELL,	. . . . .	Albany, N. Y.
*FOSTER HOOPER,	. . . . .	Fall River, Mass.
*THOMAS C. BRINSMADE,	. . . . .	Troy, N. Y.
GEORGE CHANDLER,	. . . . .	Worcester, Mass.
GILMAN KIMBALL,	. . . . .	Lowell, Mass.
JAMES McNAUGHTON,	. . . . .	Albany, N. Y.
*USHER PARSONS,	. . . . .	Providence, R. I.
*S. D. WILLARD,	. . . . .	Albany, N. Y.
*JOHN WARE,	. . . . .	Boston, Mass.
EBENEZER ALDEN,	. . . . .	Randolph, Mass.
B. FORDYCE BARKER,	. . . . .	New York City.
JOHN G. ADAMS,	. . . . .	New York City.
JARED LINSLEY,	. . . . .	New York City.
A. J. FULLER,	. . . . .	Bath, Me.
SAMUEL H. PENNINGTON,	. . . . .	Newark, N. J.
FREDERICK N. BENNETT,	. . . . .	Newtown, Ct.
*THOMAS W. BLATCHFORD,	. . . . .	Troy, N. Y.
THOMAS C. FINNELL,	. . . . .	New York City.
N. C. HUSTED,	. . . . .	New York City.
JACOB P. WHITTEMORE,	. . . . .	Chester, N. H.
*JOHN GREEN,	. . . . .	Worcester, Mass.
THOMAS SANBORN,	. . . . .	Newport, N. H.
WILLIAM PIERSON,	. . . . .	Orange, N. J.
ARTHUR WARD,	. . . . .	Belleville, N. J.
HIRAM CORLISS,	. . . . .	Washington, N. Y.
E. K. WEBSTER,	. . . . .	Boscawen, N. H.
P. A. STACKPOLE,	. . . . .	Dover, N. H.
S. F. L. SIMPSON,	. . . . .	Concord, N. H.
A. T. WOODWARD,	. . . . .	Brandon, Vt.
WM. McCULLOM,	. . . . .	Woodstock, Vt.
J. C. HUTCHINSON,	. . . . .	Brooklyn, N. Y.
BENJ. E. COTTING,	. . . . .	Boston, Mass.
HENRY I. BOWDITCH,	. . . . .	Boston, Mass.
SETH SHOVE,	. . . . .	Katanah, N. Y.
SAMUEL T. HUBBARD,	. . . . .	New York City.
GEORGE F. HORTON,	. . . . .	Terrytown, Penn.
GURDON BUCK,	. . . . .	New York City.

ORDINARY MEMBERS.

The names of those who have been Presidents are in Capitals.

HARTFORD COUNTY.

R. W. GRISWOLD, M.D., of Rocky Hill, President.

W. A. M. WAINWRIGHT, M.D., of Hartford, Clerk.

<p>HARTFORD, S. B. BERESFORD,* G. B. Hawley, G. W. RUSSELL, David Crary,* P. W. Ellsworth, E. K. HUNT, J. S. Butler,* J. C. Jackson, A. W. Barrows, Thomas Miner,* William R. Brownell, P. M. Hastings, W. H. Tremaine, Lucian S. Wilcox, Henry P. Stearns, S. C. Preston, Irving W. Lyon, Daniel Poll, Melancthon Storrs, Horace S. Fuller, John O'Flaherty, Nathan Mayer, Wm. M. Hudson, Geo. C. Jarvis, C. R. Hart, Morton W. Easton, W. A. M. Wainwright, E. M. Dunbar, David Crary, Jr., George F. Hawley, J. B. Lewis, D. T. Bromley, James H. Denny, Geo. P. Davis, C. W. Chamberlain, James Campbell, G. W. Avery, A. C. Carson, H. P. Atherton, Eli Warren.</p> <p>BERLIN, E. Brandegee.</p> <p>BLOOMFIELD, Henry Gray.</p> <p>BROADBROOK, E. R. Leonard.</p> <p>CANTON, Collinsville, R. H. Tiffany, Geo. R. Shepherd.</p> <p>EAST HARTFORD, S. L. Childs, L. W. McIntosh.</p> <p>EAST WINDSOR HILL, Sidney W. Rockwell, William Wood.</p>	<p>Warehouse Point, Marcus L. Fisk.</p> <p>ENFIELD, Thompsonville, Edward F. Parsons, Rial L. Strickland.</p> <p>FARMINGTON, Frank Wheeler, Charles Carrington.</p> <p>PLAINVILLE, G. A. Moody.</p> <p>GRANBY, (North,) Francis F. Allen,* G. W. Edwards.</p> <p>GLASTENBURY, H. C. Bunce.</p> <p>South Glastenbury, G. A. Hubbard, H. M. Rising.</p> <p>MANCHESTER, William Scott.*</p> <p>South Manchester, J. N. Parker.</p> <p>NEW BRITAIN, B. N. Comings, S. W. Hart, Geo. Clary, E. B. Lyon, G. S. Stone, Erastus P. Swasey.</p> <p>ROCKY HILL, R. W. Griswold.</p> <p>SIMSBURY, G. W. Sanford,* R. A. White.</p> <p>SOUTHINGTON, N. H. Byington,* F. A. Hart.</p> <p>SUFFIELD, Aretus Rising,* J. K. Mason, Wm. H. Mather.</p> <p>WEST HARTFORD, Edward Brace.*</p> <p>WETHERSFIELD, A. S. Warner.</p> <p>WINDSOR, A. Morrison, S. A. Wilson.</p> <p>Windsor Locks, S. R. Burnap.</p>
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* Over sixty years of age.

NEW HAVEN COUNTY.

L. J. SANFORD, M.D., of New Haven, President.

W. L. BRADLEY, M.D., of New Haven, Clerk.

<p>NEW HAVEN, E. H. Bishop,* Levi Ives, P. A. Jewett, David L. Daggett, Geo. O. Sumner,* David A. Tyler, HENRY BRONSON,* E. A. Park, S. G. Hubbard, H. W. E. Matthews, C. A. Lindsley, T. H. Totton, John Nicoll, Moses C. White, H. Pierpoint, Leonard J. Sanford, Edward Bulkley, W. B. DeForest,* F. L. Dibble, T. Beers Townsend, T. H. Bishop, Eli W. Blake, Henry A. DuBois, Francis Bacon, C. O. Stockman, Charles A. Gallagher, W. L. Bradley, A. E. Winchell, H. A. Carrington, O. W. Peck, L. M. Gilbert, Robert S. Ives, F. J. Whittemore, Arthur Ruckoldt, H. L. Wixon, Stephen H. Bronson, Willis G. Alling, Frank Gallagher, Walter R. Bartlett, Walter Judson, Ira S. Smith, D. C. Leavenworth, Geo. B. Farnam, J. F. Lines, Frederick Bellosa, J. W. Phelps. Fair Haven, Charles S. Thomson,* W. H. Thomson, Wm. M. White, S. D. Gilbert. Westville, J. W. Barker. BRANFORD, H. V. C. Holcomb, Newton B. Hall, C. W. Gaylord. CHESHIRE, A. J. Driggs, M.N. Chamberlin.</p>	<p>DERBY, Charles H. Pinney. Birmingham, Ambrose Beardsley. Ansonia, F. P. Blodgett. GUILFORD, Joel Canfield,* Alvan Talcott, G. P. Reynolds. North Guilford, Justin Smith. 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. MILFORD, Hull Allen,* L. N. Beardsley, Thomas Dutton. NAUGATUCK, J. D. Mears.* NORTH HAVEN, R. F. Stillman. ORANGE, West Haven, J. Martin Aimes. OXFORD, Lewis Barnes. SEYMOUR, Thos. Stoddard, S. C. Johnson, Joshua Kendall. SOUTHBURY, A. B. Burritt.* South Britain, N. C. Baldwin. WALLINGFORD, Nehemiah Banks, B. F. Harrison. WATERBURY, G. L. Platt, John Deacon, George E. Perkins, Thos. Dougherty, Alfred North, Edward L. Griggs.</p>
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NEW LONDON COUNTY.

ISAAC G. PORTER, M.D., of New London, President.

ALBERT T. CHAPMAN, M.D., of Mystic, Clerk.

<p>NEW LONDON, ISAAC G. PORTER,* Robert A. Manwaring,* A. W. Nelson, F. N. Braman, Henry Potter. BOZRAH, Samuel Johnson.* COLCHESTER, Ezekiel W. Parsons,* Frederick Morgan.* FRANKLIN, ASHBEL WOODWARD. Greenville, Wm. Witter. GROTON, Mystic River, A. W. Coates,* John Gray. LEBANON, Ralph Green.*</p>	<p>MYSTIC, Mason Manning,* Albert T. Chapman. NORWICH, Elijah Dyor,* Elisha Phinney,* A. B. Hailo,* Lewis S. Paddock, Chas. M. Carleton, Wm. S.C. Perkins, Patrick Cassidy, E. C. Kinney. OLD LYME, Richard Noyes,* George W. Harris. STONINGTON, William Hyde.* Mystic Bridge, E. Frank Coates.</p>
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* Over sixty years of age.

FAIRFIELD COUNTY.

ROBERT HUBBARD, M.D., of Bridgeport, President.

GEORGE L. BEERS, M.D., of Bridgeport, Clerk.

Southport, Justus Sherwood.*
 BRIDGEPORT, David H. Nash, Robert
 Hubbard, H. L. W. Burritt, Elijah
 Gregory, Geo. L. Beers, Andrew J.
 Smith, Augustus H. Abernethy, Geo.
 F. Lewis, James R. Cumming, Gus-
 tave Ohnesorg, George L. Porter, Rob-
 ert Lauder, Francis J. Young, Curtis
 H. Bill, R. W. Bull, H. H. Davidson.
 BROOKFIELD, A. L. Williams.
 DANBURY, E. P. Bennett,* James Bald-
 win,* William C. Bennett.*
 DARIEN, Samuel Sands.
 NEW CANAAN, Samuel S. Noyes,* Lewis
 Richards,* William G. Brownson.
 BETHEL, A. D. Barber.
 MONROE, E. M. Bradley.

NORWALK, Samuel Lynes, James G.
 Gregory, James E. Barbour, W. A.
 Lockwood, John W. McLean.
 South Norwalk, M. B. Pardee, R. L. Hig-
 gins, John Hill.
 RIDGEFIELD, O. S. Hickok, Wm. S. Todd.
 STAMFORD, N. D. Haight,* Jas. H. Hoyt,
 E. H. Winslow.
 North Stamford, Geo. W. Birch, W. H.
 Trowbridge.
 STRATFORD, Roger M. Gray.
 TRUMBULL, George Dyer.*
 WESTPORT, George Blackman,* George
 B. Bouton.
 WILTON, A. E. Emery.
 HUNTINGTON, Gould A. Shelton.

WINDHAM COUNTY.

ELIPHALET HUNTINGTON, M.D., of Windham, President.

SAMUEL HUTCHINS, M.D., of West Killingly, Clerk.

Censors—LOWELL HOLBROOK, M.D., E. HUNTINGTON, M.D., S. HUTCHINS, M.D.

WINDHAM, E. Huntington.
 ASHFORD, John H. Simmons.
 BROOKLYN, James B. Whitcomb,* Wm.
 Woodbridge.
 SOUTH CANTERBURY, Elijah Baldwin.
 CHAPLIN, Orrin Witter.
 HAMPTON, Dyer Hughes.*
 KILLINGLY, Justin Hammond.*
 South Killingly, Daniel A. Hovey.*
 West Killingly, Samuel Hutchins, C. C.
 Crandall, R. Robinson, A. A. Reinfret.
 East Killingly, Edwin A. Hill.
 PLAINFIELD, WM. H. COGSWELL.*
 POMFRET, Lewis Williams.

PUTNAM, H. W. Hough,* Daniel B.
 Plympton, John B. Kent, Oren Larue.
 PLAINFIELD, Moosup, Wm. A. Lewis.
 Central Village, Charles H. Rogers.
 THOMPSON, Lowell Holbrook, Charles
 Hosford.
 VOLUNTOWN, Harvey Campbell.*
 WESTFORD, Farnam O. Bennett.
 WOODSTOCK, Lorenzo Marcy.*
 East Woodstock, John Witter.
 West Woodstock, Milton Bradford,*
 A. S. Leonard.
 WINDHAM, Willimantic, Fred. Rogers,
 T. Morton Hills, L. F. Bugbee.
 Woodstock Valley, Wm. H. Emery.

* Over sixty years of age.

LITCHFIELD COUNTY.

ORLANDO BROWN, M.D., of Washington, President.

WILLIS J. BEACH, M.D., of Litchfield, Clerk.

Censors—B. B. NORTH, M.D., J. B. DERICKSON, M.D., WM. DEMING, M.D.

LITCHFIELD, H. W. BUEL, H. E. Gates. W. J. Beach, Wm. Deming.	Lakeville, Benjamin Welch,* W. Bissell, H. M. Knight.
Northfield, D. B. W. Camp.*	SHARON, Ralph Deming,* William W. Knight.
BETHLEHEM, Franklin Booth.	Wolcottville, Erastus Bancroft,* T. S. Hanchett, L. H. Wood.
CORNWALL, Burritt B. North.*	WARREN, John B. Derickson.
Cornwall Bridge, Elias B. Heady.	WASHINGTON, Remus M. Fowler,* Or- lando Brown.
West Cornwall, Edward Sanford.	New Preston, Sidney H. Lyman, Edward P. Lyman.
MORRIS, Garry H. Miner.*	WATERTOWN, W. S. Munger.
NEW MILFORD, J. K. Baeon.	WINCHESTER, West Winsted, Jas. Welch,* Johu W. Bidwell.
Gaylord's Bridge, G. H. St. John,* Chas. F. Couch.	WOODBURY, Charles H. Webb, Harmon W. Shove.
NORFOLK, Wm. W. Welch.	Terryville, L. Tudor Platt.
PLYMOUTH, Samuel T. Salisbury, T. G. Wright.	
Thomaston, William Woodruff,* Ralph S. Goodwin.	
ROXBURY, Myron Downs.*	

MIDDLESEX COUNTY.

D. H. HUBBARD, M.D., of Clinton, President.

F. D. EDGERTON, M.D., of Middletown, Clerk.

MIDDLETOWN, Elisha B. Nye,* Geo. W. Burke, Rufus Baker, F. D. Edgerton, Noah Cressy, Abraham M. Shew, Win- throp B. Halleek, Joseph W. Alsop, Jr., Daniel A. Cleaveland, John Mor- gan, Thomas O. Farrell.*	CROMWELL, IRA HUTCHINSON.* DURHAM, R. W. Mathewson. ESSEX, Alanson H. Hough,* Charles H. Hubbard.
CHATHAM, Middle Haddam, Albert B. Worthington.	HADDAM, Miner C. Hazen, Selden W. Noyes.
East Hampton, Albert Field.	OLD SAYBROOK, J. H. Grannis.
CHESTER, Sylvester W. Turner.	PORTLAND, George O. Jarvis,* C. A. Sears, Cornelius E. Hammond.
CLINTON, Denison H. Hubbard.*	SAYBROOK, Deep River, Edwin Bidwell.

TOLLAND COUNTY.

STEPHEN G. RISLEY, M.D., of Rockville, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

TOLLAND, G. H. Preston.	SOMERS, Orson Wood.*
BOLTON, CHAS. F. SUMNER.	STAFFORD, Wm. N. Clark.*
COVENTRY, Maurice B. Bennett.	West Stafford, Joshua Blodgett.*
South Coventry, Timothy Dimock,* Henry S. Doan.	Stafford Springs, C. B. Newton.
ELLINGTON, J. A. Warren.	Vernon Depot, A. R. Goodrich.
MANSFIELD, Wm. H. Richardson.*	Roekville, Stephen G. Risley, Francis L. Dickinson.
Mansfield Center, O. B. Griggs.	

Summary of Members, May, 1873.

	Members.	Deaths.	New Members.
Hartford County,	81	1	5
New Haven County,	91	2	5
New London County,	27	1	0
Fairfield County,	48	0	0
Windham County,	34	0	2
Litchfield County,	38	0	2
Middlesex County,	26	0	2
Tolland County,	15	0	0
	<hr/>	<hr/>	<hr/>
Total,	360	4	16

APPENDIX A.

REPORT OF COMMITTEE ON EXAMINATION.

THE Committee held their Semi-Annual Session, at the Medical College, July 9, 1872, at 11 o'clock A. M.

Present on the part of the State Medical Society, H. W. Buel, M.D., præses *ex officio*, D. A. Tyler, M.D., F. S. Dickinson, M.D., Robert Hubbard, M.D., and J. C. Jarvis, M.D. On the part of the College, Professors Silliman, Hubbard, Lindsley, White, Ives, and Sanford.

Mr. CHARLES WOODWARD GAYLORD, A.B., of Wallingford, having submitted a thesis on "Phthisis Pulmonalis; Its relation to Tuberculosis," and having passed a satisfactory examination, was recommended for a degree.

The Annual Examination was held at the Medical College, Thursday, February 13th, 1873. Present on the part of the State Medical Society, David A. Tyler, M.D. On the part of the College, Professors Silliman, Hubbard, Lindsley, Bacon, White, Ives, and Sanford.

Mr. HERMANN BAUMANN submitted a Thesis on "Abdominal Auscultation," was examined and unanimously recommended to the degree of Doctor in Medicine.

Dr. H. M. Knight was appointed to give the next address to the graduating Class. Dr. H. P. Stearns was appointed alternate.

Dr. D. A. Tyler was appointed to report the proceedings of this Board to the Convention of the State Medical Society.

The Board adjourned *sine die*.

D. A. TYLER.

APPENDIX B.

REPORT OF COMMITTEE TO NOMINATE PHYSICIAN TO THE RETREAT FOR THE INSANE.

At a meeting of the Committee to nominate a Physician to the Retreat for the Insane, held at the Allyn House, Hartford, Ct., November 8, 1872, the following members were present, viz: GIDEON L. PLATT, M.D., J. B. WHITCOMB, M.D., E. K. HUNT, M.D., WILLIAM PORTER, M.D.

The Meeting was called to order by the Chairman, Dr. Platt. Upon motion of Dr. Hunt, Dr. Porter was chosen Secretary.

A telegram was received from Dr. C. M. Carleton, stating his inability to be present, and favoring the nomination of Dr. J. H. Denny.

Communications were received from Dr. C. A. Walker and Mrs. and General McDowell.

A statement was made by Dr. Hunt that communications from Drs. Grey of Utica, and Barstow, of Flushing, favoring the nomination of Dr. J. H. Denny, had been received or shown to the members of the Board of Managers. As no other papers were presented, favoring any other candidate, Dr. Hunt was called upon and spoke in favor Dr. J. H. Denny. Remarks were also made by Drs. Platt, Whitcomb, and Porter. Upon motion of Dr. Hunt, Dr. J. H. Denny was nominated for the position of Physician to the Retreat for the Insane. The motion was seconded by Dr. Porter, and was carried unanimously.

Upon motion, Dr. Platt, the Chairman, was chosen to communicate the action of the Committee to the Board of Directors.

Attest: WILLIAM PORTER, M.D., *Secretary.*

In behalf of the Committee.

GIDEON 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 President.

Unfinished business of previous year disposed of.

Committee on Nominations, appointed by county delegations.

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.

Reports 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 Reports, 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 this 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 Proceedings for 1872, page vi, 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.

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.

M. C. WHITE, M.D., *Secretary.*

Νεκρολογία

De Mortuis nil nisi bonum

ALBERT MORRISON, M.D.

Born at Hebron, Ct., - - - - - March 13, 1820
 Graduated M.D. College Physicians and Surgeons, N. Y., - - - 1847
 Practiced at Mansfield, - - - - - 1847-1851
 Practiced at Windsor, - - - - - 1851-1873
 Died at Windsor, - - - - - May 13, 1873

JUSTIN HAMMOND, M.D.

Born in Hampton, Ct., - - - - - March 2, 1804
 Received degree of A.B. at Brown University, - - - - - 1827
 Received degree of M.D. at Harvard, - - - - - 1830
 Practiced in East Killingly, Ct., - - - - - 1830-1851
 Practiced in Dayville, - - - - - 1851-1873
 Died in Killingly, - - - - - July 5, 1873

CHARLES OSWALD STOCKMAN, M.D.

Born in Germany, - - - - - 1809
 Graduated M.D. at Rostor, - - - - - Jan. 15, 1836
 Practiced in Biebrom, Germany, - - - - - 1836-1855
 Practiced in New Haven, - - - - - 1856-1873
 Died in New Haven, - - - - - Sept 8, 1873

WILLIAM HYDE, M.D.

Born at Stonington, Ct., - - - - - Oct. 27, 1808
 Received M.D. at Harvard, - - - - - 1830
 Practiced in Stonington, - - - - - 1830-1873
 Died at Stonington, - - - - - Sept. 25, 1873

A. C. CARSON, M.D.

Born at Dumfries, Canada, - - - - - Jan. 20, 1840
 Graduated M.D. at College Physicians and Surgeons, N. Y., - - - 1865
 Served as Surgeon U. S. A. two and a half years, - - - - -
 Practiced in Hartford, - - - - - 1863-1873
 Died in Hartford, - - - - - Oct. 6, 1873

Pallidum

Mors aequo

pulsat

pede

pauperum

tabernas

regnumque

turres.



Νεκρολογία

De Mortuis nil nisi bonum

BENJAMIN WELCH, M.D.

Born in Norfolk, Ct. -	May 24, 1798
Licensed at Yale College, -	March 23, 1810
Received M.D. at Yale College, -	Sept. 30, 1813
Honorary at Jeff. Med. Coll., -	Dec. 24, 1824
Practiced at Norfolk, -	1820-1843
Practiced at Litchfield, -	1841-1846
Practiced at Salisbury, -	1846-1873
Died at Salisbury, -	Oct. 9, 1873

SAMUEL BARWICK BERESFORD, M.D.

Born in British Guiana, -	July 5, 1806
Graduated M.D. at Royal Coll. and Univ. of Edinburgh, -	1826
Practiced in British Guiana seven years, -	1843-1873
Practiced in Hartford, Ct., -	Oct. 13, 1873
Died in Hartford, -	

THOMAS MINER, M.D.

Born in Blanford, Vermont, -	1800
Graduated M.D. at Brown University, -	1824
Practiced at Alford, Mass., -	1825-1829
Practiced at Middletown, Ct., -	1829-1847
Practiced at Hartford, -	1848-1873
Died in Hartford, -	Oct. 20, 1873

ELI WHITNEY BLAKE, M.D.

Born at Whitneyville, Ct., -	Dec. 27, 1819
Graduated A.B. at Yale, -	1839
Graduated M.D. at Yale, -	1842
Practiced in Boston, until -	1864
Practiced in New Haven, Ct., -	1864-1873
Died in New Haven, -	Nov. 19, 1873

Pallida

Mors aequo

pulsat

pede

pauperum

tabernas

regnumque

turres.



Νεκρολογία

De Mortuis nil nisi bonum

ERASTUS BANCROFT, M.D.

Born in Farmington, Ct.,	1790
Graduated in Medicine, -	1811
Practiced at Wolcottville, -	1812-1873
Died at Wolcottville, -	Nov. 22, 1873

WM. R. BROWNELL, M.D.

Born at Providence, R. I.,	March 30, 1828
Graduated M.D. College Physicians and Surgeons, N. Y.,	1851
Practiced in Hartford, -	1851-1861 and 1865-1873
Served as Surgeon U. S. Army, -	1861-1865
Died in Hartford, -	Dec. 1, 1873

ROGER M. GRAY, M.D.

Born at Huntington, Ct.,	Oct. 1, 1833
Graduated M.D. at University of N. Y.,	1856
Practiced at Munroe, Ct.,	1856-1861
Practiced at Stratford, Ct.,	1861-1873
Died at Stratford, Ct.,	Dec. 19, 1873

SAMUEL T. SALISBURY, M.D.

Born at Providence, R. I.,	March 14, 1814
Graduated M.D. at Yale College,	1836
Practiced at Plymouth, -	1836-1874
Died at Plymouth, -	March 1, 1871

THOMAS HENRY TOTTEN, M.D.

Born in New Haven, Ct.,	March, 1815
Graduated A.B. at Yale, 1834, M.D., Yale,	1837
Practiced in Pottsville, Pa.,	-
Practiced in New Haven, -	1837-1874
Died in New Haven, of Phthisis,	March 26, 1874

Pallida

Flors aequo

pulsat

pede

pauperum

tabernas

regumque

turres.



Νεκρολογία

De Mortuis nil nisi bonum

THOMAS O'FARRELL, M.D.

Born in Ireland,
 Received M.D. at University of Pennsylvania,
 Practiced in Matamoras and Monterey,
 Practiced in New York,
 Practiced in Middletown,
 Practiced in New Britain,
 Died at New Britain,

1832
 - 1852
 1852-1869
 1869-1872
 - 1873
 - 1873-1874
 April 8, 1874

RALPH GREEN, M.D.

Born at Auburn, Mass.,
 Graduated A.B. at Amherst, Mass.,
 Received M.D. Berkshire Medical Institute,
 Practiced at Auburn, Mass.,
 Practiced at Lebanon, Ct.,
 Died at Lebanon,

Sept. 22, 1815
 - 1835
 - 1839
 1839-1843
 - 1843-1874
 May 20, 1874

GEORGE BLACKMAN, M.D.

Born in Newtown, Ct.,
 Studied medicine and was licensed at Yale College,
 Received M.D. Honorarii Causa Yale College,
 Practiced in Redding,
 Practiced in Westport,
 Died at Westport, Ct.,

July, 1803
 - 1826
 - 1845
 1826-1832
 - 1832-1874
 Aug. 8, 1874

DENISON H. HUBBARD, M.D.

Born at Bolton, Tolland County, Ct.,
 Graduated M.D. at Yale College,
 Practiced at Glastenbury,
 Practiced at Bloomfield,
 Practiced at Clinton,
 Died at Clinton.

Sept. 1, 1805
 - Jan., 1839
 1821-1832
 1832-1844
 1844-1874
 Aug. 12, 1874

Pallidum

Mors aequo

pulsat

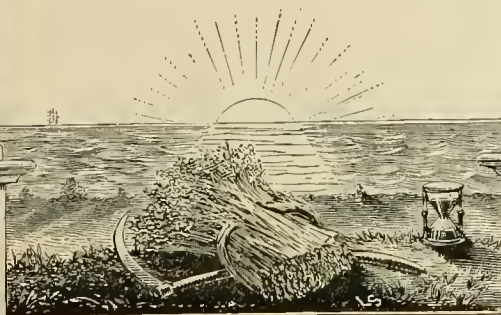
pede

pauperum

tabernas

regumque

turres.



PROCEEDINGS.

The *Eighty-third* Annual Meeting of the President and Fellows of the Connecticut Medical Society was held at the City Hall in New Haven, May 27th, 1874. The meeting was called to order at 3 P. M. by the President, Ira Hutchinson, M.D.

M. C. White and R. S. Goodwin 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 approved and read by the Secretary, viz:—

List of Fellows Ex-Officio.

PRESIDENT.

IRA HUTCHINSON, M.D.

VICE-PRESIDENTS.

LOWEL HOLBROOK, M.D.

*A. W. BARROWS, M.D.

R. F. STILLMAN, M.D.

*A. B. HAILE, M.D.

*E. P. BENNETT, M.D.

LEWIS WILLIAMS, M.D.

ORLANDO BROWN, M.D.

*ABRAM M. SHEW, M.D.

F. L. DICKINSON, M.D.

TREASURER.

J. C. JACKSON, M.D.

SECRETARY.

MOSES C. WHITE, M.D.

COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST IN THE STATE.

H. A. CARRINGTON, M.D.

L. S. WILCOX, M.D.

*A. W. NELSON, M.D.

Fellows Elected in 1874.

NEW HAVEN COUNTY.

P. A. Jewett, M.D.

C. A. Lindsley, M.D.

W. L. Bradley, M.D.

N. Nickerson, M.D.

R. F. Stillman, M.D.

HARTFORD COUNTY.

Melancthon Storrs, M.D.	W. A. M. Wainwright, M.D.
*Henry Gray, M.D.	B. N. Comings, M.D.
J. K. Mason, M.D.	

NEW LONDON COUNTY.

A. Woodward, M.D.	*A. T. Chapman, M.D.
Isaac G. Porter, M.D.	*A. B. Haile, M.D.
*F. N. Braman, M.D.	

FAIRFIELD COUNTY.

*Geo. L. Porter, M.D.	Robert Lauder, M.D.
F. J. Young, M.D.	*E. P. Bennett, M.D.
*Samuel Sands, M.D.	

LITCHFIELD COUNTY.

R. M. Fowler, M.D.	*H. W. Buel, M.D.
R. S. Goodwin, M.D.	W. S. Munger, M.D.
*J. Knight Bacon, M.D.	

WINDHAM COUNTY.

John Witter, M.D.	T. M. Hills, M.D.
E. A. Hill, M.D.	*Omer La Rue, M.D.
*Rieuzi Robinson, M.D.	

MIDDLESEX COUNTY.

A. B. Worthington, M.D.	*C. A. Sears, M.D.
M. C. Hazen, M.D.	

TOLLAND COUNTY.

F. L. Dickinson, M.D.	G. H. Preston, M.D.
C. F. Sumner, M.D.	

On motion of Dr. C. A. Lindsley, the cordial greetings of the Society were sent by telegram to the New Jersey Medical Society, in session at Long Branch.

The President appointed as *Business Committee* Drs. M. C. White, C. A. Lindsley, and M. C. Hazen.

The County Delegations reported the following as *Nominating Committee*, viz:—J. K. Mason, M.D., R. F. Stillman, M.D.,

A. Woodward, M.D., Robert Lander, M.D., R. S. Goodwin, M.D., E. A. Hill, M.D., M. C. Hazen, M.D., C. F. Sumner, M.D.

An invitation was received from George B. Farnam, M.D., requesting the President and Fellows to spend the evening at his house, No. 37 Hillhouse avenue, and on motion the invitation was accepted.

The President appointed as the *Committee on County Resolves*, P. A. Jewett, M.D., Orlando Brown, M.D., and C. F. Sumner, M.D.

Committee to Nominate Essayists, B. N. Comings, M.D., and A. Woodward, M.D.

Committee on Gratuitous Students, F. L. Dickinson, M.D., and A. B. Worthington, M.D.

The Annual Report of the *Committee of Examination* was presented and referred to the Committee of Publication. (See Appendix A.)

The *Committee to Nominate Physician for the Retreat for the Insane* presented a Report, which was referred to the Committee of Publication. (See Appendix B.)

The *Committee on an Inebriate Asylum* also made a Report, which was referred to the Committee of Publication. (See Appendix C.)

The Treasurer's Report was presented, and referred to W. A. M. Wainwright, M.D., and T. M. Hills, M.D., by whom it was pronounced correct, and on motion the Treasurer's Report was approved.

Summary of Treasurer's Report.

May 28, 1873.	Balance in Treasury,-----	\$265.64½
May 23, 1874.	Received during the year,-----	291.50
		\$557.14½
	Disbursements during the year,-----	273.48
		\$283.66½
	Balance carried to new account,-----	

Voted, That *Six Hundred* copies of Proceedings be printed this year.

Voted, That the *Annual Tax* be *Two Dollars*, payable June 1st, 1874.

The Nominating Committee reported, and officers for the ensuing year were elected as follows, viz:—

President—LOWEL HOLBROOK, M.D.

Vice-President—PLINY A. JEWETT, M.D.

Treasurer—JAMES C. JACKSON, M.D.

Secretary—MOSES C. WHITE, M.D.

On Committee of Examination—George B. Farnam, M.D.

On Committee to Nominate Professors in the Medical Institution of Yale College—S. G. Risley, M.D., Joel Canfield, M.D.

On Committee to Nominate Physician to the Retreat for the Insane—A. Woodward, M.D., M. Storrs, M.D.

Committee on Matters of Professional Interest in the State—S. G. Hubbard, M.D., W. A. M. Wainwright, M.D., and H. W. Buel, M.D.

On Committee of Publication—Robert Hubbard, M.D., and Isaac G. Porter, M.D.

Committee of Arrangements—E. K. Hunt, M.D., *Anniversary Chairman*; Geo. C. Jarvis, M.D., and Gurdon W. Russell, M.D.

Dissertator—P. M. Hastings, M.D.

Alternate—Francis Bacon, M.D.

Delegates to the American Medical Association for 1875—Orlando Brown, M.D., G. H. Preston, M.D., Lewis Williams, M.D., and Geo. L. Porter, M.D.

Delegates to the Maine Medical Association—C. M. Carleton, M.D., and N. Nickerson, M.D.

Delegates to the New Hampshire Medical Society—J. C. Jackson, M.D., and W. S. Munger, M.D.

Delegates to the Vermont Medical Society—B. F. Harrison, M.D., and Alfred North, M.D.

Delegates to the Massachusetts Medical Society—Joel Canfield, M.D., and A. B. Haile, M.D.

Delegates to the Rhode Island Medical Society—John Witter, M.D., and Wm. H. Cogswell, M.D.

Delegates to the New York Medical Society—A. W. Barrows, M.D., C. A. Lindsley, M.D., R. S. Goodwin, M.D., A. B. Worthington, M.D., and C. F. Sumner, M.D.

Delegates to the New Jersey Medical Society—S. R. Burnap, M.D., and L. N. Beardsley, M.D.

Delegates to the Pennsylvania Medical Society—J. K. Bacon, M.D., Walter Judson, M.D., and W. G. Alling, M.D.

The Committee on County Resolves reported, and it was thereupon

Voted, That the action of Fairfield County Association be approved, and that, for the persistent neglect and refusal to pay the taxes due to this Society, H. L. W. Burritt, of Bridgeport, be, and is hereby, expelled from this Society.

On the report of the same Committee it was also

Voted, That the action of Windham County Association be confirmed, and that H. E. Balcam be dismissed from this Society.

The Committee on Gratuitous Students made their report, and the following were approved to receive gratuitous lectures at the Medical Institution of Yale College at the next public course, viz: Roger M. Griswold, of Rocky Hill, and William Howard, of North Guilford.

Voted, That the next Annual Meeting be held at Hartford at the usual time in May next.

Prof. Stephen G. Hubbard, M.D., having declined to serve on the Committee on Matters of Professional Interest, his resignation was accepted, and Prof. Chas. A. Lindsley, M.D., was appointed chairman of that committee.

The Committee on Honorary Membership presented the names of David P. Smith, M.D., of Springfield, Mass., and Jared P. Kirtland, M.D., of Cleveland, O. These names lie over one year, in accordance with the By-laws.

Adjourned.

Attest:

M. C. WHITE, M.D., *Secretary*.

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held at the Common Council Chamber at the City Hall, in New Haven, May 28, 1874.

The Convention was called to order at 9 A. M., by the President, Ira Hutchinson, M.D.

ORGANIZATION.

President, IRA HUTCHINSON, M.D.
Vice-President, LOWEL HOLBROOK, M.D.

Vice-Presidents, *ex officio*.

A. W. Barrows, M.D.
R. F. Stillman, M.D.
A. B. Haile, M.D.
E. P. Bennett, M.D.
Lewis Williams, M.D.
Orlando Brown, M.D.
Abram M. Shew, M.D.
F. L. Dickinson, M.D.

The Secretary read the list of new members admitted during the year, viz:

- M. Shaw Bowen, M.D., Harvard, 1867, of Hartford.
Geo. E. Abbott, M.D., Harvard, 1872, of Hartford.
E. A. Green, M.D., Albany, 1872, of New Britain.
R. B. Goodyear, M.D., Yale, 1868, of North Haven.
N. B. Bailey, M.D., Yale, 1871, of Seymour.
S. H. Chapman, A.B., Yale, 1866, M.D. Coll. Phys. and Surg. N. Y., 1869, of New Haven.
S. C. Bartlett, M.D., Yale, 1865, of Waterbury.
Ernest LeRoy Thompson, M.D., Yale, 1874, of Fair Haven.
James D. McGaughey, M.D., Jeff. Med. Coll. 1870, of Wallingford.
Chas. E. Brayton, M.D., Coll. Phys. and Surg., N. Y., 1873, of Stonington.
Geo. D. Stanton, M.D., Bellevue, 1865, of Stonington.
N. E. Worden, M.D., Jeff. Med. Coll., 1873, of Bridgeport.
G. M. Peepie, M.D., Albany, 1849, of Bridgeport.
Wm. O. Wile, M.D., Univ. of N. Y., 1870, of Sandy Hook.
E. H. Davis, M.D., Burlington, Vt., 1872, of Plainfield.

Asael E. Darling, M.D., Harvard, 1872, of Killingly.

J. Howard North, M.D., Yale, 1873, of Goshen.

John Henry Churchill, M.D., Harvard, 1867, of Middletown.

Calvin Sloan May, M.D., Yale, 1873, of Middletown.

B. D. McGuire, M.D., McGill Coll., Canada, 1873, of Middletown.

The names of those who have died during the year were also read by the Secretary, with brief notices of the history of each. (See Mortuary Tablets.)

Obituaries of various deceased members were presented to the Convention, and referred to the Committee of Publication.

The Vice-President, Lowel Holbrook, M.D., took the chair.

The Annual Address was then delivered by the President, Ira Hutchinson, M.D., on the "Medical Use of Alcohol and Alcoholic Liquors in the Prevention and Cure of Disease."

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

The President resumed the chair.

Dr. H. A. Carrington presented the report of the Committee on Matters of Professional Interest in the State, accompanied by the following preamble and resolution, which were unanimously adopted, viz:

Whereas, This Society is informed that a resolution is about to be introduced into the Legislature, requesting the Governor to appoint a Commission, whose duty it shall be to inquire as to the necessity for new legislation in regard to sanitary matters, and vital statistics, and to report thereon at the next session of the Legislature; therefore

Resolved, That we cordially approve of the object of such resolution, and respectfully hope it may meet with your favorable consideration.

Voted, That a copy of the above preamble and resolution be sent to the General Assembly.

L. S. Wilcox, M.D., read a report of a case of Leucocythæmia, as an addenda to the Report on Matters of Professional Interest.

On motion of Dr. C. A. Lindsley, it was unanimously

Resolved, That, as members of the Connecticut Medical Society, we regard the establishment of an asylum for the special treatment of inebriates and the various disorders which are induced by the excessive use of alcohol, opium, hydro-chloral and other narcotics, as an object of very great importance.

Gurdon W. Russell, M.D., presented a report on Honorary Degrees, Licenses, &c. (See Resolutions of 1870 and 1873.) The report was adopted and referred to the Committee of Publication.

Delegates who had visited other societies were called on for reports.

T. Morton Hills, M.D., reported a very interesting visit to the Rhode Island Medical Society.

R. M. Fowler, M.D., made a report of his visit to the New York State Medical Society. He referred to Dr. Squibbs' method of dissolving anodynes and other medicinal substances in *oleic acid*, and applying the same to the skin denuded of cuticle as a means of speedily allaying pain, and stated that the only novelty was the solvent menstruum, as the old physicians long since applied anodynes after removing the cuticle.

M. H. Eddy, M.D., delegate from the Vermont Medical Society, addressed the Convention, and mentioned that in Vermont pulverized charcoal was administered internally in the treatment of typhoid fever. Whether it would prove more valuable than other remedies, was yet undecided.

Delegates from other societies were introduced and addressed the Convention.

S. C. Bartlett, M.D., read a paper on "Skin Grafting," and exhibited a lady whose scalp had been torn off by machinery. The scalp had been entirely restored. Skin grafting had been extensively employed in the treatment of this case.

W. Loekwood Bradley, M.D., exhibited another lady from whose head the entire scalp, one of the eyebrows, one ear, and part of one cheek had been torn off by machinery. In all about seventy-two square inches of surface had been denuded. A portion of the skull had exfoliated. This very unpromising case had been nine months under treatment, and by the method of skin grafting much progress towards recovery had been made. It is hoped that Dr. Bradley will present a full report of this case next year, when there is every reason to expect that a complete cure will have been effected.

The thanks of the Convention were tendered to Drs. Bartlett and Bradley, and copies of their communications were requested for publication.

By invitation of the Society, Gurdon Buek, M.D., delegate from the New York Medical Society, made an interesting communication on Plastic Surgery, illustrated with photographs and models of cases on which he had performed some remarkable operations.

The thanks of the Convention were tendered to Dr. Buck for his very interesting and instructive communication.

A paper on "Small-Pox," by A. Woodward, M.D. (Dr. W. not being present to read it), was referred to the Committee of Publication.

Isaac G. Porter, M.D., then read a paper on ABORTION, *with Cases of Pathological Conditions in Embryology*.

Thanks were voted to Dr. Porter, and a copy of the paper was requested for publication.

Chas. M. Carleton, M.D., read a paper on "Ovariectomy," a copy of which was requested, with the thanks of the Convention.

The Committee to Nominate Essayists for next year presented the names of S. H. Bronson, M.D., E. B. Lyon, M.D., W. S. Bowen, M.D., and S. H. Chapman, M.D. The report was accepted and adopted.

S. H. Fuller, M.D., then read a paper on "Cerebro-Spinal Meningitis." The thanks of the Convention were tendered to Dr. Fuller, and a copy of the paper was requested for publication.*

On motion, all other papers were referred to the Committee of Publication without reading.

On motion of the Secretary, it was

Voted, That a committee of one from a county be appointed to make a report next year on Sewerage and Drainage in Connecticut, or some other branch of public hygiene.

The President appointed for this Committee, B. H. Catlin, M.D., W. A. M. Wainwright, M.D., L. S. Paddock, M.D., O. Brown, M.D., T. M. Hills, M.D., R. Hubbard, M.D., M. C. Hazen, M.D., and G. H. Preston, M.D.

On motion, the Convention adjourned to meet in Hartford at the usual time next year.

Attest: MOSES C. WHITE, M.D., *Secretary*.

* We are sorry to say that Dr. Fuller has not felt prepared to publish the paper this year.—[*Committee of Publication*.]

OFFICERS OF THE SOCIETY
FOR 1874-75.

PRESIDENT.

LOWEL HOLBROOK, M.D., OF THOMPSON.

VICE-PRESIDENT.

PLINY A. JEWETT, M.D., OF NEW HAVEN.

VICE-PRESIDENTS, *Ex-officio*.

A. W. BARROWS, M.D., OF HARTFORD.
R. F. STILLMAN, M.D., OF NORTH HAVEN.
A. B. HAILE, M.D., OF NORWICH.
E. P. BENNETT, M.D., OF DANBURY.
LEWIS WILLIAMS, M.D., OF POMFRET.
ORLANDO BROWN, M.D., OF WASHINGTON.
A. M. SHEW, M.D., OF MIDDLETOWN.
F. L. DICKINSON, M.D., OF ROCKVILLE.

TREASURER.

JAMES C. JACKSON, M.D., OF HARTFORD.

SECRETARY.

MOSES C. WHITE, M.D., OF NEW HAVEN.

STANDING COMMITTEES.

Committee of Examination.

LOWEL HOLBROOK, M.D., *Ex-officio*.
DAVID A. TYLER, M.D.
GEO. C. JARVIS, M.D.
ROBERT HUBBARD, M.D.
B. B. NORTH, M.D.
S. W. TURNER, M.D.
GEO. B. FARNAM, M.D.

MEMBERS OF THE SOCIETY.

HONORARY MEMBERS.

*FELIX PASCALIS,	- -	New York City.
*JAMES JACKSON,	- - -	Boston, Mass.
*JOHN C. WARREN,	- -	Boston, Mass.
*SAMUEL L. MITCHELL,	- - -	New York City.
*DAVID HOSACK,	- - -	New York City.
*WRIGHT POST,	- -	New York City.
*BENJAMIN SILLIMAN,	- -	New Haven.
*GEORGE M'CLELLAN,	- -	Philadelphia, Pa.
*JOHN MACKIE,	- -	Providence, R. I.
*CHARLES ELDREDGE,	- - -	East Greenwich, R. I.
*THEODORIC ROMEYN BECK,	- -	Albany, N. Y.
*JAMES THACHER,	- -	Plymouth, Mass.
EDWARD DELAFIELD,	- -	New York City.
JOHN DELAMATER,	- - -	Cleveland, O.
*WILLIAM P. DEWEES,	- - -	Philadelphia, Pa.
*JOSEPH WHITE,	- - -	Cherry Valley, N. Y.
JACOB BIGELOW,	- - -	Boston, Mass.
WALTER CHANNING,	- -	Boston, Mass.
*PHILIP SYNG PHYSIC,	- -	Philadelphia, Pa.
*LEWIS HERMAN,	-	U. S. Navy.
*DANIEL DRAKE,	- - -	Cincinnati, O.
*HENRY MITCHELL,	- - -	Norwich, N. Y.
NATHAN RYNO SMITH,	- - -	Baltimore, Md.
*VALENTINE MOTT,	- - -	New York City.
*SAMUEL WHITE,	- - -	Hudson, N. Y.
*REUBEN D. MUSSEY,	- -	Cincinnati, O.
*WILLIAM TULLY,	- - -	Springfield, Mass.
RICHMOND BROWNELL,	- -	Providence, R. I.
*WILLIAM BEAUMONT,	- - -	St. Louis, Mo.
SAMUEL HENRY DICKSON,	-	Philadelphia, Pa.
*SAMUEL B. WOODWARD,	- - -	Northampton, Mass.
*JOHN STEARNS,	- - -	New York City.
*STEPHEN W. WILLIAMS,	- - -	Deerfield, Mass.
*HENRY GREEN,	- - -	Albany, N. Y.
*GEORGE FROST,	- - -	Springfield, Mass.
WILLARD PARKER,	- - -	New York City.
*BENAJAH TICKNOR,	- -	U. S. Navy.
*ALDEN MARCH,	- - -	Albany, N. Y.
*AMOS TWITCHELL,	- -	Keene, N. H.
*CHARLES A. LEE,	- - -	New York City.
*DAVID S. C. H. SMITH,	- - -	Providence, R. I.
*JAMES M. SMITH,	- -	Springfield, Mass.
*HENRY D. BULKLEY,	- -	New York City.

* Deceased.

J. MARION SIMS,	- - - -	-	New York City.
*JOHN WATSON,	- - - -	-	New York City.
FRANK H. HAMILTON,	- - - -	-	Brooklyn, L. I.
*ROBERT WATTS,			New York City.
J. V. C. SMITH,	- - - -		New York City.
O. WENDELL HOLMES,		-	Boston, Mass.
JOSEPH SARGENT,	- - - -		Worcester, Mass.
*MASON F. COGSWELL,	- - - -	-	Albany, N. Y.
*FOSTER HOOPER,	- - - -		Fall River, Mass.
*THOMAS C. BRINSMADE,			Troy, N. Y.
GEORGE CHANDLER,			Worcester, Mass.
GILMAN KIMBALL,	- - - -		Lowell, Mass.
*JAMES McNAUGHTON,		-	Albany, N. Y.
*USHER PARSONS,	- - - -		Providence, R. I.
*S. D. WILLARD,	- - - -	-	Albany, N. Y.
*JOHN WARE,	- - - -	-	Boston, Mass.
EBENEZER ALDEN,	- - - -	-	Randolph, Mass.
B. FORDYCE BARKER,		-	New York City.
JOHN G. ADAMS,	- - - -		New York City.
JARED LINSLEY,			New York City.
A. J. FULLER,	- - - -		Bath, Me.
SAMUEL H. PENNINGTON,	- - - -		Newark, N. J.
FREDERICK N. BENNETT,		- -	Newtown, Ct.
*THOMAS W. BLATCHFORD,	- - - -		Troy, N. Y.
THOMAS C. FINNELL,	- - - -		New York City.
N. C. HUSTED,	- - - -		New York City.
JACOB P. WHITTEMORE,	- - - -	-	Chester, N. H.
*JOHN GREEN,	- - - -		Worcester, Mass.
THOMAS SANBORN,		-	Newport, N. H.
WILLIAM PIERSON,	- - - -	-	Orange, N. J.
ARTHUR WARD,	- - - -		Belleville, N. J.
HIRAM CORLISS,	- - - -		Washington, N. Y.
E. K. WEBSTER,	- - - -	-	Boscawen, N. H.
P. A. STACKPOLE,	- - - -	-	Dover, N. H.
S. F. L. SIMPSON,	- - - -		Concord, N. H.
A. T. WOODWARD,	- - - -		Brandon, Vt.
WM. McCULLOM,			Woodstock, Vt.
J. C. HUTCHINSON,		-	Brooklyn, N. Y.
BENJ. E. COTTING,			Boston, Mass.
HENRY I. BOWDITCH,	- - - -		Boston, Mass.
SETH SHOVE,	- - - -		Katana, N. Y.
SAMUEL T. HUBBARD,	- - - -	-	New York City.
GEORGE F. HORTON,	- - - -		Terrytown, Penn.
GURDON BUCK,	- - - -		New York City.

Nominated for Honorary Membership.

DAVID P. SMITH,			Springfield, Mass.
JARED POTTER KIRTLAND,		-	Cleveland, O.

ORDINARY MEMBERS.

The names of those who have been Presidents are in Capitals.

HARTFORD COUNTY.

A. W. BARROWS, M.D., of Hartford, President.

W. A. M. WAINWRIGHT, M.D., of Hartford, Clerk.

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, S. C. Preston, Irving W. Lyon, Daniel Poll, Melancthon Storrs, Horace S. Fuller, John O'Flaherty, Nathan Mayer, Wm. M. Hudson, Geo. C. Jarvis, W. A. M. Wainwright, E. M. Dunbar, David Crary, Jr., George F. Hawley, J. B. Lewis, D. T. Bromley, George P. Davis, C. W. Chamberlain, James Campbell, G. W. Avery, W. Shaw Bowen, Geo. E. Abbott, H. P. Ather-ton, Eli Warren.	ENFIELD, Thompsonville, Edward F. Parsons, Rial L. Strickland.
BERLIN, E. Brandegge.	FARMINGTON, Frank Wheeler, Charles Carrington.
BLOOMFIELD, Henry Gray.	PLAINVILLE, G. A. Moody.
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	ROCKY HILL, R. W. Griswold.
	SIMSBURY, G. W. Sanford,* R. A. White.
	SOUTHINGTON, N. H. Byington,* F. A. Hart.
	SUFFIELD, J. K. Mason, Wm. H. Mather.
	WEST HARTFORD, Edward Brace.*
	WETHERSFIELD, A. S. Warner.
	WINDSOR, S. A. Wilson.
	Windsor Locks, S. R. Burnap.

* Over sixty years of age.

NEW HAVEN COUNTY.

R. F. STILLMAN, M.D., of North Haven, President.

GEO. B. FARNAM, M.D., of New Haven, Clerk.

Censors—B. F. HARRISON, M.D., C. H. GAYLORD, M.D., L. J. SANFORD, M.D.

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Westville, J. W. Barker.	North Guilford, Justin Smith.
BRANFORD, Newton B. Hall, C. W. Gaylord.	HAMDEN, E. D. Swift, O. F. Treadwell.
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	MILFORD, Hull Allen,* L. N. Beardsley, Thomas Dutton,* Wm. H. Andrews.
	NAUGATUCK, J. D. Mears.*
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	ORANGE, West Haven, J. Martin Aimes.
	OXFORD, Lewis Barnes.
	SEYMOUR, Thos. Stoddard, S. C. Johnson,* Joshua Kendall, N. B. Bailey.
	SOUTHBURY, A. B. Burritt.*
	South Britain, N. C. Baldwin.
	WALLINGFORD, Nehemiah Banks, B. F. Harrison, H. Davis, J. W. McGaughey.
	WATERBURY, G. L. Platt, John Deacon, George E. Perkins, Thos. Dougherty, Alfred North, Edward L. Griggs, S. C. Bartlett.

NEW LONDON COUNTY.

A. B. HAILE, M.D., of Norwich, President.

ALBERT T. CHAPMAN, M.D., of Mystic, Clerk.

NEW LONDON, ISAAC G. PORTER,* Robert A. Manwaring,* A. W. Nelson, F. N. Braman, Henry Potter.	MYSTIC, Mason Manning,* Albert T. Chapman.
BOZRAH, Samuel Johnson.*	NORWICH, Elijah Dyer,* Elisha Phinney,* A. B. Haile,* Lewis S. Paddock, Chas. M. Carleton, Wm. S. C. Perkins, Patrick Cassidy, E. C. Kinney.
COLCHESTER, Ezekiel W. Parsons,* Frederick Morgan.*	OLD LYME, George W. Harris.
FRANKLIN, ASHBEL WOODWARD.*	STONINGTON, Chas. N. Brayton, Geo. D. Stanton.
Greenville, Wm. Witter.	Mystic Bridge, E. Frank Coates.
GEOTON, Mystic River, A. W. Coates,* John Gray.	
LEBANON, Ralph Green.*	

FAIRFIELD COUNTY.

E. P. BENNETT, M.D., of Danbury, President

JAMES G. GREGORY, M.D., of Norwalk, Clerk.

Censors—G. F. LEWIS, M.D., W. A. LOCKWOOD, M.D., GEO. L. PORTER, M.D.

Southport, Justus Sherwood.*	MONROE, E. M. Bradley.
BRIDGEPORT, David H. Nash,* Robert Hubbard, Elijah Gregory, George L. Beers, Andrew J. Smith, Augustus H. Abernethy, Geo. F. Lewis, James R. Cumming, Gustave Ohnesorg, George L. Porter, Robert Lauder, Francis J. Young, Curtis H. Bill, R. W. Bull, H. H. Davidson, N. E. Wordin, G. M. Peeples.	NORWALK, Samuel Lynes, James G. Gregory, James E. Barbour, W. A. Lockwood, John W. McLean.
BROOKFIELD, A. L. Williams.	South Norwalk, M. B. Pardee, R. L. Higgins, John Hill.
DANBURY, E. P. Bennett,* James Baldwin,* William C. Bennett.	RIDGEFIELD, O. S. Hickok, Wm. S. Todd.
DARIEN, Samuel Sands.	STAMFORD, N. D. Haight,* Jas. H. Hoyt, E. H. Winslow.
NEW CANAAN, Samuel S. Noyes,* Lewis Richards,* William G. Bronson.	North Stamford, Geo. W. Birch, W. H. Trowbridge.
BETHEL, A. D. Barber.	TRUMBULL, George Dyer.*
	WESTPORT, George B. Bouton.
	WILTON, A. E. Emery.
	HUNTINGTON, Gould A. Shelton.
	Sandy Hook, Wm. C. Wyle.

WINDHAM COUNTY.

LEWIS WILLIAMS, M.D., of Pomfret, President

SAMUEL HUTCHINS, M.D., of West Killingly, Clerk.

Censors—LOWEL HOLBROOK, M.D., E. HUNTINGTON, M.D., S. HUTCHINS, M.D.

WINDHAM, E. Huntington.	POMFRET, Lewis Williams.
ASHFORD, John H. Simmons.*	PUTNAM, H. W. Hough,* John Witter, John B. Kent, Omer LaRue.
BROOKLYN, James B. Whitcomb,* Wm. Woodbridge.	PLAINFIELD, Moosup, Wm. A. Lewis.
SOUTH CANTERBURY, Elijah Baldwin.	Central Village, Charles H. Rogers.
CHAPLIN, Orrin Witter.	THOMPSON, LOWEL HOLBROOK, Charles Hosford.
HAMPTON, Dyer Hughes.*	VOLUNTOWN, Harvey Campbell.*
KILLINGLY, Asael E. Darling.	WESTFORD, Farnam O. Bennett.
South Killingly, Daniel A. Hovey.*	WOODSTOCK, Lorenzo Marcy.*
West Killingly, Samuel Hutchins, C. C. Crandall, R. Robinson, A. A. Reinfret.	West Woodstock, Milton Bradford.*
East Killingly, Edwin A. Hill.	South Woodstock, A. S. Leonard.
PLAINFIELD, WM. H. COGSWELL,* E. H. Davis.	WINDHAM, Willimantic, Fred. Rogers, T. Morton Hills, L. F. Bugbee.

LITCHFIELD COUNTY.

ORLANDO BROWN, M.D., of Washington, President.

BURRITT B. NORTH, M.D., of Cornwall, Vice-President.

WILLIS J. BEACH, M.D., of Litchfield, Clerk.

Censors—B. B. NORTH, M.D., J. B. DERICKSON, M.D., WM. DEMING, M.D.

LITCHFIELD, H. W. BUEL, H. E. Gates, W. J. Beach, Wm. Deming.	Lakeville, W. Bissell, H. M. Knight.
Northfield, D. B. W. Camp.*	SHARON, Ralph Deming,* William W. Knight.
BETHLEHEM, Franklin Booth.	Wolcottville, T. S. Hanchett, L. H. Wood.
CORNWALL, Burritt B. North.*	WARREN, John B. Derickson.
Cornwall Bridge, Elias B. Heady.	WASHINGTON, Remus F. Fowler,* Or- lando Brown.
West Cornwall, Edward Sanford.	New Preston, Sidney H. Lyman,* Ed- ward P. Lyman.
MORRIS, Garry H. Miner.*	WATERTOWN, W. S. Munger.
NEW MILFORD, J. K. Bacon.	WINCHESTER, West Winsted, James Welch,* John W. Bidwell.
Gaylord's Bridge, G. H. St. John.*	WOODBURY, Charles H. Webb,* Harmon W. Shove.
GOSHEN, J. H. North.	Terryville, L. Tudor Platt.
NORFOLK, Wm. W. Welch.	
PLYMOUTH, T. G. Wright.	
Thomaston, William Woodruff,* Ralph S. Goodwin.	
ROXBURY, Myron Downs.*	

MIDDLESEX COUNTY.

ABRAHAM M. SHEW, M.D., of Middletown, President.

F. D. EDGERTON, M.D., of Middletown, Clerk.

MIDDLETOWN, Elisha B. Nye,* Geo. W. Burke, Rufus Baker, F. D. Edgerton, Abraham M. Shew, Winthrop B. Hal- leck, Joseph W. Alsop, Jr., Daniel A. Cleaveland, John Morgan, J. H. Churchill, C. S. May, B. D. McGuire.	CROMWELL, IRA HUTCHINSON.*
CHATHAM, Middle Haddam, Albert B. Worthington.	DURHAM, R. W. Mathewson.*
East Hampton, Albert Field.	ESSEX, Alanson H. Hough,* Charles H. Hubbard.
CHESTER, Sylvester W. Turner.	HADDAM, Miner C. Hazen, Selden W. Noyes.
	OLD SAYBROOK, J. H. Grannis.
	PORTLAND, George O. Jarvis,* C. A. Sears, Cornelius E. Hammond.
	SAYBROOK, Deep River, Edwin Bidwell.

TOLLAND COUNTY.

F. L. DICKINSON, M.D., of Rockville, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

TOLLAND, G. H. Preston.	SOMERS, Orson Wood.*
BOLTON, CHAS. F. SUMNER.	STAFFORD, Wm. N. Clark.*
COVENTRY, Maurice B. Bennett.	West Stafford, Joshua Blodgett.*
South Coventry, Timothy Dimock,* Henry S. Dean.	Stafford Springs, C. B. Newton.
ELLINGTON, J. A. Warren.	Vernon Depot, A. R. Goodrich.
MANSFIELD, Wm. H. Richardson.*	Rockville, Stephen G. Risley, Francis L. Dickinson.
Mansfield Center, O. B. Griggs.	

* Over sixty years of age.

A P P E N D I X A.

REPORT OF COMMITTEE ON EXAMINATION.

THE Committee held their Semi-annual Session at the Medical College, June 24, 1873, at 11 o'clock A. M.

Present on the part of the State Medical Society, Ira Hutchinson, M.D., præses, *ex officio*, F. L. Dickinson, M.D., D. A. Tyler, M.D., Geo. C. Jarvis, M.D., and B. B. North, M.D. On the part of the College, Professors Silliman, Hubbard, Lindsley, White, Bacon, and Sanford.

A resolution approving and making valid the doings of the last meeting of the Board, a quorum not having been present, although duly notified, was passed.

The following named gentlemen were then examined and recommended for the degree of Doctor in Medicine.

WILLIAM BRINTON HALL of Pittsfield, Mass. Thesis—Strychnine.

CALVIN SLOAN MAY of New Haven, Conn. Thesis—Peritonitis.

FREDERICK OLIN WHITE of New Haven, Conn. Thesis—Skin Diseases.

JOHN HERMAN EDEN was examined, and his examination not being quite satisfactory, it was *Voted*, That if Mr. Eden would pursue his studies assiduously through the vacation, and at the beginning of the Lecture Term submit to another examination by the Faculty, he might by unanimous vote be recommended for the Degree.*

Dr. H. S. Fuller, of Hartford, was appointed to address the graduating class in 1874.

The Annual Examination was held at the Medical College, February 12, 1874, at 11 o'clock A. M.

Present on the part of the State Medical Society, Ira Hutchinson, M.D., præses, *ex officio*, Francis L. Dickinson, M.D., D. A.

* Mr. Eden passed a satisfactory examination in accordance with this vote.

Tyler, M.D., George C. Jarvis, M.D., and B. B. North, M.D. On the part of the College, Professors Silliman, Hubbard, Lindsley, White, Bacon, Smith and Sanford.

H. B. Steele of Winsted petitioned for examination, and it was found that he had not complied with the legal requirements of the charter of the Society, and the Dean was directed to refer him to the Chairman of the State Committee on Honorary Degrees.

The following named gentlemen were then examined and recommended for the Degree of Doctor in Medicine.

EDWARD AMES, Sherman, N. Y. Thesis—Thrombus and Embolism.

HENRY COLEMAN, Boston, Mass. Thesis—The Development of the Skeleton.

ERNEST LE ROY THOMPSON, New Haven, Conn. Thesis—Beauty and the Beast.

One other candidate was examined, and his examination not being satisfactory he was recommended to continue his studies.

It was voted that Dr. Fuller be continued (as appointed before) to address the graduating class in 1875.

Dr. D. A. Tyler was appointed to report the proceedings of the Board to the State Medical Society.

The Board adjourned *sine die*.

D. A. TYLER.

A P P E N D I X B.

REPORT OF THE COMMITTEE TO NOMINATE PHYSICIAN TO THE RETREAT FOR THE INSANE.

Having been informed of the resignation of Dr. Denny, a meeting of the Committee was called for January 20th, 1874, at the Allyn House, Hartford, Conn.

Present at the meeting, Dr. J. B. Whitcomb, of Brooklyn, E. K. Hunt, of Hartford, Jas. R. Cummins, of Bridgeport, and Wm. Demming, of Litchfield.

Dr. William Demming was chosen Secretary.

After a brief discussion of the subject, it was

Voted, That the Committee nominate Dr. Henry P. Stearns, of Hartford, to fill the vacancy caused by the resignation of Dr. J. H. Denny.

Voted, That Dr. E. K. Hunt be a committee to convey the action of the Committee to the Board of Directors of the Retreat.

In behalf of the Committee.

JAS. B. WHITCOMB,
Chairman.

A P P E N D I X C .

REPORT OF COMMITTEE ON ESTABLISHMENT OF AN INEBRIATE ASYLUM.

The Committee appointed at the Annual Meeting of the Medical Society, May, 1873, to confer with the General Assembly in reference to the establishment of an Inebriate Asylum, respectfully report :

That they petitioned the General Assembly for a hearing before the Committee on Humane Institutions and asked for the appointment of a commission to report to the General Assembly, now in session. Drs. B. R. Comings, G. B. Hawley, G. W. Russell and Judges L. P. Waldo and Chas. H. Briscoe were appointed and have made their report to the General Assembly.

A copy of the Act of the General Assembly, and a printed report of the committee, is herewith presented as a record of the action of your committee.

All of which is respectfully submitted.

B. N. COMINGS,
GEO. B. HAWLEY,
GURDON W. RUSSELL. } *Committee.*

NEW HAVEN, May 27, 1874.

GENERAL ASSEMBLY, }
May Session, 1873. }

APPOINTING A COMMITTEE ON PROPOSED INEBRIATE ASYLUM.

Resolved by this Assembly, That Doctors Benjamin N. Comings, George B. Hawley, Gurdon W. Russell, and Judges Loren P. Waldo and Charles H. Briscoe, be appointed a committee to report on the necessity and expediency of an inebriate asylum, and if, in their opinion, such an institution is demanded in this State, to present to the next Legislature an appropriate act for its establishment; and to investigate the penal treatment of persons arrested for drunkenness, misdemeanors and breach of the peace while under the influence of intemperate habits, and report to the next Legislature what new legislation is required to reform persons of intemperate habits. The committee to receive no compensation except for necessary traveling expenses, stationery and postage.

Approved July 2d, 1873.

A P P E N D I X D.

The original Charter of Yale College was granted "By the Governor in Council and Representatives of His Majesty's Colony of Connecticut in General Court assembled, New Haven, October 9th, 1701."

By this Act the Undertakers and Partners of the College were empowered, "As also for the encouragement of the students, to grant Degrees or Licenses as they or those deputed by them shall see cause to order and appoint."

The present Charter of Yale College, enacted May 9th, 1745, was confirmed in ARTICLE VIII. of the Constitution of the State in 1818. In said Charter it is provided

Section 9. "That the President of said College, with the consent of the Fellows, shall have power to give and confer all such Honors, Degrees or Licenses as are usually given in Colleges or Universities, upon such as they shall think worthy thereof."

The Powers of the Connecticut Medical Society to grant Licenses to practice Medicine, and to confer Degrees, will be seen by the following copy of the original Charter enacted in 1792, as follows :

AN ACT INCORPORATING A MEDICAL SOCIETY.

Whereas well regulated medical societies, have been found to contribute to the diffusion of true science, and particularly the knowledge of the healing art :—Therefore,

§ 1. *Be it enacted by the Governour and Council and House of Representatives in General Court assembled,* That there be a Medical Society formed within this State, to consist of the following persons, viz.—James Potter, Leveret Hubbard, Charles Phelps, Joshua Porter, Amos Mead, Charles Mather, Josiah Hart, Eliakim Fish, Samuel Flagg, Eneas Munson, Jared Potter, John Lester, David Rogers, Philip Turner, Elisha Perkins, Isaac Knight, Daniel Sheldon, Phineas Miller, James Schovill, Samuel Woodward, Ichabod Warner, Jeremiah West, David Sutton, Elihu

Tudor, Timothy Rogers, Joseph Baker, John R. Watrous, Seth Bird, Miner Grant, Simon Wolcott, John Osborn, Asa Hamilton, Theophilus Rogers, Lemuel Hopkins, Philemon Tracy, Mason F. Cogswell, Thaddeus Betts, Thomas Coit, Joshua Downer, Elnathan Beach, John Turner, John Spalding, Levi Ives, James Clarke, Albigeance Waldo, John Clark, and Elisha Lord, with such other physicians and surgeons, as shall hereafter be approved of, and admitted from time to time, as is herein after provided, that is to say, the physicians and surgeons, living in the respective counties shall have liberty to meet together on the fourth Tuesday of September next, and at such place within their respective counties, as shall be appointed by Lemuel Hopkins, Eneas Munson, Simon Wolcott, Albigeance Waldo, James Potter, Seth Bird, Jeremiah West, and John Osborn; and by them notified, by advertising in some public Gazette in the counties in which they respectively dwell, and when so met, they shall have authority by their major vote in such respective meetings, to determine the qualifications, and admission of their own members, and the persons who shall thus be admitted, shall have authority to make choice of a chairman and clerk, to conduct the affairs of such meetings.

§ 2. *Be it further enacted*, That such county meetings formed as aforesaid, and all future county meetings, which the members so approved and admitted as aforesaid, with such others as shall hereafter be duly approved and admitted pursuant to this act, shall annually hold on the fourth Tuesday in September, which they are hereby authorized to do, and at such place as they shall appoint the said future meetings, having organized themselves with a chairman and clerk as aforesaid, are hereby authorized and directed to choose by ballot, from amongst themselves, five persons for each county, except for the county of Middlesex and Tolland, and three for each of those counties, to compose a convention of said society; which members so to be chosen for said first convention, shall meet at the court-house in Middletown, on the second Tuesday of October next, at ten of the clock in the forenoon; and for the future annual convention at such time and place as they shall appoint, and being so met, they are hereby authorized, by ballot to choose a president, vice-president, treasurer and secretary, and such other officers as they may think proper, and the convention so formed, shall be known by the name of *The President and Fellows of the Connecticut Medical Society*; and shall hold their offices for the term of one year, and shall have full power to make

by-laws to promote the ends of said society, provided they be not repugnant to the laws of this State, or of the United States, and may expel members from said society, for any misdemeanors as relative to said society; to appoint examining committees in the respective counties, who shall examine such candidates as may offer themselves for that purpose, and license such as shall be found qualified for the practice of physic or surgery, and to receive them on their desire as members of said society in their respective counties; to confer honorary degrees on such of the faculty as they may, from time to time find of distinguished merit, to purchase and hold to, and for, the benefit of said society, property, both real and personal, to an amount not exceeding *sixteen thousand six hundred and sixty-seven dollars*, and to manage, improve and convey the same for the common good and interest of said society; and may have a common seal, and the same alter and renew at their pleasure; and the said society, in their corporate capacity, may sue and be sued as other societies and bodies corporate may by law, as relative to the contracts, rights and interests, of said society. Twenty members to be present to be a quorum to transact the business of said society.

§ 3. *Be it further enacted*, That it shall be the duty of the several members of the society, according to their ability, to communicate useful information to each other in their respective county meetings, and such meetings shall, from time to time, transmit to the convention, such curious cases and observations, as may come to their knowledge; and it shall be the duty of the convention to cause to be published, such extraordinary cases, and such observations on the state of the air, and on epidemical and other disorders as they may think proper; and the said county meetings and conventions shall have power to adjourn, from time to time, as they may think necessary, to promote the design of their institution.

§ 4. *Be it further enacted*, That if this Act, or any thing therein contained, shall be found inadequate or inconvenient, it may by the general assembly be altered, amended, or repealed.

THE MEDICAL INSTITUTION OF YALE COLLEGE

was established in accordance with an agreement between the President and Fellows of Yale College in New Haven and the Connecticut Medical Society as contained in certain "Articles of Union," which, though often referred to, and which were ordered to be published in 1811 as part of the Journal of said society, are not now to be found in separate form, but we [Secretary Conn. Med. Society] find that in 1819 the society ordered "the several Statutes of this State relating to the Society to be published with the doings of the Convention." Here we find the "*Articles of Union*" indorsed and approved by the society, by the College, and by the Legislature, so that at last we find them quoted in full in the "Act of the Legislature, establishing the Medical Institution" entitled

An Act in addition to and alteration of an Act entitled "An Act to incorporate the Medical Society."

§ 1. *Be it enacted by the Governour and Council, and House of Representatives, in General Court assembled, That the President and Fellows of the Medical Society be empowered, to unite with the President and Fellows of Yale College, for the purpose of forming a Medical Seminary, to be styled The Medical Institution of Yale College: agreeably to the following articles, agreed upon by and between the committee of the corporation of Yale College, and the Medical Society of the State of Connecticut; as follows, viz.—*

ART. 1. THAT there shall be a Medical Institution established in Yale College, to be known and acknowledged by the name of *The Medical Institution of Yale College.*

2. That said Institution, to include a complete circle of medical science, consists of four Professorships. First, of Chemistry and Pharmacy: Second, of the theory and practice of Medicine: Third, of Anatomy, Surgery, and Midwifery: Fourth, of Materia Medica and Botany: And that there shall be a joint committee of an equal number of persons, appointed by the Convention of the Medical Society and Corporation of Yale College, who shall make a nomination; from which nomination the aforesaid Professors shall be chosen by the Corporation.

3. That a Cabinet of anatomical preparations, including all things usually found in collections of this nature, be provided as speedily as the college funds will allow.

4. That there be a collection of specimens in the *Materia Medica*; and that a Botanical Garden be established as soon as the funds of the college can afford such establishment.

5. That every medical student be required to attend to the study of physic, or surgery, with some medical or chirurgical professor, or practitioner, who is in respectable standing, for two years; provided he shall have been graduated at some college; otherwise to study three years; and to have arrived at the age of twenty-one years. And that every medical student, who shall commence the study of physic, or surgery, after the foregoing articles shall be complied with, and lectures commenced upon the several branches above mentioned, shall attend one course of each of the above systems of lectures, under the Professors of the Medical Institution of Yale College, or of some other public medical institution, previous to his being admitted to an examination for a licence: And that the course of lectures he is required to attend, may be included within the term he is required to study. Provided nevertheless, that upon the recommendation of the county medical societies respectively, one meritorious and necessitous person from each county, shall annually be allowed the privilege of attending one course of each of the above systems of lectures, gratis. And if any one of the counties should fail to recommend as above, the Medical Convention of the State may fill up the vacancy. It shall be the duty of the Medical Societies of the counties, to report to the Medical Convention of the State, the names of the persons whom they shall agree to recommend; and the President of said Convention shall transmit the said names, together with such as the Medical Convention may add, agreeably to the above provision, to the Medical Professors of Yale College.

6. That the price of the ticket for the whole of the above courses of lectures, shall be fifty dollars.

7. That the committee of examination for the practice of physic or surgery shall consist of the Professors of the Medical Institution of the College, and an equal number of the members of the Medical Society, appointed by the Medical Convention: and the president of the Medical Convention shall be, *ex-officio*, president of the examining committee, with a vote at all times, and a casting vote, when there is a tie; and in case of the absence of the

President, a president pro tempore shall be appointed by the members of the examining committee, appointed by the Medical society, with the same powers; which committee or a majority of the same, shall possess the powers, and they only, of examining for a license; and that all licenses to practice physic or surgery, shall be signed by the President of the Medical Society, and countersigned by the committee, or a majority of the same; and the emoluments arising from the licences, shall be as heretofore, and shall accrue to the Medical Society.

8. That each candidate for the degree of Doctor of Medicine, shall be required to attend two courses of the above systems of lectures, at the Medical Institution in Yale College, or at some other public medical institution where a similar course of public instruction is pursued; which degree, upon the recommendation of the committee of examination, shall be conferred by the President of the College, and the diploma signed by him, and countersigned by the committee, or a majority of the same; and that each person examined for the degree of Doctor of Medicine, shall pay four dollars to the President of the College, three dollars to each of the examiners present, and ten dollars to the treasury of the Medical Society.

9. It shall be considered as within the meaning and intention of this association, that honorary degrees may be conferred by the President of the College, upon those persons, whom the Medical Convention shall recommend as deserving so distinguished a mark of respect.

10. For the accommodation both of the students and of the committee, there shall be but one examination in a year; which shall be immediately at the close of the courses of lectures. When a candidate is prevented by sickness, he may be examined by the medical professors at college. And such examination, together with their certificate thereof, shall entitle him to the same privileges as though his examination had been by said committee.

11. It is likewise the understanding of the Corporation of said College, and the Fellows of the Medical Society, that all medical students, who shall have attended two courses of the lectures in the Medical Institution in Yale College, shall have the privilege of attending all future courses gratis.

12. All persons licensed in future to practice physic or surgery, agreeably to the foregoing provisions, shall be of course members of the Medical Society in the respective counties where they reside.

§ 2. *And be it further enacted*, That the appointment of examining committees, the granting of licenses, and the conferring of degrees, shall in future be regulated, agreeably to the articles of union agreed upon between the President and Fellows of Yale College on the one part, and the President and Fellows of the Medical Society on the other part; any law to the contrary notwithstanding.

§ 3. *Be it further enacted*, That so much of the Act entitled an Act to incorporate a Medical Society, as respects the appointing of county committees for the examination of medical students, and the granting of licences to them, and that so much of the act as respects the granting of honorary degrees, be and the same is hereby repealed.

Provided nevertheless, That the repealing clauses in the third paragraph in this act shall not be in force until the articles of union in this act, shall be adopted and in operation.

General Assembly, October Session, 1810.

LYMAN LAW, *Speaker*

of the House of Representatives.

JOHN TREADWELL, *Governor.*

Attest THOMAS DAY, *Secretary.*

The present Charter and By-laws of the Connecticut Medical Society are contained in the Proceedings of the Society for 1870.

The present Charter of the Medical Institution of Yale College will be found in the Proceedings of this Society for 1866.

Both these documents will probably be republished with the Proceedings next year. COM. OF PUBLICATION.

EDITORIAL.—It will be seen by the Mortuary Tablets that death has made sad inroads and demands upon our Society during the past year, but those who have gone were noble men, who have acted well their part in their day and generation.

Our apology for the late appearance of the Proceedings this year may be read in our Editorial Notices for 1872, to which the Society are respectfully referred. COM. OF PUBLICATION.

Νεκρολογία

De Mortuis nil nisi bonum

TIMOTHY DIMOCK, M.D.

Born at Coventry, Ct.,	- Sept. 7, 1800
Graduated M.D. at Yale, -	1823
Practiced in Granby, Mass., -	1823-1827
Practiced at Coventry,	1827-1874
Died at Coventry,	April 29, 1874

ORSON WOOD, M.D.

Born at Somers, Ct., - -	1791
Licensed by the Conn. Med. Soc.,	1818
Received M.D. at Yale,	1840
Practiced at Somers,	1818-1826
Practiced at Stafford,	1826-1834
Practiced at Somers,	- 1834-1874
Died at Somers,	July 19, 1874

HUBERT VINCENT CLAIRBORNE HOLCOMBE.

Born at West Granville, Mass.,	Jan. 5, 1828
Graduated M.D. at Castleton, Vermont, -	1854
Practiced in Granville with his father until	1854
Removed to Branford, Ct.,	1862
Appointed Surgeon 15th Conn. Vol.,	1865
Returned to Branford,	Aug. 4, 1874
Died at Branford,	

Pallida

Mors aequo

pulsat

pede

pauperum

tabernas

regumque

turres.



Νεκρολογία

De Mortuis nil nisi bonum

HENRY WILLY EDMUND MATTHEWS, M.D.

Born at St. Simon's Island, Georgia,	Dec. 10, 1827
Graduated A.B. at Trinity College. -	- 1847
Graduated M.D. at Yale College, -	1850
Practiced in New Haven,	- 1850-1875
Died at New Haven, -	Jan. 29, 1875

GEORGE C. JARVIS, M.D.

Born at New Canaan, Ct.,	July 14, 1795
Licensed by the Conn. Med. Soc.,	1817
Received M.D. at Yale,	1846
Practiced in Torrington,	1817-1819
Practiced in Colebrook, -	1819-1840
Practiced in Portland, (Chatham)	1840-1875
Died at Portland,	Feb. 3, 1875

Pallidum

Mors aequo

pulsat

pede

pauperum

tabernas

regnumque

turres.

PROCEEDINGS.

The *Eighty-Fourth* Annual Meeting of the President and Fellows of the Connecticut Medical Society was held at the Charter Oak Building in Hartford, May 26, 1875. The meeting was called to order at 3 P. M., by the President, Lowell Holbrook, M. D.

Drs. M. C. White and L. J. Sanford 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 approved and read by the Secretary, viz:—

LIST OF FELLOWS EX OFFICIO.

President.

Lowell Holbrook, M. D.

Vice Presidents.

Pliny A. Jewett, M. D.

G. W. Sanford, M. D.	*Elijah Baldwin, M. D.
C. A. Lindsley, M. D.	*B. B. North, M. D.
A. Woodward, M. D.	*Elisha B. Nye, M. D.
E. P. Bennett, M. D.	S. G. Risley, M. D.

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

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

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 1875.

Hartford County.

E. K. Hunt, M. D.	M. Storrs, M. D.
W. S. Bowen, M. D.	J. K. Mason, M. D.
	S. R. Burnap, M. D.

* Absent.

New Haven County.

Francis Bacon, M. D.	G. L. Platt, M. D.
W. L. Bradley, M. D.	L. J. Sanford, M. D.
C. H. Gaylord, M. D.	

New London County.

Isaac G. Porter, M. D.	*L. S. Paddock, M. D.
*W. S. C. Perkins, M. D.	F. N. Braman, M. D.
Patrick Cassidy, M. D.	

Fairfield County.

E. P. Bennett, M. D.	*J. Baldwin, M. D.
*G. T. Lewis, M. D.	*I. G. Gregory, M. D.
*W. S. Todd, M. D.	

Litchfield County.

W. J. Beach, M. D.	*J. K. Bacon, M. D.
T. G. Wright, M. D.	Wm. Woodruff, M. D.
*J. K. Bidwell, M. D.	

Windham County.

H. Hough, M. D.	E. A. Hill, M. D.
E. Huntington, M. D.	A. E. Darling, M. D.
Lewis Williams, M. D.	

Middlesex County.

Rufus Baker, M. D.	Daniel A. Cleaveland, M. D.
Cornelius E. Hammond, M. D.	

Tolland County.

*Henry S. Dean, M. D.	S. G. Risley, M. D.
Chas. F. Sumner, M. D.	

DELEGATES FROM OTHER SOCIETIES.

Vermont Medical Society.

H. H. Atwater, M. D., Burlington, Vt.

Massachusetts Medical Society.

F. J. Knight, M. D., of Boston, Mass.
 P. L. B. Stickney, M. D., of Springfield, Mass.
 Bennett S. Lewis, M. D., of Boston, Mass.

Medical Society of the State of New York.

A. E. M. Purdy, M. D., of New York City.
 * Edward L. Beadle, M. D., of Poughkeepsie, N. Y.

The President appointed as—

Business Committee—Drs. M. C. White, E. K. Hunt and Isaac G. Porter.

The County Delegations reported the following as the Nominating Committee:

Hartford County, M. Storrs.
 New Haven County, F. Bacon.
 New London County, I. G. Porter.
 Fairfield County, E. P. Bennett.
 Windham County, E. Huntington.
 Litchfield County, T. G. Wright.
 Middlesex County, Rufus Baker.
 Tolland County, S. G. Risley.

The President appointed as—

Committee on County Resolves—Drs. G. W. Russell, M. D., A. Woodward, M. D., and Lewis Williams, M. D.

Committee on Gratuitous Students—C. F. Sumner, M. D., and E. Huntington, M. D.

Committee to Nominate Essayists—L. J. Sanford, M. D., and L. S. Wilcox, M. D.

Committee on Honorary Degrees and Honorary Membership—G. L. Platt, M. D., and E. P. Bennett, M. D.

Voted, That *Six Hundred* copies of Proceedings be printed this year.

Voted, That the *Annual Tax* be *two dollars*, payable June 1st, 1875.

Voted, That the Publishing Committee have authority to publish at their discretion, in the Proceedings this year, the Charter and By-laws of the Society, and such other compilations as they think useful and in accordance with previous usages of the Society.

* Sent congratulations by telegram.

The Treasurer's Report was presented, and having been referred to Drs. E. A. Hill and W. J. Beach as Auditors, it was declared correct and approved by the Society.

May, 1874. Balance in Treasury,-----	\$283.66½
May, 1875. Received during the year,-----	440.65
	\$724.31½
Disbursements during the year,-----	284.37
	\$439.94
Balance carried to new account,-----	\$439.94

The Report of the Committee on Examination was presented by Dr. Geo. B. Farnam, and it was referred to the Committee of Publication. (See Appendix A.)

An invitation was received and accepted to visit the Asylum for the Deaf and Dumb.

The Committee on Gratuitous Students made their report, approving the appointment made by County Associations, viz:

Frank Gorham, of Weston, *Westport P. O.*
 Samuel Henry Huntington, of Windham.
 Orren A. Gorton, of East Lyme.
 Francis H. Drew, of Saybrook.

The Committee on Honorary Degrees reported no new candidates for that honor this year.

The Committee on County Resolves reported that no business had been presented for their action.

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

President—PLINY A. JEWETT, M. D., of New Haven.
Vice-President—A. W. BARROWS, M. D., of Hartford.
Treasurer—J. C. JACKSON, M. D., Hartford.
Secretary—M. C. WHITE, M. D., of New Haven.

An invitation of Dr. H. S. Bowen to meet at his house at 8½ p. m., was accepted.

Voted to hold an Evening Session at 7½ p. m.

Adjourned to 7½ p. m.

EVENING SESSION, 7½ P. M., May 26.

The President, Lowell Holbrook, M. D., in the chair.

The Nominating Committee completed their report, and the following were elected, viz:

On Committee of Examination.

Gideon L. Platt, M. D., Irving W. Lyon, M. D.

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

Isaac G. Porter, M. D., E. Huntington, M. D.

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

E. K. Hunt, M. D., James R. Cumming, 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.

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

Committee of Arrangements.

David L. Daggett, M. D., F. Bacon, M. D., G. B. Farnam, M. D.

Dissertator.

Francis Bacon, M. D.

Alternate.

A. M. Shew, M. D.

Delegates to the American Medical Association.

Ralph Goodwin, M. D., R. Robinson, M. D., L. S. Wilcox, M. D.,
L. J. Sanford, M. D.

Reserve Delegates.

Isaac G. Porter, M. D., L. Williams, 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 the vacancies.

Delegates to the Maine Medical Association.

C. M. Carleton, M. D., Lowell Holbrook, M. D.

Delegates to the New Hampshire Medical Society.

J. B. Kent, M. D., F. L. Dickinson, M. D.

Delegates to the Vermont Medical Society.

L. S. Paddock, M. D., G. H. Preston, M. D.

Delegates to the Massachusetts Medical Society.

A. Woodward, M. D., T. G. Wright, M. D.

Delegates to the Rhode Island Medical Society.

W. A. Lewis, M. D., F. N. Braman, 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.

E. C. Kinney, M. D., W. J. Beach, M. D., John O'Flaherty, M. D.

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

On motion, the President and Fellows adjourned to meet in New Haven, the fourth Wednesday in May, 1876.

Attest :

MOSES C. WHITE, *Secretary.*

THE ANNUAL CONVENTION

Of the Connecticut Medical Society was held at the Charter Oak Building, in the city of Hartford, May 27th, 1875.

The Convention was called to order at 9 A. M., by the President, Lowell Holbrook, M. D.

ORGANIZATION.

President, LOWELL HOLBROOK, M. D.
Vice-President, PLINY A. JEWETT, M. D.

Vice-Presidents, *ex officio*.

G. W. Sanford, M. D.
C. A. Lindsley, M. D.
A. Woodward, M. D.
E. P. Bennett, M. D.
Elijah Baldwin, M. D.
Burritt B. North, M. D.
Elisha B. Nye, M. D.
S. G. Risley, M. D.

The Secretary read the list of new members admitted during the year, viz:

W. C. Ayres, M. D., Yale, 1854, Hartford.
C. E. Froëlich, M. D., Copenhagen, 1870, Hartford.
John Dwyer, M. D., N. Y. Univ., 1871, Hartford.
G. F. Lewis, M. D., Yale, 1865, Collinsville.
Homer S. Bell, M. D., N. Y. Univ., 1871, East Hartland.
R. E. Ensign, M. D., Albany, 1858, Poquonnock.
John F. Barnett, M. D., Yale, 1869, West Haven.
Wm. H. Hotchkiss, M. D., Yale, 1872, New Haven.
F. E. Castle, M. D., Yale, 1870, Waterbury.
E. W. McDonald, M. D., N. Y. Univ., Waterbury.
S. L. Sprague, M. D., Harvard, 1850, Norwich.
J. Walter Martin, M. D., Vt. Univ., 1869, Norwich.
Frank P. Esterly, M. D., ——— Woodbury.
J. J. Newcomb, M. D., Yale, 1875, Litchfield.
Virgil Buel, M. D., Long Isl. Coll. Hosp., ——— Harwinton.

G. C. H. Gilbert, M. D., ——— Westbrook.

G. H. Gray, M. D., Coll. Phys. and Surg., N. Y., 1873, Clinton.

J. Hamilton Lee, M. D., Yale, 1859, Killingworth.

The names of those who had died during the year were read by the Secretary. (See Mortuary Tablets.)

Obituaries of deceased members were presented to the Convention, and referred to the Committee of Publication.

The Vice-President, Pliny A. Jewett, M. D., took the chair.

The Annual Address was then delivered by the President, Lowell Holbrook, M. D., on The Present State of Medical Science.

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

The Committee on Matters of Professional Interest in the State, C. A. Lindsley, M. D., Chairman, presented their Report, which was referred to the Committee of Publication.

Delegates from other Societies were introduced, viz :

P. L. B. Stickney, M. D., of Springfield, Mass. ; F. J. Knight, M. D., of Boston, Mass. ; H. H. Atwater, M. D., of Burlington, Vt. ; A. E. M. Purdy, M. D., of New York City, who addressed the Convention.

E. L. Beadle, M. D., of Poughkeepsie, N. Y., sent a telegram regretting his inability to be present at the meeting.

An Essay was read by S. H. Chapman, M. D., on Chronic Laryngitis, its causes and treatment.

The thanks of the Society were tendered to Dr. Chapman, and a copy of the Essay was requested for publication.

An Essay on Pathology of Phthisis Pulmonalis was read by Irving W. Lyon, M. D.

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

A paper entitled Standard of Vitality in Irritation and Inflammation, by Geo. W. Harris, M. D., was presented by the Secretary, and without reading referred to the Committee of Publication.

D. A. Cleaveland, M. D., of Middletown, in behalf of the Middlesex County Medical Association, presented papers on Ozone Oxygen and Electricity, by Geo. O. Jarvis, M.D., of Portland, deceased.

The papers were referred to the Committee of Publication to consider and publish if they think proper.

The Committee on Public Hygiene were continued, at their own request.

The Committee to Nominate Essayists reported the following names, which were approved by the Society, viz: W. A. M. Wainwright, M. D., Geo. B. Farnam, M. D., C. H. Gaylord, M. D., S. W. Turner, M. D., C. W. Chamberlain, M. D.

Remarks were made by Dr. I. G. Porter, on Animal Electricity.

Dr. Lewis Williams, who had attended the American Medical Association as a Delegate of this Society, gave an account of his visit at Louisville.

The Committee of Arrangements announced Dinner at a quarter past 2 P. M.

Adjourned.

M. C. WHITE, M. D., *Secretary.*

OFFICERS OF THE SOCIETY FOR 1875-76.

PRESIDENT.

PLINY A. JEWETT, M. D., OF NEW HAVEN.

VICE-PRESIDENT.

A. W. BARROWS, M. D., OF HARTFORD.

VICE-PRESIDENTS, *Ex officio*.

G. W. SANFORD, M. D., OF SIMSBURY.

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

A. WOODWARD, M. D., OF FRANKLIN.

E. P. BENNETT, M. D., OF DANBURY.

ELIJAH BALDWIN, M. D., OF SOUTH CANTERBURY.

BURRITT B. NORTH, M. D., OF CORNWALL.

ELISHA B. NYE, M. D., OF MIDDLETOWN.

S. G. RISLEY, M. D., OF ROCKVILLE.

TREASURER.

JAMES C. JACKSON, M. D., OF HARTFORD.

SECRETARY.

MOSES C. WHITE, M. D., OF NEW HAVEN.

STANDING COMMITTEES.

Committee of Examination.

P. A. JEWETT, M. D. *Ex officio*.

ROBERT HUBBARD, M. D.

B. B. NORTH, M. D.

S. W. TURNER, M. D.

GEO. B. FARNAM, M. D.

G. L. PLATT, M. D.

IRVING W. LYON, M. D.

MEMBERS OF THE SOCIETY.

HONORARY MEMBERS.

*FELIX PASCALIS,	-	-	-	-	New York City.
*JAMES JACKSON,	-	-	-	-	Boston, Mass.
*JOHN C. WARREN,	-	-	-	-	Boston, Mass.
*SAMUEL L. MITCHELL,	-	-	-	-	New York City.
*DAVID HOSACK,	-	-	-	-	New York City.
*WRIGHT POST,	-	-	-	-	New York City.
*BENJAMIN SILLIMAN,	-	-	-	-	New Haven.
*GEORGE M'CLELLAN,	-	-	-	-	Philadelphia, Pa.
*JOHN MACKIE,	-	-	-	-	Providence, R. I.
*CHARLES ELDRIDGE,	-	-	-	-	East Greenwich, R. I.
*THEODORIC ROMEYN BECK,	-	-	-	-	Albany, N. Y.
*JAMES THACHER,	-	-	-	-	Plymouth, Mass.
EDWARD DELAFIELD,	-	-	-	-	New York City.
JOHN DELAMATER,	-	-	-	-	Cleveland, O.
*WILLIAM P. DEWEES,	-	-	-	-	Philadelphia, Pa.
*JOSEPH WHITE,	-	-	-	-	Cherry Valley, N. Y.
JACOB BIGELOW,	-	-	-	-	Boston, Mass.
WALTER CHANNING,	-	-	-	-	Boston, Mass.
*PHILIP SYNG PHYSIC,	-	-	-	-	Philadelphia, Pa.
*LEWIS HERMAN,	-	-	-	-	U. S. Navy.
*DANIEL DRAKE,	-	-	-	-	Cincinnati, O.
*HENRY MITCHELL,	-	-	-	-	Norwich, N. Y.
NATHAN RYNO SMITH,	-	-	-	-	Baltimore, Md.
*VALENTINE MOTT,	-	-	-	-	New York City.
*SAMUEL WHITE,	-	-	-	-	Hudson, N. Y.
*REUBEN D. MUSSEY,	-	-	-	-	Cincinnati, O.
*WILLIAM TULLY,	-	-	-	-	Springfield, Mass.
RICHMOND BROWNELL,	-	-	-	-	Providence, R. I.
*WILLIAM BEAUMONT,	-	-	-	-	St. Louis, Mo.
*SAMUEL HENRY DICKSON,	-	-	-	-	Philadelphia, Pa.
*SAMUEL B. WOODWARD,	-	-	-	-	Northampton, Mass.
*JOHN STEARNS,	-	-	-	-	New York City.
*STEPHEN W. WILLIAMS,	-	-	-	-	Deerfield, Mass.
*HENRY GREEN,	-	-	-	-	Albany, N. Y.
*GEORGE FROST,	-	-	-	-	Springfield, Mass.
WILLARD PARKER,	-	-	-	-	New York City.
*BENAJAH TICKNOR,	-	-	-	-	U. S. Navy.
*ALDEN MARCH,	-	-	-	-	Albany, N. Y.
*AMOS TWITCHELL,	-	-	-	-	Keene, N. H.
*CHARLES A. LEE,	-	-	-	-	New York City.
*DAVID S. C. H. SMITH,	-	-	-	-	Providence, R. I.
*JAMES M. SMITH,	-	-	-	-	Springfield, Mass.

* Deceased.

*HENRY D. BULKLEY,	-	-	-	New York City.
J. MARION SIMS,	-	-	-	New York City.
*JOHN WATSON,	-	-	-	New York City.
FRANK H. HAMILTON,	-	-	-	Brooklyn, L. I.
*ROBERT WATTS,	-	-	-	New York City.
O. WENDELL HOLMES,	-	-	-	Boston, Mass.
JOSEPH SARGENT,	-	-	-	Worcester, Mass.
*MASON F. COGSWELL,	-	-	-	Albany, N. Y.
*FOSTER HOOPER,	-	-	-	Fall River, Mass.
*THOMAS C. BRINSMADÉ,	-	-	-	Troy, N. Y.
GEORGE CHANDLER,	-	-	-	Worcester, Mass.
GILMAN KIMBALL,	-	-	-	Lowell, Mass.
*JAMES McNAUGHTON,	-	-	-	Albany, N. Y.
*USHER PARSONS,	-	-	-	Providence, R. I.
*S. D. WILLIARD,	-	-	-	Albany, N. Y.
*JOHN WARE,	-	-	-	Boston, Mass.
EBENEZER ALDEN,	-	-	-	Randolph, Mass.
FORDYCE BARKER,	-	-	-	New York City.
JOHN G. ADAMS,	-	-	-	New York City.
JARED LINSLEY,	-	-	-	New York City.
A. J. FULLER,	-	-	-	Bath, Me.
SAMUEL H. PENNINGTON,	-	-	-	Newark, N. J.
*THOMAS W. BLATCHFORD,	-	-	-	Troy, N. Y.
THOMAS C. FINNELL,	-	-	-	New York City.
N. C. HUSTED,	-	-	-	New York City.
JACOB P. WHITEMORE,	-	-	-	Chester, N. H.
*JOHN GREEN,	-	-	-	Worcester, Mass.
THOMAS SANBORN,	-	-	-	Newport, N. H.
WILLIAM PIERSON,	-	-	-	Orange, N. J.
ARTHUR WARD,	-	-	-	Belleville, N. J.
HIRAM CORLISS,	-	-	-	Washington, N. Y.
E. K. WEBSTER,	-	-	-	Boscawen, N. H.
P. A. STACKPOLE,	-	-	-	Dover, N. H.
S. F. L. SIMPSON,	-	-	-	Concord, N. H.
A. T. WOODWARD,	-	-	-	Brandon, Vt.
WM. McCULLOM,	-	-	-	Woodstock, Vt.
J. C. HUTCHISON,	-	-	-	Brooklyn, N. Y.
BENJ. E. COTTING,	-	-	-	Boston, Mass.
HENRY I. BOWDITCH,	-	-	-	Boston, Mass.
SETH SHOVE,	-	-	-	Katana, N. Y.
SAMUEL T. HUBBARD,	-	-	-	New York City.
GEORGE F. HORTON,	-	-	-	Terrytown, Penn.
GURDON BUCK,	-	-	-	New York City.

Nominated for Honorary Membership.

DAVID P. SMITH,	-	-	-	Springfield, Mass.
JARED POTTER KIRTLAND,	-	-	-	Cleveland, O.

ORDINARY MEMBERS.

The names of those who have been Presidents are in Capitals.

HARTFORD COUNTY.

A. W. BARROWS, M. D., of Hartford, President.

W. A. M. WAINWRIGHT, M. D., of Hartford, Clerk.

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, Daniel Poll, Melancthon Storrs, Horace S. Fuller, John O'Flaherty, Nathan Mayer, Wm. M. Hudson, Geo. C. Jarvis, W. A. M. Wainwright, E. M. Dunbar, David Crary, Jr., George F. Hawley, D. T. Bromley, George P. Davis, C. W. Chamberlain, James Campbell, G. W. Avery, W. Shaw Bowen, Geo. E. Abbott, H. P. Ather-ton, Eli Warner, W. C. Ayres, C. E. Frœlich, John Dwyer.	Warehouse Point, Marcus L. Fisk.
BERLIN, E. Brandegee.	ENFIELD, Thompsonville, Edward F. Parsons, Rial L. Strickland.
BLOOMFIELD, Henry Gray.	FARMINGTON, Frank Wheeler, Charles Carrington.
BROADBROOK, E. R. Leonard.	PLAINVILLE, G. A. Moody.
CANTON, Collinsville, R. H. Tiffany, Geo. R. Shepherd, G. F. Lewis.	GRANBY (North), Francis F. Allen,* G. W. Edwards.
East Hartland, Homer S. Bell.	GLASTENBURY, H. C. Bunce.
EAST HARTFORD, S. L. Childs,* L. W. McIntosh.	Buckingham, G. A. Hurlburt.
EAST WINDSOR HILL, Sidney W. Rockwell, William Wood.	South Glastenbury, H. M. Rising.
	MANCHESTER, William Scott.*
	South Manchester, J. N. Parker.
	NEW BRITAIN, B. N. Comings, S. W. Hart, Geo. Clary, E. B. Lyon, J. S. Stone, Erastus P. Swasey.
	Poquonneck, R. E. Ensign.
	ROCKY HILL, R. W. Griswold.
	SIMSBURY, G. W. Sanford,* R. A. White.
	SOUTHINGTON, N. H. Byington,* F. A. Hart.
	SUFFIELD, J. K. Mason, Wm. H. Mather.
	WEST HARTFORD, Edward Brace.*
	WETHERSFIELD, A. S. Warner.
	WINDSOR, S. A. Wilson.
	Windsor Locks, S. R. Burnap.

* Over sixty years of age.

NEW HAVEN COUNTY.

CHARLES A. LINDSLEY, M. D., of New Haven, President.

GEO. B. FARNAM, M. D., of New Haven, Clerk.

Censors—B. F. HARRISON, M. D., C. H. GAYLORD, M. D., L. J. SANFORD, M. D.

NEW HAVEN, E. H. Bishop,* Levi Ives,
P. A. JEWETT, David L. Daggett,
GEO. O. SUMNER,* 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, Charles A.
Gallagher, W. L. Bradley, A. E. Win-
chell, H. A. Carrington, L. M. Gilbert,
Robert S. Ives, Evelyn L. Bissell, F.
J. Whittemore, Arthur Ruckoldt, H.
L. Wixon, Stephen H. Bronson, Willis
G. Alling, Frank Gallagher, Walter R.
Bartlett, Walter Judson, Ira S. Smith,
D. C. Leavenworth, Geo. B. Farnam,
J. F. Lines, Frederick Bellosa, J. W.
Phelps, S. H. Chapman, Wm. H.
Hotchkiss.

Fair Haven, Charles S. Thomson,*
W. H. Thomson, Wm. M. White, S. D.
Gilbert, E. L. Thomson.
Westville, J. W. Barker.

DERBY, Charles H. Pinney.

BRANFORD, Newton B. Hall,
C. W. Gaylord.

CHESHIRE, A. J. Driggs,*
M. C. Chamberlin.

Birmingham, Ambrose Beardsley.*
Ansonia, F. P. Plodgett.

GUILFORD, Joel Canfield,* Alvan Tal-
cott,* G. P. Reynolds.

North Guilford, Justin Smith.

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. Nick-
erson.

MILFORD, Hull Allen,* L. N. Beardsley,
Thomas Dutton,* Wm. H. Andrews.

NAUGATUCK, J. D. Mears.*

NORTH HAVEN, R. F. Stillman,
R. B. Goodyear.

ORANGE, West Haven, J. Martin Aimes,
John F. Barnett.

OXFORD, Lewis Barnes.

SEYMOUR, Thos. Stoddard,* S. C. John-
son,* Joshua Kendall,* N. B. Bailey.

SOUTHBURY, A. B. Burritt.*

South Britain, N. C. Baldwin.

WALLINGFORD, Nehemiah Banks, B. F.
Harrison, H. Davis, J. D. McGaughey.

WATERBURY, G. L. Platt,* Johu Deacon,
George E. Perkins, Thos. Dougherty,
Alfred North, Edward L. Griggs, S.
C. Bartlett, H. E. Castle, E. W. Mc-
Donald.

NEW LONDON COUNTY.

ASHBEL WOODWARD, M. D., of Franklin, President.

WM. S. C. PERKINS, M. D., of Norwich, Clerk.

NEW LONDON, ISAAC G. PORTER,*
Robert A. Manwaring,* A. W. Nel-
son, F. N. Braman, Henry Potter.

BOZRAH, Samuel Johnson.*

COLCHESTER, Frederick Morgan.*

FRANKLIN, ASHBEL WOODWARD.*
Greenville, Wm. Witter.

GROTON, Mystic River, A. W. Coates,*
John Gray.

MYSTIC, Mason Manning,* Albert T.
Chapman.

NORWICH, Elijah Dyer,* Elisha Phin-
ney,* A. B. Haile,* Lewis S. Paddock,
Chas. M. Carleton, Wm. S. C. Perkins,
Patrick Cassidy, E. C. Kinney, S. L.
Sprague.

OLD LYME, George W. Harris.

STONINGTON, Chas. N. Brayton, Geo. D.
Stanton.

Mystic Bridge, E. Frank Coates.

FAIRFIELD COUNTY.

E. P. BENNETT, M. D., of Danbury, President.

JAMES G. GREGORY, M. D., of Norwalk, Clerk.

Censors—G. F. LEWIS, M. D., W. A. LOCKWOOD, M. D., GEO. L. PORTER, M. D.

BRIDGEPORT, David H. Nash,* Robert Hubbard, Elijah Gregory, Andrew J. Smith, Augustus H. Abernethy, Geo. F. Lewis, James R. Cumming, Gustave Ohnesorg, George L. Porter, Robert Lauder, Francis J. Young, Curtis H. Bill, H. H. Davidson, N. E. Wordin, G. M. Teeple, Chas. W. Sheffrey.	NORWALK, Samuel Lynes, James G. Gregory, James E. Barbour, W. A. Lockwood, John W. McLean.
BROOKFIELD, A. L. Williams.	South Norwalk, M. B. Pardee, R. L. Higgins, John Hill.
DANBURY, E. P. Bennett,* James Baldwin,* William C. Bennett.	RIDGEFIELD, O. S. Hickok, Wm. S. Todd
DARJEN, Samuel Sands.	Southport, Justus Sherwood.*
NEW CANAAN, Samuel S. Noyes,* Lewis Richards,* William G. Bronson.	STAMFORD, N. D. Haight.*
BETHEL, A. D. Barber.	North Stamford, Geo. W. Birch, W. H. Trowbridge.
MONROE, E. M. Bradley.	TRUMBULL, George Dyer.*
	WESTPORT, George B. Bouton.
	WILTON, A. E. Emery.
	HUNTINGTON, Gould A. Shelton.
	Sandy Hook, Wm. C. Wyle.

WINDHAM COUNTY.

ELIJAH BALDWIN, M. D., of South Canterbury, President.

SAMUEL HUTCHINS, M. D., of West Killingly, Clerk.

Censors—S. HUTCHINS, M. D., LEWIS WILLIAMS, M. D., E. HUNTINGTON, M. D.

WINDHAM, E. Huntington.	POMFRET, Lewis Williams.
ASHFORD, John H. Simmons.*	PUTNAM, H. W. Hough,* John Witter,
BROOKLYN, James B. Whitcomb.*	John B. Kent, Omer LaRue.
SOUTH CANTERBURY, Elijah Baldwin.	PLAINFIELD, Moosup, Wm. A. Lewis.
CHAPLIN, Orrin Witter.	Central Village, Charles H. Rogers.
HAMPTON, Dyer Hughes.*	THOMPSON, LOWELL HOLBROOK,
KILLINGLY, Asael E. Darling.	Charles Hosford.
South Killingly, Daniel A. Hovey.*	WESTFORD, Farnam O. Bennett.
West Killingly, Samuel Hutchins, C. C. Crandall, R. Robinson.	West Woodstock, Milton Bradford.*
East Killingly, Edwin A. Hill.	South Woodstock, A. S. Leonard.
PLAINFIELD, WM. H. COGSWELL,*	WINDHAM, Willimantic, Fred. Rogers,
E. H. Davis.	T. Morton Hills, L. F. Bugbee.

* Over sixty years of age.

LITCHFIELD COUNTY.

BURRITT B. NORTH, M.D., of Cornwall, President.

THEODORE G. WRIGHT, M.D., of Plymouth, Clerk.

Censors—J. B. DERICKSON, M.D., WM. DEMING, M.D., B. B. NORTH, M.D.

LITCHFIELD, H. W. BUEL, H. E. Gates, W. J. Beach, Wm. Deming, J. J. Newcomb.	SHARON, Ralph Deming,* William W. Knight.
Northfield, D. B. W. Camp.*	Wolcottville, T. S. Hanchett, L. H. Wood.
CORNWALL, Burritt B. North.*	WARREN, John B. Derickson.
Cornwall Bridge, Elias B. Heady.	WASHINGTON, Remus F. Fowler.* Or- lando Brown.
West Cornwall, Edward Sanford.	New Preston, Sidney H. Lyman,* Ed- ward P. Lyman.
MORRIS, Garry H. Miner.*	WATERTOWN, W. S. Munger.
NEW MILFORD, J. K. Bacon.	WINCHESTER, West Winsted, James Welch,* John W. Bidwell.
Gaylord's Bridge, G. H. St. John.*	WOODBURY, Charles H. Webb,* Harmon W. Shove, Frank P. Esterly.
GOSHEN, J. H. North.	Terryville, L. Tudor Platt.
NORFOLK, Wm. W. Welch.	Harwinton, Virgil Buell.
PLYMOUTH, T. G. Wright.	
Thomaston, William Woodruff,* Ralph S. Goodwin.	
ROXBURY, Myron Downs.*	
Lakeville, W. Bissell, H. M. Knight.	

MIDDLESEX COUNTY.

ELISHA B. NYE, M.D., of Middletown, President.

F. D. EDGERTON, M.D., of Middletown, Clerk.

Censors—S. W. TURNER, M.D., GEO. 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. Halleck, Joseph W. Alsop, Jr., Daniel A. Cleaveland, John Morgan, J. H. Churchill, C. S. May, B. D. McGuire.	ESSEX, Alanson H. Hough,* Charles H. Hubbard.
CHATHAM, Middle Haddam, Albert B. Worthington.	HADDAM, Miner C. Hazen, Selden W. Noyes.
East Hampton, Albert Field.	OLD SAYBROOK, J. H. Grannis.
CHESTER, Sylvester W. Turner.	PORTLAND, O. A. Sears, Cornelius E. Hammond.
CROMWELL, IRA HUTCHINSON.*	SAYBROOK, Deep River, Edwin Bidwell.
DURHAM, R. W. Mathewson.*	Westbrook, G. C. H. Gilbert.
	Clinton, G. Harrison Gray.
	Killingworth, J. Hamilton Lee.

TOLLAND COUNTY.

S. G. RISLEY, M.D., of Rockville, President.

GILBERT H. PRESTON, M.D., of Tolland, Clerk.

TOLLAND, G. H. Preston.	STAFFORD, Wm. N. Clark.*
BOLTON, CHAS. F. SUMNER.	West Stafford, Joshua Blodgett.*
COVENTRY, Maurice B. Bennett.	Stafford Springs, C. B. Newton.
South Coventry, Henry S. Dean.	Vernon Depot, A. R. Goodrich.
ELLINGTON, J. A. Warren.	Rockville, Stephen G. Risley, Francis L. Dickinson.
MANSFIELD, Wm. H. Richardson.*	
Mansfield Center, O. B. Griggs.	

* Over sixty years of age.

LIST OF ADDRESSES AND DISSERTATIONS
DELIVERED IN CONVENTION.

- 1793 President's Address, by Dr. Leaveritt Hubbard.
1794 Prize Essay on Autumnal Bilious Fever, by Dr. S. H. P. Lee.
1794 Prize Essay on the Properties of Opium, by D. G. Shepherd.
1795 Eulogy on Dr. L. Hubbard, by Dr. Eneas Monson, President.
1795 Prize Essay on the Preparation of Antimony, by Dr. F. P. Ouyiere.
1795 Prize Essay on the Different Species of Colic, by Dr. T. Betts.
1796 Prize Essay on the Contagion of Yellow Fever, by Dr. F. P. Ouyiere.
1796 Prize Essay on Cynanche Tonsillaris, by Dr. S. H. P. Lee.
1796 Prize Essay on the Most Eligible Mode of Increasing Medical Knowledge in this State, by Dr. Lewis Collins.
1796 Prize Essay on the same subject, by Dr. Gideon Shepherd.
1798 History of a Case of Bilious Concretion, by Dr. L. Hopkins.
1798 An Essay, by Dr. Jared Potter.
1799 A Dissertation, by Dr. Thaddeus Clark.
1800 A Dissertation on Lunacy, by Dr. Nathaniel Dwight.
1804 Essay on the Stafford Mineral Waters, by Dr. S. Willard.
1812 Essay on the Necessity of a Hospital for Lunatics in this State, by Dr. Nathaniel Dwight.
1817 Deleterious Effects of Ardent Spirits, by Dr. W. R. Fowler.
1818 On Ergot, by Dr. William Buel.
1820 Dissertation on Typhus Fever, by Dr. Thomas Miner.
1821 Dissertation on Uterine Hemorrhage, by Dr. S. Rockwell.
1822 Yellow Fever at Middletown, by Dr. Wm. Tully.
1823 Dissertation, by Dr. Dyer T. Brainerd.
1829 Extra Uterine Conception, by Dr. Geo. Sumner.
1830 Dissertation on Diseases of the Ear, by Dr. Charles Hooker.
1835 Dissertation on the Vitality of the Blood, by Dr. B. Welch, Jr.
1836 Influence of Moral Emotions on Disease, by Dr. E. H. Bishop.
1837 An Address by the President, Dr. Thomas Miner.

- 1837 A Dissertation on Scarlet Fever, by Dr. Archibald Welch.
- 1838 A Dissertation on Spinal Irritation, by Dr. Isaac G. Porter.
- 1839 A Dissertation on the Mental Qualifications Necessary to a Physician, by Dr. Henry Bronson.
- 1840 A Dissertation on the Advantages of Prompt and Efficient Practice in Acute Diseases, by Dr. Richard Warner.
- 1841 An Address by the President, Dr. Silas Fuller.
- 1841 A Dissertation on Insanity as a Subject of Medical Jurisprudence, by Dr. Amariah Brigham.
- 1842 A Dissertation on Uterine Irritation, by Dr. Charles Woodward.
- 1843 An Address by the President, Dr. Elijah Middlebrook.
- 1843 A Dissertation on Phlebitis, by Dr. Pinckney W. Ellsworth.
- 1845 A Dissertation on the Respect due to the Medical Profession, and the Reasons that it is not awarded by the Community, by Dr. Worthington Hooker.
- 1845 A Dissertation on Laryngismus Stridulus, by Dr. N. B. Ives.
- 1845 Prize Essay on Scarlatina, by Dr. P. W. Ellsworth.
- 1846 A Dissertation, Practical Observations on Typhus Fever, by Dr. Theodore Still.
- 1847 The Importance of a Medical Organization, and the Advantages resulting from it, by Dr. E. K. Hunt.
- 1848 A Dissertation on Some Forms of Non-Malignant Disease of the Cervix Uteri, by Dr. B. Fordyce Barker.
- 1849 An Address by the President, Dr. Archibald Welch.
- 1849 A Dissertation on Hygiene, by Dr. Alvan Talcott.
- 1850 Medical Jurisprudence, by Dr. J. C. Hatch.
- 1851 An Address by the President, Dr. George Sumner, on the Early Physicians of Connecticut.
- 1853 An Address by the President, Dr. Rufus Blakeman, on the Early Physicians of Fairfield County.
- 1853 A Dissertation on Popularizing Medicine, by Dr. S. Beach.
- 1854 Diseased Cervix Uteri, by Dr. Wm. B. Casey.
- 1855 A Dissertation on Registration as the Basis of Sanitary Reform, by Dr. Stephen G. Hubbard.
- 1857 An Address by the President, Dr. Benjamin H. Catlin, on the Connecticut Medical Society.
- 1857 A Dissertation on the Medical Profession, by Dr. B. D. Dean.
- 1858 An Address by the President, Dr. Benjamin H. Catlin, on the Claims of the Regular Medical Profession to the Confidence of the Community.

- 1859 An Address by the President, Dr. A. Woodward, Historical Account of the Connecticut Medical Society.
- 1859 A Dissertation on the Issue, by Dr. Rufus Baker.
- 1860 An Address by the President, Dr. Ashbel Woodward, on Medical Ethics.
- 1860 An Address on Hygiene, by Dr. A. B. Haile.
- 1861 An Address by the President, Dr. Woodward, on Life.
- 1861 A Dissertation on Hereditary Predisposition, by Dr. J. B. Lewis.
- 1862 An Address by the President, Dr. Josiah G. Beckwith, on Medical Progress.
- 1862 A Dissertation, Present State of the Question of Spontaneous Generation, by Dr. M. C. White.
- 1863 An Address by the President, Dr. Josiah G. Beckwith, on the Dignity and Grandeur of the Medical Profession.
- 1863 A Dissertation on Logic applied to Medical Science, by Dr. J. C. Jackson.
- 1864 An Address by the President, Dr. E. K. Hunt, on Inert Practice in Disease.
- 1864 A Dissertation on Scarlatina, by Dr. P. M. Hastings.
- 1865 An Address by the President, Dr. E. K. Hunt, on Public and Benevolent Institutions and Movements, with which the Connecticut Medical Society has been Prominently Identified.
- 1865 The Mothers of New England, by Dr. J. E. Blake.
- 1865 Prize Essay on Prophylaxis as it relates to Phthisis Pulmonalis, by Dr. George W. Burke.
- 1866 An Address by the Vice-President, Dr. Isaac G. Porter, on the Medico-Chirurgical Lessons of the War.
- 1866 Prophylaxis of Phthisis Pulmonalis, by Dr. C. L. Ives.
- 1866 Prize Essay on Therapeutic Value of Mercury and its Preparations, by Dr. C. L. Ives.
- 1867 An Address by the President, Dr. Isaac G. Porter, on the Self-Restorative Power in the Light of Modern Science.
- 1867 A Dissertation on the Value of Milk as an Article of Diet for the Sick, by Dr. Robert Hubbard.
- 1868 An Address by the President, Dr. C. Woodward, Our Organization, Its Relations and Responsibilities.
- 1868 Dr. H. A. Carrington, Relation of Theory to Practice.
- 1868 Dr. R. Bartholow, Prize Essay, Army Hygiene.
- 1868 Dr. R. Bartholow, Prize Essay, Quinine and its Salts.

- 1868 Dr. M. G. Echevereia, Paralysis Treated by Hypodermic Injections of Strychnine.
- 1869 An Address by the President, Dr. S. B. Breesford, on the Abuse of Tobacco.
- 1869 Dr. L. H. Wood, Researches on the Influence of Mental Activity on the Excretion of Phosphoric Acid by the Kidneys.
- 1869 Dr. C. M. Carleton, Use and Abuse of Spectacles.
- 1869 Dr. F. L. Dibble, Hydrophobia.
- 1869 Dr. G. A. Ward, Use of Veratium Viride.
- 1870 An Address by the President, Dr. H. Bronson, Science as a Helper, Inheritance as a Hindrance, Death as a Conservator.
- 1870 Dr. H. A. Carrington, Heredity.
- 1871 An Address by the President, Dr. C. F. Sumner, The Early Physicians of Tolland County.
- 1871 Dr. M. C. White, Chloral Hydrate.
- 1872 An Address by the President, Dr. G. W. Russell, Some of the Causes of Disease.
- 1872 Dr. H. Bronson, Intermittent Fever in the New Haven Region.
- 1872 Dr. Wm. B. DeForest, Public Hygiene.
- 1872 Dr. W. L. Bradley, Puerperal Convulsions.
- 1873 An Address by the President, Dr. H. W. Buel, Advancement of the Medical Profession.
- 1873 Dr. B. N. Comings, Inebriate Asylums.
- 1873 Dr. H. Bronson, Origin of the Connecticut Medical Society.
- 1873 Dr. P. M. Hastings, Vaccination.
- 1873 Dr. E. Baldwin, Physiology of Sleep.
- 1873 Dr. F. N. Braman, Hot Pack in Eclampsia.
- 1874 An Address by the President, Dr. I. Hutchinson, Alcohol in the Prevention and Cure of Disease.
- 1874 Dr. C. M. Carleton, Ovariectomy.
- 1874 Dr. I. G. Porter, Abortion,—Pathological Conditions in Embryology.
- 1874 S. C. Bartlett and W. L. Bradley, Skin Grafting.
- 1875 An Address by the President, Dr. L. Holbrook, The Present Status of Medical Science and its Demands upon the Profession.
- 1875 Dr. I. W. Lyon, Pathology of Phthisis.
- 1875 Dr. S. H. Chapman, Chronic Laryngitis.

A P P E N D I X A .

REPORT OF CÔMMITTEE OF EXAMINATION.

THE Committee of Examination met at the Medical College, Monday, June 22d, 1874, at 10.30 A. M.

There were present on the part of the State Medical Society, Robert Hubbard, M.D., of Bridgeport, D. A. Tyler, M.D., of New Haven, Geo. C. Jarvis, M.D., of Hartford, Burritt B. North, M.D., of Cornwall, S. W. Turner, M.D., of Chester, and G. B. Farnam, M.D., of New Haven. And on the part of the College, Professors B. Silliman, M.D., S. G. Hubbard, M.D., M. C. White, M.D., L. J. Sanford, M.D., and C. A. Lindsley, M.D.

The President being absent, Robert Hubbard, M.D., of Bridgeport, was elected by the Representatives of the State Society President *pro tempore* of the Examining Committee.

In response to an inquiry from Mr. F. D. Clum, it was

Voted, That the Dean be directed to inform Mr. Clum, that he will be entitled to an examination after attendance upon the next course of lectures, on presenting satisfactory evidence that he has studied as he represents.

The following gentlemen were then examined and recommended for the degree of M.D. :

ARTHUR HERMAN ADAMS, B. A. Thesis, "Essential Ideas of a Profession."

WILBUR HIRAM BOOTH. Thesis, "Public Hygiene" and Valectictory.

CHARLES WELLINGTON FITCH. Thesis, "Cinchona."

EDWARD SOLOMON MEERS. Thesis, "Phthisis Pulmonalis."

JAMES OLMSTEAD, B.A. Thesis, "Medical Nomenclature."

STANLEY PERKINS WARREN, B.A. Thesis, "Acute and Chronic Bright's Disease."

The appointment of H. S. Fuller, M.D., of Hartford, to address the Graduating Class at the end of the next Lecture Course, was continued.

H. P. Stearns, M.D., of Hartford, was appointed substitute.

G. B. Farnam, M.D., of New Haven, was appointed to report the proceedings of the Examining Board to the State Society.
Adjourned.

The Committee of Examination met pursuant to notice at the Medical College, and continued in session Wednesday and Thursday, Feb. 10th and 11th.

There were present on the part of the State Society, Lowell Holbrook, M.D., *ex-officio*, President; Geo. C. Jarvis, M.D., D. A. Tyler, M.D. and Sylvester W. Turner, M.D.; and on the part of Yale College, Professors B. Silliman, M.D., S. G. Hubbard, M.D., M. C. White, M.D., F. Bacon, M.D., L. J. Sanford, M.D., and C. A. Lindsley, M.D.

On motion, it was

Voted, That the result of the examinations in future shall not be announced to the candidates until the conclusion of all the examinations.

The following gentlemen were examined by the Committee and recommended to receive the degree of M.D. :

GEORGE BYRON CHAPMAN, Kent. Thesis, "Phthisis Pulmonalis.

FRANKLIN D. CLUM, Saugerties, N. Y. Thesis, "Prevention of Contagious Disease," and *Valedictory*.

SAMUEL ERNEST MORGAN, Wilton. Thesis, "Malarial Fevers."

JAMES JEROME NEWCOMB, Litchfield. Thesis, "Application and Action of Drugs.

THEOPHILUS MITCHELL PRUDDEN, Ph.B., New Haven. Thesis, "The present use of the Sphygmograph in Clinical Medicine."

THOMAS HUBBARD RUSSELL, Ph.B., New Haven. Thesis, "Talipes Equinus."

JAMES SULLIVAN, Milford, N. H. Thesis, "Pneumonitis."

CHARLES DEARBORN WIGGIN, M.A., Providence, R. I. Thesis, "Significance of Temperature as a Symptom of Disease.

The examination of another candidate was not considered satisfactory, and he was advised to continue his studies for a longer period.

At the Evening Session of the Committee, it was

Voted, That the consideration of adopting the method of written examinations instead of oral, be the special business of the hour after the examination of the first two students on Thursday morning.

At the time specified on Thursday morning a full discussion of the subject resulted in the passage of the following resolution :

Resolved, That it is the well-considered opinion of this Board, that in the future the method of written examinations, as proposed by the Faculty in 1871, and as practiced in other departments of Yale College, should be adopted.

Resolved, That the Professors of the Medical Faculty be authorized to prepare the examination papers, and submit them to the candidates under the usual regulations and restrictions.

And before any decision respecting them is made, the whole Committee of Examination shall be convened, and the papers submitted to their inspection, at which time any candidate may be further examined orally if thought proper by any member of the Board; after which the results of the examination shall be decided by the assembled Committee by ballot in the usual form.

After the examinations were concluded, Dr. H. P. Stearns, of Hartford, was appointed to address the graduates on the next occasion when the degrees should be publicly conferred.

Dr. Jarvis of Hartford was appointed substitute.

The Committee adjourned.

Attest : GEO. BRONSON FARNAM, M.D.,
Committee.

A P P E N D I X B .

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.

Corporate powers.

SEC. 2. That the superintendence and management of the Society shall be vested in a body to be known and called by the name of "The President and Fellows of the Connecticut Medical Society;" which body shall have power to prescribe the duties of its officers and members, and fix their compensation; to establish the conditions of admission, dismissal and expulsion; to lay a tax from time to time upon the members, not exceeding five dollars in each year; to collect the same, and to hold and dispose of all moneys or other property belonging to the Society in such manner as they may think proper to promote the objects and interests of the Society; and in general, to make such by-laws and regulations for the due government of the Society, not repugnant

Managers.

Taxes.

to the laws of the United States or of this State, as may be deemed necessary.

Who are
Fellows.

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.

Qualifica-
tions for
member-
ship.

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.

Power to
collect
taxes.

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.

Delinquent
clerks.

Compensa-
tion for col-
lecting.

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 amendment thereof as are inconsistent herewith, be and the same are hereby repealed.

Approved, July the 8th, 1870.

B Y L A W S .

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.

Who are 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*.

Time and place of meeting.

Quorum.

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.

County meetings.

CHAPTER II.

Officers.

SEC. 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*.

Officers.

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.

Duties of President.

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.

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,

Treasurer.

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.

Secretary.

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.

Notice of meetings.

The Secretary shall cause a notice to be put up each year in at least three hotels in the town in which the Annual Convention meets, stating the time and place of meeting, at least one day before said meeting.

"Proceedings"

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.

"Committee on matters of Professional Interest in the State."

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 Association 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.

Resignation
or removal
of officers.

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.

Necessary
expenses.

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.

Annual
Meeting of
Fellows.

SEC. 2. The President, Vice-President, and *ex officio* Vice-Presidents, Treasurer, Secretary, Committee on Matters of Professional interest, and Fellows, shall be known and called by the name of the President and Fellows of the Connecticut Medical Society ; a majority of whom legally assembled together shall be a quorum for the transaction of any business ; and shall have the power to make by-laws for the regulation and government of the Society, and for the promotion of the objects of the same, not repugnant to the laws of the United States or of this State ; to expel any member of the Society for misconduct ; to make rules for the admission of members of the Society, and for their dismissal from the same ; to lay a tax upon each member of the Society, not exceeding five dollars in each year ; to dispose of the moneys thus raised and all other property of the Society in such a manner as they may think proper to promote the objects and interests of the Society.

Who are
Fellows.

Quorum.

Powers of
Fellows.

The President and Fellows at any annual meeting, and after one year's nomination of every candidate, and not otherwise, may, by a major vote of those present, elect eminent physicians not resident in this State to be honorary members of this Society. But those elected shall not exceed three in number in any year.

Election of
Honorary
Members.

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,

Presiding
officer.

the Vice-President, shall preside; and in case of the absence of the President and Vice-President, the Fellows present may elect one of their own number as President for the occasion.

Special
Meetings.

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.

Standing
Committees.

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 two Standing Committees each year; the first two on the list to be dropped, and the two chosen to be placed at the bottom; but any person may be re-elected. These Standing Committees of the Society shall report annually to the President and Fellows, whenever they have had occasion to act in their official capacity.

The Committee of Publication shall be three in number, of which the Secretary shall be one, and the others shall be chosen by ballot.

Nominating
Committee.

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 re-

pointed for the election.

Obituary
Notices.

SEC. 6. It shall be the duties 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.

Business
Committee.

SEC. 7. The President shall at an early hour of the session, appoint a Committee of three Fellows, of which the Secretary shall be one, to be called the Business Committee, to whom all reports of cases, dissertations, or other papers designed to be read at the Annual Convention, shall be handed. And this Committee shall

examine them and recommend the manner and order in which they shall be presented to the Convention.

CHAPTER IV.

County Associations.

SECTION 1. The members of the Connecticut Medical Society shall meet annually in their respective counties, 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 counties of Middlesex and Tolland, and in each of those counties, 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 this State, or who shall leave the profession for other pursuits.

SEC. 6. Any County Association may, if it is deemed expedient, recommend to the President and Fellows, for dismissal from the Society, any member residing in that county who shall apply for such dismissal by a written request to that effect delivered to

the Clerk of said County Association at least ten days before the time of holding any legal County meeting; and also any member who shall refuse or neglect to pay taxes; and upon the approval of such recommendation by the President and Fellows, in annual meeting, the connection between such member and the Society shall be dissolved. *Provided*, That no member shall be honorably dismissed from the Society until all his taxes have been paid.

Dismissal
by request
or for non-
payment of
taxes.

Violation of
By-Laws.

SEC. 7. All violations 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 Association, in conformity with the By-Laws of the State Society, may be prosecuted and tried in the respective County Associations, under the following regulations: The member accusing another of a violation of any of the before mentioned regulations shall make a statement, in writing, of the transaction which he deems a misdemeanor and lay the same before a Fellow of the Society; and such Fellow shall issue a notification to the accused to appear before the next County meeting, stating the time when and the place where it is to be held, to defend, if he sees fit, against such accusation. A copy of such accusation and notification shall be left with the accused, or at his last 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.

Trial of
members.

Punishment.

County
Records.

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 appertaining to the office, retaining copies of the same, if he think proper.

Collection
of taxes.

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 Associa-

Compensa-
tion.

tion 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. Expenses of Meetings.

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. Delinquent members.

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 cancelled and paid by the Treasurer. Delinquent and defaulting clerks.

Expenses for collecting.

SEC. 10. The Clerks shall transmit the names and places of residence of the Fellows, and of the person recommended for a gratuitous course of lectures, to the Secretary, before the first day of May in each year, that the Secretary may have ample time to arrange the programme for the Annual Convention. They shall also forward to the Secretary, and a duplicate copy to the Treasurer, on or before the annual meeting, the names of the members in their respective County Associations, and their place of residence; and those who fail in the performance of this duty shall be subject to a fine of five dollars, to be collected by the Treasurer. Other duties of clerks.

SEC. 11. The Clerks shall transmit to the Treasurer the names of members delinquent in taxes, with the amounts severally due from each, and what notice he has given to each delinquent of his indebtedness. List of delinquents.

CHAPTER V.

Members.

SEC. 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 requests them. Examination of Records.

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. Privileges of members.

Honorary members shall have the privilege of a seat at the

Annual Convention, and of taking part in discussions; but they shall not vote on any question, nor be eligible to any office.

Members
over age.

SEC. 3. The payment of the annual tax shall be optional with all members over sixty years of age.

Sale of
Nostrums.

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.

Consulta-
tion with
Irregulars.

SEC. 5. No member of the Society shall hold professional consultation or intercourse with any other than licensed Physicians and Surgeons in regular standing.

Accusation
of members.

SEC. 6. It shall be the duty of each 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.

Time and
manner of
electing
officers.

SEC. 1. All elections for 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.

Nomination
of officers.

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.

Terms of
office.

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 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.

Delegates to
other socie-
ties.

Annual Din-
ner.

CHAPTER VII.

The Society adopts the Code of Ethics of the American Medical Association as a part of its Constitution and By-Laws. Code of Ethics.

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. Amendment of By-Laws.

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. Payment of Annual Dinner.

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. Invited guests.

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.* Honorary Degree of Doctor of Medicine.

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 not be acted upon for one year subsequent to the time such nominations are made. Nomination for Honorary degree and membership.

Passed, May, 1860.

CHAPTER IX.

Of Medical Students.

Medical students.

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.*

Qualifications.

2. The following certificate of studies shall be required of all candidates for examination for a degree:

Certificates of study.

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.

County students.

Resolved, That it is the opinion of this Convention, that in case the student recommended from any county is not necessitous and meritorious, it has full power to declare that a vacancy exists, and may proceed to fill the same. *Passed, May, 1846.*

The following By-Laws not having been repealed, are supposed to be still in force.—*Sec. Conn. Med. Soc.*

Abatement of taxes.

In place of the old debenture system, which is abolished, the taxes of the President and Fellows and Dissertator in attendance at the Convention shall be abated.

The Fellows of the Society shall be a Committee of Abatements in their respective counties.

Old Debentures.

No debenture bill shall be paid by the Treasurer that is more than seventeen years old.

Expulsion of Quacks.

Each County meeting shall have the power to examine and immediately expel any member notoriously in the practice of Homocopathy, 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. [*See By-Laws of 1854.*]

Sale of Nostrums.

Resolved, 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. *Passed, May, 1853.*

Resolved, 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. *Passed, May, 1857.* Irregulars.

Resolved, That it shall be the duty of the Clerks of the several Counties to report to the Secretary of the State Convention, on the first day of its session, the names, ages, and diseases of the members of this Society who may have died during the year preceding the 1st of April of each year, in their several County Societies, and that the Secretary be directed to append these statistics to the catalogue of Members of the Society in the published proceedings of the Annual Convention. *Passed, May, 1849.** Obituary Notices.

Resolved, 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.* Dismission of delinquents.

Whereas, Doubts have existed as to the construction of membership after absence from this State—

Resolved, That the privileges and obligations of membership revert to a regular Physician on returning to the State. *Passed, May, 1864.* Restoration of membership.

*This By-Law is modified by the adoption of the plan of a Mortuary Tablet introduced in 1870.

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.

APPENDIX C.

 CHARTER

OF THE MEDICAL INSTITUTION OF YALE COLLEGE.*

SEC. 1. *Be it enacted by the Senate and House of Representatives in General Assembly convened,* The Medical Institution established in Yale College, pursuant to an agreement between the President and Fellows of Yale College and the President and Fellows of the Medical Society of Connecticut, shall be known and acknowledged by the name of THE MEDICAL INSTITUTION OF YALE COLLEGE.

SEC. 2. There shall be established in the Institution not less than four Professorships; and the price of the tickets for the course of lectures on each branch shall not exceed Fifteen Dollars. There shall be a joint committee of an equal number of persons appointed by the President and Fellows of Yale College and the President and Fellows of the Connecticut Medical Society, who shall make a nomination; from which nomination the Professors shall be chosen by the President and Fellows of the College.

SEC. 3. Every medical student shall be required to attend to the study of physic and surgery for two years, with some medical or surgical professor or practitioner who is in respectable standing; provided he shall have been graduated at some college; otherwise to study three years; to have acquired, in addition to a good English education, a competent knowledge of the Latin language and of the principles of Natural Philosophy; to have arrived at the age of twenty-one years; to be of good moral character; and to deliver to the Committee of Examination a satisfactory dissertation upon some subject in medicine or surgery or the auxiliary branches. And every medical student shall attend one course of the lectures, under the Professors of the Medical Institution of Yale College or of some other public medical institution,

* This form of the Charter of the Medical Institution of Yale College has been compiled by combining with the Act of June 5th, 1834, the amendments adopted June 29th, 1856, and June 20th, 1866.

previously to his being admitted to an examination for a license; and the course or courses of lectures which he shall attend may be included within the time he is required to study. Provided, nevertheless, that upon the recommendation of the Medical Society in each county, one meritorious and necessitous person from each county shall annually be allowed the privilege of attending one course of lectures gratis, and if any of the counties shall fail to recommend as above, the President and Fellows of said Society may fill up the vacancy. It shall be the duty of the clerks of the several county meetings to report to the President and Fellows the names of the persons whom they shall agree to recommend; and the Secretary of the Society shall transmit the said names, together with such as the President and Fellows may add, agreeably to the above provision, to the Medical Professors of Yale College.

Provided, furthermore, that no person shall be recommended, as aforesaid, to a gratuitous course of lectures, unless such person shall have previously attended one course of lectures in the Medical Institution of Yale College.

SEC. 4. Each candidate for the degree of Doctor of Medicine shall be required to attend two full courses of lectures, one of which, at least, shall be at the Medical Institution of Yale College; the other, if attended elsewhere, being at an Institution where a similar course of public instruction is pursued; which degree, upon the recommendation of at least two-thirds of the Committee of Examination, shall be conferred by the President of the College, and the diploma signed by him and countersigned by the Examining Committee, or a majority of them; and the fee for graduation shall be twenty-five dollars. The President of the College may also confer the honorary degree of Doctor of Medicine upon those persons whom the President and Fellows of the Medical Society shall recommend for that purpose.

SEC. 5. The Committee of Examination for the practice of physic and surgery shall consist of the Professors of the Medical Institution of the College and an equal number of the members of the 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 Committee; and in case of the absence of the President, a President *pro tempore* shall be appointed by the members of the Examining Committee, chosen by the Medical Society, with the same powers; which committee or

a majority of them, shall possess the power, and they only, of examining for a license ; and all licenses to practice physic or surgery shall be signed by the President of the Medical Society, and countersigned by the Secretary of the Committee of Examination ; which secretary they are hereby authorized to appoint ; and the fee for each license shall be Fifteen Dollars, and shall accrue to the Medical Society. All licenses heretofore signed by the Clerk or Secretary of the Examining Committee, shall be valid and have the same effect as if they had been signed by the Examining Committee, any law to the contrary notwithstanding.

SEC. 6. There shall be two examinations in the year, one of which shall be held immediately at the close of the lectures, and the other during Commencement week in the Academical Department of Yale College. When a candidate is prevented by sickness from attending at that time, he may afterwards be examined by the Medical Professors : and such examination, together with their certificate thereof, shall entitle him to the same privileges as though his examination had been by said Committee.

SEC. 7. All medical students who shall have attended two courses of the lectures in the Medical Institution, shall have the privilege of attending all future courses gratis.

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 all obligations imposed, in pursuance of the acts hereby repealed, shall have the same effect as though said acts were still in force ; and all taxes heretofore laid pursuant to said acts, may be collected according to the provisions of said acts, in the same manner as though said acts had not been repealed.

APPENDIX D.

Officers and Fellows of the Connecticut Medical Society from its organization in 1792 to the present time.

PRESIDENTS.

1792, *Leaverett Hubbard.	1853, *Richard Warner.
1794, *Æneas Munson.	1854, William H. Cogswell.
1801, *James Potter.	1856, Benjamin H. Catlin.
1803, *Thomas Mosely.	1858, Ashbel Woodward.
1804, *Jeremiah West.	1861, *Josiah G. Beckwith.
1807, *John R. Watrous.	1863, Ebenezer K. Hunt.
1812, *Mason F. Cogswell,	1865, *Nathan B. Ives.
1823, *Thomas Hubbard.	1866, Isaac G. Porter.
1827, *Eli Todd.	1867, *Charles Woodward.
1829, *John S. Peters.	1868, *Samuel B. Beresford.
1832, *William Buel.	1869, Henry Bronson.
1834, *Thomas Miner.	1870, Charles F. Sumner.
1837, *Silas Fuller.	1871, Gurdon W. Russell.
1841, *Elijah Middlebrook.	1872, Henry W. Buel.
1843, *Luther Ticknor.	1873, Ira Hutchinson.
1846, *Archibald Welch.	1874, Lowel Holbrook.
1849, *George Sumner.	1875, Pliny A. Jewett.
1851, *Rufus Blakeman.	

VICE PRESIDENTS.

1792, *Æneas Munson.	1847, *George Sumner.
1794, *Elihu Tudor.	1849, *Rufus Blakeman.
1796, *James Potter.	1851, *Richard Warner.
1801, *Thomas Mosely.	1853, Wm. H. Cogswell.
1803, *Jeremiah West.	1854, Benj. H. Catlin.
1804, *Jared Potter.	1856, Ashbel Woodward.
1806, *John R. Watrous.	1858, *Josiah G. Beckwith.
1807, *Mason F. Cogswell.	1861, Ebenezer K. Hunt.
1812, *John Barker.	1863, *Nathan B. Ives.
1813, *Timothy Hall.	1865, Isaac G. Porter.
1814, *Thomas Hubbard.	1866, *Charles Woodward.
1823, *Eli Todd.	1867, *Samuel B. Beresford.
1824, *Eli Ives.	1868, Henry Bronson.
1827, *John S. Peters.	1869, Charles F. Sumner.
1829, *William Buel.	1870, Gurdon W. Russell.
1832, *Thomas Miner.	1871, Henry W. Buel.
1834, *Silas Fuller.	1872, Ira Hutchinson.
1837, *Elijah Middlebrook.	1873, Lowel Holbrook.
1841, *Luther Ticknor.	1874, Pliny A. Jewett.
1843, *Archibald Welch.	1875, A. W. Barrows.
1846, *Dyer T. Brainard.	

Presidents of County Associations Ex-officio Vice Presidents of the State Society. This ex-officio relation was first recognized in 1870.

1870.	1872.	1874.
G. A. Moody,	Wm. Hood,	A. W. Barrows,
A. Talcott,	B. F. Harrison,	R. F. Stillman,
I. G. Porter,	A. Woodward,	A. B. Haile,
S. S. Noyes,	I. Gregory,	E. P. Bennett,
L. Holbrook,	J. Hammond,	L. Williams,
H. W. Buel,	J. W. Bidwell,	O. Brown,
*D. H. Hubbard,	I. Hutchinson,	A. M. Shew,
A. R. Goodrich.	Wm. N. Clark.	F. L. Dickinson.
1871.	1873.	1875.
Wm. Scott,	W. R. Griswold,	G. W. Sanford,
D. L. Daggett,	L. J. Sanford,	C. A. Lindsley,
I. G. Porter,	I. G. Porter,	A. Woodward,
I. Gregory,	R. Hubbard,	E. P. Bennett,
L. Holbrook,	E. Huntington,	E. Baldwin,
H. W. Buel,	O. Brown,	B. B. North,
I. Hutchinson,	D. H. Hubbard,	E. B. Nye,
A. R. Goodrich.	S. G. Risley.	S. G. Risley.

SECRETARIES.

1792, *Jared Potter.	1830, *George Sumner.
1794, *James Clark.	1832, *Charles Hooker.
1796, *Daniel Sheldon.	1838, *Archibald Welch.
1798, *Nathaniel Perry.	1843, *Ralph Farnsworth.
1800, *Samuel Woodward.	1844, *Worthington Hooker.
1801, *William Shelton.	1846, Gurdon W. Russell.
1805, *John Barker.	1849, *Josiah G. Beckwith.
1810, *Eli Ives.	1858, Panet M. Hastings.
1813, *Joseph Foot.	1862, Leonard J. Sanford.
1816, *Jonathan Knight.	1864, Moses C. White.
1827, *Samuel B. Woodward.	

TREASURERS.

1792, *John Osborn.	1817, *John S. Peters.
1793, *Jeremiah West.	1827, *William Buel.
1794, *John Osborn.	1828, *Joseph Palmer.
1795, *Mason F. Cogswell.	1834, *Elijah Middlebrook.
1799, *William B. Hall.	1837, *Luther Ticknor.
1809, *Timothy Hall.	1841, *Virgil Maro Dow.
1813, *Richard Ely.	1851, George O. Sumner.
1816, *Thomas Miner.	1863, James C. Jackson.

FELLOWS.

HARTFORD COUNTY.

1792.	1799.	1807.
Eliakim Fish, Lemuel Hopkins, Elihu Tudor, Josiah Hart, Samuel Flagg.	Lemuel Hopkins, Elihu Tudor, Mason F. Cogswell, Nathaniel Dwight, Eli Todd.	Mason F. Cogswell, Timothy Hall, John Bestor, Abner Mosely, George Griswold.
1793.	1800.	1808.
Eliakim Fish, Samuel Flagg, Josiah Hart, Elihu Tudor, Lemuel Hopkins.	Elihu Tudor, Mason F. Cogswell, Solomon Everest, Timothy Hall, John Bestor.	Mason F. Cogswell, Timothy Hall, John Bestor, Simeon Field, George Griswold.
1794.	1801.	1809.
Elihu Tudor, Lemuel Hopkins, Charles Mather, Mason F. Cogswell, Asa Hillyer.	Elihu Tudor, Solomon Everest, Eli Todd, John Bestor, Elijah F. Reed.	Mason F. Cogswell, Timothy Hall, John Bestor, Simeon Field, J. H. Sparhawk.
1795.	1802.	1810.
Elihu Tudor, Eliakim Fish, Mason F. Cogswell, Solomon Everest, Josiah Hart.	John Bestor, George Griswold, Timothy Hall, Howard Alden, Samuel Flagg.	Mason F. Cogswell, Timothy Hall, Simeon Field, Howard Alden, J. H. Sparhawk.
1796.	1803.	1811.
Eliakim Fish, Lemuel Hopkins, Solomon Everest, Mason F. Cogswell, Samuel Flagg.	Eliakim Fish, John Bestor, Timothy Hall, Leonard Bacon, George Griswold.	Mason F. Cogswell, Timothy Hall, John Bestor, J. H. Sparhawk, Simeon Field.
1797.	1804.	1812.
Eliakim Fish, Elihu Tudor, Samuel Flagg, Mason F. Cogswell, Lemuel Hopkins.	Leonard Bacon, John Bestor, Timothy Hall, George Griswold, Elijah F. Reed.	Mason F. Cogswell, Timothy Hall, John Bestor, J. H. Sparhawk, Nathan Strong, Jr.
1798.	1805, '6.	1813.
Eliakim Fish, Elihu Tudor, Lemuel Hopkins, Samuel Flagg, Mason F. Cogswell.	Howard Alden, John Bestor, Leonard Bacon, Simeon Field, Timothy Hall.	Mason F. Cogswell, Timothy Hall, John Bestor, Eli Todd, Nathan Strong.

1814.
Mason F. Cogswell,
Timothy Hall,
Solomon Everest,
Simeon Field,
John Bestor.

1815.
Solomon Everest,
Simeon Field,
John Bestor,
Eli Todd,
Sylvester Wells.

1816.
Solomon Everest,
John Bestor,
Nathan Strong, Jr.,
Simeon Field,
Dwell Morgan.

1817.
Solomon Everest,
John Bestor,
Nathan Strong,
Samuel B. Woodward,
James E. Hart.

1818.
John Bestor,
S. B. Woodward,
Sylvester Wells,
Eli Todd,
Solomon Everest.

1819.
Mason F. Cogswell,
John A. Hart,
John L. Comstock,
Norman Lyman,
Dwell Morgan.

1820.
The same as 1819.
The Convention being held before the legal time for new election of Fellows.

1821.
S. Everest,
S. B. Woodward,
J. Bestor,
E. Todd,
G. Sumner.

1822.
Eli Todd,
Elijah F. Reed,
S. B. Woodward,
George Sumner,
Wm. S. Pierson.

1823.
M. F. Cogswell,
J. Bestor,
Josiah M. Ward,
William Tully,
Norman Lyman.

1824.
S. B. Woodward,
James O. Pond,
E. F. Reed,
Samuel Hart, 2d,
Benj. Weed, Jr.

1825.
E. Todd,
Charles Woodward,
Julius S. Barnes,
George Sumner,
S. B. Woodward.

1826.
S. B. Woodward,
E. F. Reed,
J. O. Pond,
C. Woodward,
J. L. Comstock.

1827.
E. Todd,
S. B. Woodward,
George Sumner,
W. S. Pierson,
Caleb H. Austin.

• 1828.
E. F. Reed,
Horatio Gridley,
George Sumner,
Samuel W. Brown,
Edward P. Terry.

1829.
George Sumner,
C. Woodward,
E. F. Reed,
H. Gridley,
Ralph Carter.

1830.
Samuel Hart,
Wm. James Barry,
Pardon Brownell,
Simeon Birge,
J. S. Barnes.

1831.
Wm. H. Morgan,
Richard Ells,
Jeremiah T. Denison,
Daniel Fuller,
R. Carter.

1832.
John J. Abernethy,
P. Brownell,
E. D. Hudson,
Amariah Brigham,
E. F. Reed.

1833.
W. S. Pierson,
G. Sumner,
Hiram Watson,
D. H. Hubbard,
H. Gridley.

1834.
Milo L. North,
J. L. Comstock,
Asaph L. Bissell,
E. P. Terry,
Archibald Welch.

1835.
J. S. Barnes,
George Sumner,
P. Brownell,
Henry Holmes,
Guy R. Phelps.

1836.
D. H. Hubbard,
M. L. North,
W. S. Pierson,
A. Welch,
Daniel Fuller.

1837.
David S. Dodge,
Sumner Ives,
R. Carter,
H. Holmes,
Earl Loomis.

1838.
Daniel Holt,
G. Sumner,
Justus B. Wilcox,
Horace C. Gillette,
Jairus Case.

1839.
H. Gridley,
A. Brigham,
Chauncey Brown,
Augustus R. Case,
P. Brownell.

1840.
George O. Sumner,
D. H. Hubbard,
Theodore Sill,
Edward Rowland,
Samuel B. Beresford.

1841.
Eli Hall,
Geo. W. Sanford,
Alfred Kellogg,
Simeon Shurtleff,
Joseph F. Jewett.

1842.
D. S. Dodge,
Wm. C. Williams,
P. W. Elsworth,
Geo. B. Hawley,
Lucius Woodruff.

1843.
G. W. Russell,
D. Holt,
Silas Fuller,
W. S. Pierson,
P. Brownell.

1844.
T. Sill,
Benjamin Rogers,
J. S. Barnes,
G. Sumner,
R. Carter.

1845.
E. K. Hunt,
John S. Butler,
A. W. Barrows,
Roswell Hawley,
Eli Hall.

1846.
E. W. Carrington,
Chester Hamlin,
G. W. Russell,
Samuel B. Fuller,
D. S. Dodge.

1847.
H. Allen Grant,
William Scott,
Samuel Hart,
S. B. Beresford,
Sidney Rockwell.

1848.
E. K. Hunt,
David Crary,
Josiah C. Banning,
H. C. Gillett,
John F. Wells.

1849.
E. K. Hunt,
A. L. Spaulding,
Eli Hall,
Thomas Miner,
Seth L. Child.

1850.
L. Woodruff,
Aretus Rising,
Sabin Stocking,
Myron W. Wilson,
G. B. Hawley.

1851.
P. W. Ellsworth,
J. F. Erving,
W. S. Pierson,
G. W. Sanford,
P. G. Rockwell.

1852.
Archibald Welch,
C. M. Brownell,
M. W. Wilson,
G. A. Moody,
J. C. Jackson.

1853.
C. W. Ensign,
A. S. Warner,
E. D. Babcock,
H. C. Bunce,
Wm. Porter.

1854.
Wm. R. Brownell,
J. D. Wilcox,
Wm. Wood,
E. Brandegee, Jr.,
C. E. Hammond.

1855.
B. N. Comings,
O. B. Griggs,
W. C. Williams,
S. Rockwell,
E. K. Hunt.

1856.
Joseph Olmstead,
M. L. Fiske,
David Crary,
R. A. White,
S. L. Child.

1857.
J. F. Wells,
R. Fox,
H. C. Gillette,
R. W. Griswold,
A. Morrison.

1858.
Thomas Miner,
William S. Pierson,
George A. Moody,
P. M. Hastings,
C. M. Brownell.

1859.
S. B. Beresford,
G. B. Hawley,
C. E. Hammond,
A. Morrison,
Sidney Rockwell.

1860.
G. W. Russell,
F. A. Hart,
J. D. Wilcox,
A. W. Barrows,
R. A. White.

1861.
H. Holmes,
E. K. Hunt,
L. S. Wilcox,
A. S. Warner,
Wm. Scott.

1862.
S. L. Child,
G. W. Russell,
J. C. Jackson,
F. A. Hart,
D. Crary.

1863.
G. W. Sanford,
George B. Hawley,
S. W. Rockwell,
William Scott,
George A. Moody.

1864.
G. W. Russell,
A. W. Barrows,
S. W. Rockwell,
Geo. A. Moody,
B. N. Comings.

1865.
Gurdon W. Russell,
P. W. Ellsworth,
B. N. Comings,
Edward Brandegee,
R. W. Griswold.

1866.
P. W. Ellsworth,
R. W. Griswold,
H. P. Stearns,
C. E. Hammond,
Charles Carrington.

1867.
C. E. Hammond,
Charles Carrington,
William Wood,
S. B. Beresford,
Lucian S. Wilcox.

1868.
Lucian S. Wilcox,
William Wood,
George Clary,
F. A. Hart,
R. H. Tiffany.

1869.
F. A. Hart,
George Clary,
E. F. Parsons,
M. Storrs,
Irving W. Lyon.

1870.
Melancthon Storrs,
E. F. Parsons,
E. K. Hunt,
A. W. Barrows,
G. W. Sanford.

1871.
A. W. Barrows,
G. W. Sanford,
Wm. Scott,
H. C. Bunce,
Geo. C. Jarvis.

1872.
Geo. C. Jarvis,
H. C. Bunce,
Henry Gray,
H. S. Fuller,
E. B. Lyon.

1873.
Henry Gray,
G. B. Hawley,
W. A. M. Wainwright,
H. S. Fuller,
R. L. Strickland.

1874.
Melancthon Storrs,
Henry Gray,
J. K. Mason,
W. A. M. Wainwright,
B. N. Comings.

1875.
E. K. Hunt,
M. Storrs,
W. S. Bowen,
J. K. Mason,
S. R. Burnap.

NEW HAVEN COUNTY.

1792.
Leaverett Hubbard,
Æneas Munson,
William Gould,
Elnathan Beach,
Jared Potter.

1793.
Leaverett Hubbard,
Æneas Munson,
Jared Potter,
William Gould,
John Spalding.

1794.
Leaverett Hubbard,
Æneas Munson,
Levi Ives,
Abr'm Tomlinson,
Thos. R. Pyncheon.

1795.
Æneas Munson,
Jared Potter,
Abr'm Tomlinson,
Elnathan Beach,
Wm. Gould.

1796.
Æneas Munson,
Jared Potter,
John Spalding,
Obadiah Hotchkiss,
Nathaniel Hubbard.

1797.
Æneas Munson,
Jared Potter,
Abr'm Tomlinson,
Obadiah Hotchkiss,
John Spalding.

1798.	1806.	1814.
Æneas Munson, Abr'm Tomlinson. Jared Potter, John Spalding, Lewis Collins.	Abr'm Tomlinson, Joseph Foot, Thomas Goodsell, John Barker, Eli Ives.	Joseph Foot, Eli Ives, Pearl Craft, Anson Foot, Bela Farnham.
1799.	1807.	1815.
Æneas Munson, Jared Potter, John Spalding, Obadiah Hotchkiss, Lewis Collins.	John Barker, Joseph Foot, Eli Ives, Thomas Goodsell, David Marvin.	Joseph Foot, Pearl Craft, Jonathan Knight, William Tully, Anson Foot.
1800.	1808.	1816.
Æneas Munson, Abr'm Tomlinson. John Spalding, Jared Potter, Obadiah Hotchkiss.	John Barker, Joseph Foot, Eli Ives, Abr'm Tomlinson, David Marvin.	Joseph Foot, Eli Ives, Jonathan Knight, Pearl Craft, T. P. Beers.
1801.	1809.	1817.
Abr'm Tomlinson, John Spalding, Obadiah Hotchkiss, John Barker, Jared Pottor.	Abr'm Tomlinson, John Barker, Eli Ives, Joseph Foot, Thomas Goodsell.	Joseph Foot, Eli Ives, Jonathan Knight, Bela Farnham, Isaac Goodsell.
1802.	1810.	1818.
Abr'm Tomlinson, Jared Potter, John Spalding, Levi Ives, John Barker.	Joseph Foot, Eli Ives, Abr'm Tomlinson, Bela Farnham, Thomas Goodsell.	Eli Ives, Joseph Foot, Jonathan Knight, Pearl Craft, Edward Field.
1803.	1811.	1819.
Abr'm Tomlinson, Levi Ives, Jonathan Todd, John Barker, Joseph Foot.	Abr'm Tomlinson, John Barker, Joseph Foot, Eli Ives, Obadiah Hotchkiss.	Eli Ives, Jonathan Knight, Isaac Goodsell, Timothy P. Beers, Pearl Craft.
1804.	1812.	1820.
Jared Potter, John Spalding, Levi Ives, Abr'm Tomlinson, John Barker.	John Barker, Joseph Foot, Eli Ives, Elias Shipman, Jr., Pearl Craft.	The same as in 1819, the Convention being this year an adjourned Convention.
1805.	1813.	1821.
Abr'm Tomlinson, Levi Ives, Thomas Goodsell, Joseph Foot, John Barker.	Joseph Foot, Eli Ives, Pearl Craft, Anson Foot, Elias Shipman.	Eli Ives, Jonathan Knight, Isaac Goodsell, Edward Field, Timothy P. Beers.

- | | | |
|---|--|---|
| 1822. | 1830. | 1838. |
| Eli Ives,
Jonathan Knight,
Timothy P. Beers,
John Titsworth,
Virgil M. Dow. | Jonathan Knight,
Solomon Stoddard,
Isaac Jennings,
V. M. Dow,
Wyllys Woodruff. | J. F. Hunt,
C. S. Thomson,
Joel Canfield,
Wyllys Woodruff,
V. M. Dow. |
| 1823. | 1831. | 1839. |
| Eli Ives,
Jonathan Knight,
Joseph Foot,
Timothy P. Beers,
Isaac Jennings. | Thomas Huhhard,
Joseph Tomlinson,
Alfred S. Monson,
Joel Canfield,
Timothy P. Beers. | N. B. Ives,
Lester Keep,
Lyman Parker,
Sam'l Punderson,
Reynold Wehh. |
| 1824. | 1832. | 1840. |
| Andrew French,
Isaac Goodsell,
Sam'l Punderson,
Joel L. Griffing,
Timothy P. Beers. | Jonathan Knight,
Isaac Jennings,
Reynold Wehh,
V. M. Dow,
Charles Hooker. | Jonathan Knight,
Joel Canfield,
Anson Moody,
E. H. Bishop,
Wyllys Woodruff. |
| 1825. | 1833. | 1841. |
| Eli Ives,
Isaac Jennings,
Lyman Parker,
John Titsworth,
Reynold Wehh. | Isaac Goodsell,
J. T. Denison,
Lyman Parker,
N. B. Ives,
Wyllys Woodruff. | Isaac Goodsell,
N. B. Ives,
Charles Hooker,
Henry Bronson,
Wyllys Woodruff. |
| 1826. | 1834. | 1842. |
| Nathan Smith,
Isaac Goodsell,
Isaac Jennings,
Charles Hooker,
Jacob Linsley. | Reynold Wehh,
A. S. Monson,
Ahiram Stoddard,
Joel Canfield,
Sheldon Beardsley. | T. P. Beers,
Lyman Parker,
J. A. Totten,
C. S. Thomson,
Alvan Talcott. |
| 1827. | 1835. | 1843. |
| Nathan Smith,
Wyllys Woodruff,
Isaac Jennings,
Timothy P. Beers,
Alfred S. Monson. | E. H. Bishop,
N. B. Ives.
Andrew French,
Arza Andrews,
Josiah F. Hunt. | Nathan B. Ives,
Reynold Wehh,
M. C. Levenworth,
Sheldon Beardsley,
E. H. Bishop. |
| 1828. | 1836. | 1844. |
| Jonathan Knight,
Bela Farnham,
V. M. Dow,
Sam'l Punderson,
Joel Canfield. | V. M. Dow,
Isaac Goodsell,
H. A. Tomlinson,
Lyman Parker,
Wyllys Woodruff. | Jonathan Knight,
Joel Canfield,
Levi Ives,
P. A. Jewett,
Amhrose Beardsley. |
| 1829. | 1837. | 1845. |
| Eli Ives,
Isaac Goodsell,
Reynold Wehh,
Charles Hooker,
Lyman Parker. | Reynold Wehh,
Henry Bronson,
Josiah M. Colhurn,
N. B. Ives,
John H. Kain. | Jonathan Knight,
Elisha Hutchinson,
Charles Hooker,
L. N. Beardsley,
D. L. Daggett. |

1846.
Eli Ives,
W. L. Lay,
Charles Hooker,
Anson Moody,
M. C. Leavenworth.

1847.
Eli Ives,
G. O. Sumner,
C. S. Thomson,
D. A. Tyler,
Alvan Talcott.

1848.
G. O. Sumner,
Alvan Talcott,
Henry Bronson,
G. L. Platt,
W. J. Whiting.

1849.
Henry Bronson,
G. L. Platt,
Reynold Webb,
N. B. Ives,
B. H. Catlin.

1850.
Reynold Webb,
B. H. Catlin,
E. H. Bishop,
P. A. Jewett,
Joel Canfield.

1851.
P. A. Jewett,
E. H. Bishop,
Eli Ives,
Alvan Talcott,
Ambrose Beardsley.

1852.
Eli Ives,
Alvan Talcott,
Isaac Goodsell,
Edward A. Park,
S. G. Hubbard.

1853.
Isaac Goodsell,
S. G. Hubbard,
L. N. Beardsley,
W. Hooker,
David L. Daggett.

1854.
W. Hooker,
L. N. Beardsely,
R. F. Stillman,
Anson Moody,
C. A. Lindsley.

1855.
J. Knight,
N. B. Ives,
P. G. Rockwell,
Joel Canfield,
R. F. Stillman.

1856.
P. A. Jewett,
Charles Byington,
Sheldon Beardsley,
Edward W. Hatch,
Moses C. White.

1857.
N. B. Ives,
P. A. Jewett,
Andrew Castle,
John Nicoll,
W. L. Lay.

1858.
M. C. Leavenworth,
J. Knight,
L. J. Sanford,
Alvan Talcott,
W. C. Williams.

1859.
J. Knight,
C. Hooker,
H. W. Painter,
A. C. Woodward,
H. W. E. Matthews.

1860.
S. Punderson,
P. G. Rockwell,
C. L. Ives,
Joel Canfield,
R. F. Stillman.

1861.
Isaac Goodsell,
A. J. Driggs,
L. N. Beardsley,
D. A. Tyler,
P. A. Jewett.

1862.
David A. Tyler,
Leonard J. Sanford,
Lewis Barnes,
Asa H. Churchill,
Alvan Talcott.

1863.
Nathan B. Ives,
Gideon L. Platt,
Moses C. White,
Daniel M. Webb,
T. Beers Townsend.

1864.
G. L. Platt,
M. C. White,
J. Canfield,
S. Punderson,
H. Pierpont.

1865.
Henry Bronson,
Henry Pierpont,
Francis Bacon,
R. F. Stillman,
N. B. Hall.

1866.
Henry Bronson,
Levi Ives,
P. G. Rockwell,
B. H. Catlin,
Wm. B. DeForest.

1867.
P. G. Rockwell,
H. W. E. Matthews,
Stephen G. Hubbard,
Asa H. Churchill,
Edward Bulkley.

1868.
H. W. E. Matthews,
Stephen G. Hubbard,
J. H. Beecher,
Alfred North,
J. Martin Aimes.

1869.
Ozias W. Peck,
John Nicoll,
Francis Bacon,
Frederick J. Fitch,
J. W. Aimes.

1870.	1872.	1874.
O. W. Peck, C. A. Lindsley, G. A. Ward, R. F. Stillman, Sheldon Beardsley.	C. A. Lindsley, P. A. Jewett, Joel Canfield, Edward Bulkley, A. H. Churchill.	P. A. Jewett, W. L. Bradley, R. F. Stillman, C. A. Lindsley, N. Nickerson.
1871.	1873	1875.
David A. Tyler, Wm. B. DeForest, H. A. Carrington, B. F. Harrison, R. F. Stillman.	S. G. Hubbard, Alvan Talcott, Fred. J. Fitch, H. A. Carrington, Alfred North.	Francis Bacon, G. L. Platt, W. L. Bradley, L. J. Sanford, C. H. Gaylord.

NEW LONDON COUNTY.

1792.	1797.	1802.
Theophilus Rogers, Samuel Mather, Thomas Coit, Joshua Downer, Phillip Turner.	Phillip Turner, Theophilus Rogers, Simon Wolcott, John R. Watrous, Philemon Tracy.	John R. Watrous, John O. Miner, Avery Downer, James Lee, Philemon Tracy.
1793.	1798.	1803.
Theophilus Rogers, Phillip Turner, Simon Wolcott, John R. Watrous, Philemon Tracy.	John R. Watrous, John Turner, Simon Wolcott, Phillip Turner, Samuel Mather.	John R. Watrous, John Noyes, James Lee, Thomas Coit, Jr., Avery Downer.
1794.	1799.	1804.
Phillip Turner, Simon Wolcott, John R. Watrous, Theophilus Rogers, Thomas Skinner.	Theophilus Rogers, Phillip Turner, Simon Wolcott, Luther Manning, John R. Watrous.	Samuel Mather, John R. Watrous, Avery Downer, John O. Miner, Thomas Coit, Jr.,
1795.	1800.	1805.
Theophilus Rogers, Phillip Turner, Simon Wolcott, John R. Watrous, Philemon Tracy.	Simon Wolcott, John R. Watrous, John O. Miner, John Noyes, Avery Downer.	Simon Wolcott, John R. Watrous, John O. Miner, Avery Downer, Thomas Coit, Jr.,
1796.	1801.	1806.
Phillip Turner, Theophilus Rogers, Simon Wolcott, John R. Watrous, Philemon Tracy.	Simon Wolcott, John R. Watrous, John O. Miner, Avery Downer, James Lee.	Simon Wolcott, Avery Downer, John O. Miner, Samuel H. P. Lee, Thomas Coit, Jr.

1807.
John R. Watrous,
John O. Miner,
Avery Downer,
S. H. P. Lee,
Thomas Coit, Jr.

1808.
Avery Downer,
John O. Miner,
Thomas Coit, Jr.,
Samuel Mather,
S. H. P. Lee.

1809.
Samuel Mather,
Avery Downer,
Thomas Coit, Jr.,
S. H. P. Lee,
John O. Miner.

1810.
Samuel Mather,
John O. Miner,
Avery Downer,
Thomas Coit, Jr.,
S. H. P. Lee.

1811.
Avery Downer,
John O. Miner,
Thomas Coit, Jr.,
S. H. P. Lee,
Thomas Miner.

1812.
John O. Miner,
Avery Downer,
Thomas Coit,
S. H. P. Lee,
Thomas Miner.

1813.
Avery Downer,
John O. Miner,
Thomas Coit,
Thomas Miner,
S. H. P. Lee.

1814.
Avery Downer,
Elisha North,
John O. Miner,
S. H. P. Lee,
George Tisdale.

1815.
Avery Downer,
Thomas Coit,
Elisha North,
John O. Miner,
George Tisdale.

1816.
John O. Miner,
Avery Downer,
Elisha North,
S. H. P. Lee.
Vine Utley.

1817.
Elisha North,
John O. Miner,
George Tisdale,
Dyer T. Brainard,
Sylvester Wooster.

1818.
John Smith,
George Downer,
Sylvester Wooster,
Nathaniel S. Perkins,
Benj. S. Stoddard.

1819.
John O. Miner,
Elisha North,
S. H. P. Lee,
George Downer,
Sylvester Wooster.

1820.
Fellows of 1819 con-
tinued at a convention
held in May instead of
October.

1821.
John O. Miner,
Elisha North,
Wm. P. Eaton,
Avery Downer,
Lucius Tyler.

1822.
John O. Miner,
Avery Downer,
George Tisdale,
Frederick Morgan,
Dyer T. Brainard.

1823.
Archibald Mercer,
Wm. P. Eaton,
Dyer T. Brainard,
Sylvester Wooster,
John L. Smith.

1824.
Lucius Tyler,
Thomas T. Wells,
Richard P. Tracy,
Dyer T. Brainard,
Wm. P. Eaton.

1825.
Nathaniel S. Perkins,
John O. Miner,
Wm. P. Eaton,
Sylvester Wooster,
Archibald Mercer.

1826.
Thomas T. Wells,
Lucius Tyler,
John C. Tibbetts,
Reuben Burgess,
Dyer T. Brainard.

1827.
Nathaniel S. Perkins,
Dyer T. Brainard,
Wm. W. Miner,
Thomas T. Wells,
Benj. F. Stoddard.

1828.
Mason F. Manning,
Joseph Comstock,
E. B. Downing,
Lucius Tyler,
Benj. F. Stoddard.

1829.
Dyer T. Brainard,
John C. Tibbits,
Nathan Tisdale,
John O. Miner,
Nathaniel S. Perkins.

1830.
Wm. Robinson,
George E. Palmer,
Avery Downer,
Mason Manning,
Joseph Peabody.

1831.
Dyer T. Brainard,
James Morgan,
Worthington Hooker,
George E. Palmer,
Nathaniel S. Perkins.

1832.
Avery Downer,
E. B. Downing,
Lucius Tyler,
Thomas P. Wattles,
Mason Manning.

1833.
Dyer T. Brainard,
Nathaniel S. Perkins,
George E. Palmer.
R. A. Manwaring,
Benj. F. Stoddard.

1834.
Dyer T. Brainard,
E. B. Downing,
John C. Tibbetts,
Lucius Tyler,
Wm. W. Miner.

1835.
Wm. Hyde,
James Morgan,
Ephraim Fellows,
Dyer T. Brainard,
Wm. W. Miner.

1836.
Lucius Tyler,
Joseph Comstock,
E. B. Downing,
Worthington Hooker,
Dyer T. Brainard.

1837.
John O. Miner,
Avery Downer,
James Rogers,
Wm. Hyde,
Dyer T. Brainard.

1838.
Ralph Farnsworth,
Wm. W. Miner,
Joseph Durfee,
E. B. Downing,
Austin F. Perkins.

1839.
Nathaniel S. Perkins,
Dyer T. Brainard,
H. C. Beardsley,
John C. Tibbetts,
Jonathan W. Brooks.

1840.
Joseph Comstock,
Lucius Tyler,
Nathaniel S. Perkins,
Joseph Durfee,
Avery Downer.

1841.
Dyer T. Brainard,
James Morgan,
William Hyde,
Joseph Durfee,
Benj. F. Stoddard.

1842.
Elijah Dyer, Jr.,
Louis Phinney,
Lucius Tyler,
Ashbel Woodward,
Eleazer B. Downing.

1843.
Avery Downer,
Ralph Farnsworth,
Thomas P. Wattles,
Worthington Hooker,
David Holmes.

1844.
Joseph Durfee,
Worthington Hooker,
Ashbel Woodward,
Elijah Dyer, Jr.,
William Hyde.

1845.
Avery Downer,
Worthington Hooker,
Wm. W. J. Warren,
Mason Manning,
Isaac G. Porter.

1846.
Avery Downer,
Chauncey Burgess,
John P. Fuller,
Lucius Tyler,
Benjamin T. Roath.

1847.
Chauncey Burgess,
Ashbel Woodward,
Rufus W. Mathewson,
John D. Ford,
Eleazer B. Downing.

1848.
Nathaniel S. Perkins,
B. Fordyce Barker,
Wm. W. Miner,
Dyer T. Brainard,
George E. Palmer.

1849.
Ashbel B. Haile,
Ashbel Woodward,
John C. Bolles,
Avery Downer,
Joseph Comstock.

1850.
Eleazer B. Downing,
Wm. Hyde, Jr.,
Chauncey Burgess,
Dyer T. Brainard,
Mason Manning.

1851.
Elijah Dyer,
Ashbel Woodward,
A. W. Coats,
Jeremiah King,
Samuel E. Maynard.

1852.
W. Hooker,
Jno. D. Ford,
Albert Hobron,
Joseph Durfee,
Seth Smith.

1853.
A. T. Douglas,
Geo. E. Palmer,
Horace Thurston,
Elijah Dyer,
I. G. Porter.

1854.
J. D. Ford,
D. P. Francis,
Seth Smith,
E. Bently.
E. F. Coats.

1855.	1862.	1869.
Jno. D. Ford, H. Thurston, A. Fuller, Jno. C. Bolles, Isaac G. Porter.	Mason Manning, Ashbel Woodward, N. M. Tribou, R. McCurdy Lord, Elijah Dyer.	Ashbel Woodward, Albert T. Chapman, John Gray, Abiel W. Nelson, A. B. Haile.
1856.	1863.	1870.
Austin F. Perkins, A. T. Douglass, Benjamin D. Dean, Ashbel Woodward, John C. Bolles.	George E. Palmer, N. M. Tribou, D. P. Francis, John Gray, A. B. Haile.	Abiel W. Nelson, Ashbel Woodward, A. B. Haile, Charles M. Carleton, Albert T. Chapman.
1857.	1864.	1871.
Isaac G. Porter, George E. Palmer, Benj. D. Dean, Alonzo Fuller, Melancthon Storrs.	A. Woodward, Geo. E. Palmer, A. M. Tribou, A. B. Haile, O. E. Miner.	L. S. Paddock, A. Woodward, I. G. Porter, F. Morgan, Levi Warren.
1858.	1865.	1872.
Lewis S. Paddock, Isaac G. Porter, John C. Bolles, Benjamin D. Dean, George E. Palmer.	Ashbel Woodward, George E. Palmer, Isaac G. Porter, Charles M. Carleton, John Gray.	A. W. Nelson, Chas. M. Carleton, A. T. Chapman, A. Woodward, Patrick Cassidy.
1859.	1866.	1873.
E. Bentley, A. W. Coats, A. T. Douglass, Wm. Hyde, Jr., E. Phinney.	Ashbel Woodward, C. M. Carleton, L. S. Paddock, M. Manning, A. W. Nelson.	E. C. Kinney, A. T. Chapman, A. B. Haile, F. N. Braman, A. Woodward.
1860.	1867.	1874.
D. W. C. Lathrop, M. Manning, R. McCurdy Lord, A. B. Haile, O. E. Miner.	Lewis S. Paddock, Mason Manning, F. S. Abbott, Orrin E. Miner, Geo. E. Palmer.	A. Woodward, Isaac G. Porter, F. N. Braman, A. T. Chapman, A. B. Haile.
1861.	1868.	1875.
M. Manning, E. B. Downing, I. G. Porter, A. W. Coates, L. S. Paddock.	Isaac G. Porter, Geo. E. Palmer, F. S. Abbott, Ashbel Woodward, O. E. Miner.	Isaac G. Porter, L. S. Paddock, W. S. C. Perkins, F. N. Braman, P. Cassidy.

FAIRFIELD COUNTY.

1792.	1799.	1806.
James Potter, Thaddeus Betts, Hosea Hurlburt, James Clark, Amos Mead.	James Potter, William Shelton, Ezra Curtis, Hosea Hurlburt, James E. Beach.	Joseph Trowbridge, Bennet Perry, William Shelton, Benjamin Curtiss, William Beard.
1793.	1800.	1807.
James Clark, Thaddeus Betts, Hosea Hurlburt, James Potter, James E. Beach.	James Potter, Hosea Hurlburt, Gideon Shepard, Joseph Trowbridge, Thaddeus Betts.	Joseph Trowbridge, William Shelton, Hosea Hurlburt, Benjamin Curtiss, William Beard.
1794.	1801.	1808.
Hosea Hurlburt, Eli Perry, Joseph Trowbridge, Bennet Perry, James Clark.	James Potter, Thaddeus Betts, William Shelton, James E. Beach, Benjamin Curtiss.	Bennet Perry, Gideon Shepherd, William Shelton, Benjamin Curtiss, Gideon Beardsley.
1795.	1802.	1809.
James Clark, James Potter, Gideon Shepard, James E. Beach, William Shelton.	James Potter, Hosea Hurlburt, William Shelton, Joseph Trowbridge, James E. Beach.	Eli Porry, Gideon Shepherd, Joseph Trowbridge, Bennet Perry, Gideon Beardsley.
1796.	1803.	1810.
James Potter, Thaddeus Betts, Gideon Shepard, William Shelton, Eli Perry.	Joseph Trowbridge, Hosea Hurlburt, William Shelton, Samuel Webb, Eli Perry.	Bennet Perry, Benj. Curtiss, Jr., Gideon Beardsley, Noah A. Lacy, Gideon Shepherd.
1797.	1804.	1811.
James Potter, Gideon Shepard, James E. Beach, William Shelton, Bennet Perry.	William Shelton, Joseph Trowbridge, Thaddeus Betts, Eli Perry, Benjamin Curtiss.	William Shelton, Benj. Curtiss, Jr., Gideon Beardsley, Daniel Comstock, Bennet Perry.
1798.	1805.	1812.
James Potter, Thaddeus Betts, William Shelton, James E. Beach, Hosea Hurlburt.	Hosea Hurlburt, Bennet Perry, Eli Perry, William Beard, Benjamin Curtiss.	Daniel Comstock, Benj. Curtiss, Jr., Gideon Beardsley, Noah A. Lacy, Bennet Perry.

1813.
 Bennet Perry,
 Benj. Curtiss, 2d,
 Daniel Comstock,
 Gideon Beardsley,
 Ansel Hoyt.

1814.
 Gideon Shepherd,
 Gideon Beardsley,
 Daniel Comstock,
 Benj. Curtiss, Jr.,
 Alfred H. Betts.

1815.
 Benjamin Curtiss,
 Daniel Comstock,
 Gideon Beardsley,
 Noah A. Lacy,
 Alfred H. Betts.

1816.
 William Shelton,
 Gideon Beardsley,
 Nathan Tisdale,
 Daniel Comstock,
 Isaac Jennings.

1817.
 William Shelton,
 Noah A. Lacy,
 Isaac Jennings,
 Gideon Beardsley,
 Nathan Tisdale.

1818.
 Bennet Perry,
 Gideon Beardsley,
 Noah A. Lacy,
 Ansel Hoyt,
 Isaac Jennings.

1819.
 Gideon Shepherd,
 Gideon Beardsley,
 Noah A. Lacy,
 Isaac Jennings,
 R. B. Bottsford.

1820.
 An adjourned Conven-
 tion. Fellows con-
 tinued in office.

1821.
 Gideon Beardsley,
 Nathan Tisdale,
 John Tomlinson,
 John Judson,
 Elijah Middlebrook.

1822.
 Nathan Tisdale,
 E. Middlebrook,
 Cyreneus H. Booth,
 J. C. Hardyear,
 G. Beardsley.

1823.
 G. Beardsley,
 Nathan Tisdale.
 Cyreneus H. Booth,
 Lloyd Seeley,
 E. Middlebrook.

1824.
 E. Middlebrook,
 Nathan Tisdale,
 Horace Ames,
 Cyreneus H. Booth,
 Rufus Blakeman.

1825.
 E. Middlebrook,
 Samuel Simons,
 Wm. R. Shelton,
 Cyreneus H. Booth,
 John Tomlinson.

1826.
 E. Middlebrook,
 John Judson,
 Samuel Simons,
 Daniel Upford,
 Orrin J. Taylor.

1827.
 E. Middlebrook,
 John Goulding,
 Samuel Simons,
 William T. Shelton,
 Daniel Upford.

1828.
 E. Middlebrook,
 Samuel Simons,
 Daniel Upford,
 John A. McLean,
 William T. Shelton.

1829.
 Samuel Simons,
 Sturges Bulkley,
 Lloyd Seeley,
 Geo. Blackman,
 T. D. Shepard.

1830.
 John Judson,
 Samuel Simons,
 Daniel Upford,
 John Goulding,
 Rufus Blakeman.

1831.
 S. Middlebrook,
 T. D. Shepard,
 E. Middlebrook,
 M. N. Shelton,
 John Tomlinson.

1832.
 E. Middlebrook,
 Rufus Blakeman,
 Sturges Bulkley,
 Lloyd Seeley,
 John Tomlinson.

1833.
 E. Middlebrook,
 Geo. Blackman,
 Rufus Blakeman,
 James Baldwin,
 Lloyd Seeley.

1834.
 E. Middlebrook,
 Rufus Blakeman,
 A. L. Williams,
 James Baldwin,
 Justus Sherwood.

1835.
 Wm. T. Shelton,
 Geo. Blackman,
 Lloyd Seeley,
 Rufus Blakeman,
 Ambrose Beardsley.

1836.
 Ezra P. Bennett,
 Samuel Beach,
 Sturges Bulkley,
 A. L. Williams,
 George Dyer.

1837.
J. T. Denison,
Ezra P. Bennett,
E. B. Middlebrook,
Rufus Blakeman,
John Judson.

1838.
J. T. Denison,
Chauncey Ayres,
Justus Sherwood,
Rufus Blakeman,
Daniel H. Nash.

1839.
Rufus Blakeman,
Emery Bissell,
Sturges Bulkley,
J. T. Denison,
Uriah Turner.

1840.
Rufus Blakeman,
Geo. Blackman,
Ezra P. Bennett,
Samuel Beach,
J. T. Denison.

1841.
H. N. Bennett,
Sturges Bulkley,
A. L. Williams,
Samuel S. Noyes,
R. B. Botsford.

1842.
Samuel Simons,
J. T. Denison,
Rufus Blakeman,
E. B. Middlebrook,
Geo. Blackman.

1843.
Samuel Beach,
George Dyer,
S. V. R. Ten Broeck,
Sturges Bulkley,
Edwin A. Lacy.

1844.
E. Middlebrook,
Rufus Blakeman,
A. L. Williams,
E. B. Middlebrook,
Geo. Blackman.

1845.
Rufus Blakeman,
Samuel Beach,
C. Ayres,
Samuel S. Noyes,
Geo. Blackman.

1846.
Samuel Simons,
Rufus Blakeman,
Samuel Beach,
Geo. Blackman,
Lloyd Seeley.

1847.
Sturges Bulkley,
A. L. Williams,
H. N. Bennett,
S. Middlebrook,
Geo. Dyer.

1848.
Rufus Blakeman,
Sturges Bulkley,
Samuel Beach,
H. N. Bennett,
E. Middlebrook.

1849.
Rufus Blakeman,
Samuel Beach,
H. N. Bennett,
E. Middlebrook,
Geo. Blackman.

1850.
T. J. Judson,
Samuel Beach,
Geo. Blackman,
E. Middlebrook.

1851.
Nathaniel D. Height.
Samuel Beach,
Samuel S. Noyes,
Lewis Richards,
H. W. L. Burritt.

1852.
Geo. Blackman,
H. N. Bennett,
Robert Hubbard,
Justus Sherwood,
Samuel Beach.

1853.
A. L. Williams,
A. P. Ticknor,
George Dyer,
F. J. Judson,
D. S. Burr.

1854.
E. P. Bennett,
D. S. Burr,
J. Sherwood,
L. F. Humaston,
R. Hubbard.

1855.
J. Sherwood,
Jno. A. McLean,
H. N. Bennett,
H. L. W. Burritt,
Jas. Baldwin.

1856.
Ira Gregory,
Justus Sherwood,
Robert Hubbard,
D. S. Burr,
A. L. Williams.

1857.
J. McLean,
Geo. Blackman,
Moses B. Pardeo,
Rufus Blakeman,
Geo. Dyer.

1858.
N. D. Haight,
D. S. Burr,
Robert Hubbard.
L. W. Burritt,
S. S. Noyes.

1859.
Justus Sherwood,
A. L. Williams,
D. H. Nash,
E. P. Bennett,
M. B. Pardee.

1860.
D. S. Burr,
R. Hubbard,
Wm. C. Bennett,
R. P. Lyon,
G. W. Birch.

1861.	1866.	1871.
E. Gregory, R. C. McEwin, D. H. Nash, Geo. Blackman, Geo. Dyer.	A. L. Williams, Wm. G. Brownson, Wm. C. Bennett, Elijah Gregory, Samuel Lynes.	Samuel Sands, Jas. G. Gregory, W. A. Lockwood, M. B. Pardee, R. L. Higgins.
1862.	1867.	1872.
N. D. Haight, D. S. Burr, Robert Hubbard, Samuel S. Noyes, H. N. Bennett.	Robert Hubbard, Hanford N. Bennett, Roger M. Gray, Samuel Sands, Aug. H. Abernethy.	A. L. Williams, James Baldwin, R. M. Gray, Ira Gregory, O. S. Hickok.
1863.	1868.	1873.
E. P. Bennett, A. L. Williams, Roger M. Gray, O. S. Hickok.	George L. Beers, George F. Lewis, George Blackman, M. B. Pardee, Ira Gregory.	George L. Beers, A. H. Abernethy, James R. Cumming, Andrew J. Smith, George F. Lewis.
1864.	1869.	1874.
D. H. Nash, M. B. Pardee, R. Hubbard, Ira Gregory, S. S. Noyes.	Samuel S. Noyes, Lewis Richards, Samuel Lynes, A. L. Williams, Elijah Gregory.	Geo. L. Porter, F. J. Young, Samuel Sands, Robert Lauder, E. P. Bennett.
1865.	1870.	1875.
William H. Trowbridge, Moses B. Pardee, George Birch, Samuel Sands.	Wm. G. Brownson, George B. Bouton, George L. Beers, Andrew J. Smith, Aug. H. Abernethy.	E. P. Bennett, J. Baldwin, G. F. Lewis, I. G. Gregory, W. S. Todd.

LITCHFIELD COUNTY.

1792.	1794.	1796.
Seth Bird, Samuel Orton, Samuel Woodward, Seth Hastings, Samuel Rockwell.	Seth Bird, Daniel Sheldon, Samuel Woodward, Nathaniel Perry, Jesse Carrington.	Samuel Orton, Daniel Sheldon, Samuel Rockwell, Nathaniel Perry, Caleb Austin.
1793.	1795.	1797.
Seth Bird, Daniel Sheldon, Seth Hastings, Samuel Woodward, Samuel Orton.	Seth Bird, Daniel Sheldon, Samuel Woodward, Samuel Rockwell, Nathaniel Perry.	Daniel Sheldon, Samuel Rockwell, Nathaniel Perry, Phineas Meigs, Aaron Coleman.

1798.
 Samuel Orton,
 Daniel Sheldon,
 Samuel Woodward,
 Nathaniel Perry,
 Caleb Austin.

1799.
 Samuel Woodward,
 Nathaniel Perry,
 Jesse Carrington,
 Abel Catlin,
 Anthony Burritt.

1800.
 Samuel Orton,
 Samuel Woodward,
 Jesse Carrington,
 Nathaniel Perry,
 Anthony Burritt.

1801.
 Samuel Woodward,
 Anthony Burritt,
 Jesse Carrington,
 Nathaniel Perry,
 Benjamin Welch.

1802.
 Samuel Woodward,
 Nathaniel Perry,
 Jesse Carrington,
 Benjamin Welch,
 Gideon Woodruff.

1803.
 Samuel Woodward,
 Jesse Carrington,
 Benjamin Welch,
 Gideon Woodruff,
 Elijah Lyman.

1804.
 Samuel Woodward,
 Nathaniel Perry,
 Benjamin Welch,
 Timothy Clark,
 Elijah Lyman.

1805.
 Samuel Woodward,
 Jesse Carrington,
 Nathaniel Perry,
 Benjamin Welch,
 Gideon Woodruff.

1806.
 Nathaniel Perry,
 Jesse Carrington,
 Gideon Woodruff,
 Benjamin Welch,
 Frederick Plumb.

1807.
 Nathaniel Perry,
 Samuel Woodward,
 Jesse Carrington,
 Benjamin Welch,
 Warren R. Fowler.

1808.
 Samuel Woodward,
 Nathaniel Perry,
 Jesse Carrington,
 Warren R. Fowler,
 Benjamin Welch.

1809.
 Jesse Carrington,
 Benjamin Welch,
 Warren R. Fowler,
 Elijah Lyman,
 Samuel Buel.

1810.
 Jesse Carrington,
 Nathaniel Perry,
 Warren R. Fowler,
 Benjamin Welch,
 Samuel Buel.

1811.
 Nathaniel Perry,
 Jesse Carrington,
 Timothy Clark,
 Elijah Lyman,
 Samuel Buel.

1812.
 Nathaniel Perry,
 Jesse Carrington,
 Timothy Clark,
 Elijah Lyman,
 Warren R. Fowler.

1813.
 Nathaniel Perry,
 Jesse Carrington,
 Elijah Lyman,
 Samuel Buel,
 Warren R. Fowler.

1814.
 Nathaniel Perry,
 Jesse Carrington,
 Warren R. Fowler,
 Elijah Lyman,
 Jehiel Williams.

1815.
 Nathaniel Perry,
 Jesse Carrington,
 Warren R. Fowler,
 Elijah Lyman,
 Jehiel Williams.

1816.
 Nathaniel Perry,
 Jesse Carrington,
 Warren R. Fowler,
 Elijah Lyman,
 Jehiel Williams.

1817.
 Nathaniel Perry,
 Jesse Carrington,
 Warren R. Fowler,
 William Buel,
 Jehiel Williams.

1818.
 William Buel,
 Warren R. Fowler,
 Benjamin Welch,
 John Calhoun,
 Joshua Cornwall.

1819.
 Nathaniel Perry,
 Jesse Carrington,
 William Buel,
 Warren R. Fowler,
 Conant Catlin.

1820.
 Nathaniel Perry,
 Jesse Carrington,
 William Buel,
 Warren R. Fowler,
 Conant Catlin.

1821.
 Samuel Rockwell,
 William Buel,
 John Calhoun,
 Erastus L. Hart,
 Warren R. Fowler.

1822.
 Samuel Rockwell,
 William Buel,
 Warren R. Fowler,
 Roswell Abernethy,
 Conant Catlin.

1823.
 William Buel,
 Warren R. Fowler,
 Roswell Abernethy,
 Conant Catlin.
 Horatio Gridley.

1824.
 Samuel Buel,
 Gaylord Wells,
 Samuel W. Gould,
 Luther Ticknor,
 Horatio Gridley.

1825.
 Warren R. Fowler,
 William Buel,
 Roswell Abernethy,
 Conant Catlin,
 Luther Ticknor.

1826.
 Samuel Buel,
 Conant Catlin,
 Johnson C. Hatch,
 Samuel W. Gold,
 John L. West.

1827.
 Jehiel Williams,
 Gaylord Wells,
 Lyman Catlin,
 Samuel R. Childs,
 Luther Ticknor.

1828.
 William Buel,
 Benjamin Welch, Jr.,
 Johnson C. Hatch,
 Joel G. Candee,
 Conant Catlin.

1829.
 R. C. Abernethy,
 Samuel W. Gold,
 Luther Ticknor,
 Jairus Case,
 R. M. Fowler.

1830.
 Conant Catlin,
 Luther Ticknor,
 Moses A. Lee,
 Norman Bull,
 Benjamin Welch, Jr.

1831.
 R. M. Fowler,
 George O. Jarvis,
 Manly Peters,
 Norman Lyman,
 I. T. Hollister.

1832.
 Johnson C. Hatch,
 Lyman Catlin,
 Ralph Deming,
 Joel G. Candee,
 J. G. Beckwith.

1833.
 Samuel Buel,
 G. H. Minor,
 Theodore C. Hand,
 Caleb Ticknor,
 Samuel W. Gold.

1834.
 Norman Lyman,
 Benjamin Welch,
 Lyman Catlin,
 Gaylord Wells,
 R. M. Fowler.

1835.
 Johnson C. Hatch,
 J. G. Beckwith,
 Burritt B. North,
 Manly Peters,
 Charles Vail.

1836.
 Luther Ticknor,
 E. D. Hudson,
 Lyman Catlin,
 R. M. Fowler,
 Samuel Buel.

1837.
 Norman Lyman,
 J. G. Beckwith,
 Luther Ticknor,
 Johnson C. Hatch,
 G. H. St. John.

1838.
 Benjamin Welch, Jr.,
 S. W. Gold,
 Myron Downs,
 C. H. Webb,
 E. D. Hudson.

1839.
 R. M. Fowler,
 W. J. Barry,
 Norman Lyman,
 A. M. Huxley,
 J. G. Beckwith.

1840.
 R. M. Fowler,
 Manly Peters,
 Rurritt B. North,
 Myron Downs,
 G. H. St. John.

1841.
 J. G. Beckwith,
 R. L. Woodruff,
 S. W. Gold,
 Wells Beardsley,
 A. M. Huxley.

1842.
 R. M. Fowler,
 Benjamin Welch, Jr.,
 Samuel Buel,
 John S. Wolcott,
 Charles Vail.

1843.
 R. M. Woodruff,
 Myron Downs,
 Benjamin Welch, Jr.,
 S. W. Gold,
 H. Baldwin.

1844.
 Johnson C. Hatch,
 George Seymour,
 Norman Lyman,
 John A. Gillette,
 T. T. Seeley.

1845.
 R. M. Fowler,
 J. G. Beckwith,
 W. B. DeForest,
 E. B. Lyman,
 Albert A. Wright.

1846.
 Johnson C. Hatch,
 S. W. Gold,
 R. M. Woodruff,
 Myron Downs,
 Manly Peters.

1847.
 Benjamin Welch, Jr.,
 Loomis North,
 Sidney H. Lyman,
 D. E. Bostwick,
 A. M. Huxley.

1848.
 Norman Lyman,
 Wm. W. Welch,
 A. A. Wright,
 Johnson C. Hatch,
 B. B. North.

1849.
 J. G. Beckwith,
 P. Beardsley,
 R. M. Fowler,
 Myron Downs,
 E. P. Lyman.

1850.
 Manly Peters,
 Ralph Deming,
 James Welch,
 G. H. St. John,
 J. E. Smith.

1851.
 William Werden,
 A. M. Huxley,
 G. G. Bissell,
 J. C. Hatch,
 Seth Pease.

1852.
 Samuel T. Salisbury,
 D. E. Bostwick,
 Samuel Catlin, Jr.,
 O. Brown,
 John H. Welch.

1853.
 William Woodruff,
 Geo. Seymour,
 D. B. Camp,
 D. S. Higgins,
 B. B. North.

1854.
 W. W. Welch,
 R. Deming,
 J. W. Bidwell,
 J. W. Phelps,
 A. M. Huxley.

1855.
 M. Peters,
 H. W. Buel,
 R. M. Fowler,
 O. Brown,
 C. B. Maltbie.

1856.
 Samuel W. Gold,
 G. B. Miller,
 George Seymour,
 S. T. Salisbury,
 Myron Downes.

1857.
 H. M. Knight,
 Wm. Deming, Jr.,
 Ralph Deming,
 D. E. Bostwick,
 James Welch.

1858.
 Burritt B. North,
 R. M. Fowler,
 D. B. W. Camp,
 William Woodruff,
 A. M. Huxley.

1859.
 Samuel T. Salisbury,
 John H. Welch,
 Benjamin Welch,
 George Seymour,
 G. B. Miller.

1860.
 W. W. Welch,
 Wm. Woodruff,
 Wm. Bissell,
 S. W. Gold,
 R. Deming.

1861.
 S. T. Salisbury,
 C. H. Webb,
 H. M. Knight,
 H. W. Shove,
 G. B. Miller.

1862.
 Ralph Deming,
 H. W. Buel,
 J. W. Phelps,
 R. M. Fowler,
 H. M. Knight.

1863.
 A. M. Huxley,
 James Welch,
 David E. Bostwick,
 Charles N. Webb,
 Ralph Deming.

1864.
 J. G. Beckwith,
 Henry Davis,
 J. W. Phelps,
 J. W. Welch,
 H. M. Knight.

1865.
 Samuel T. Salisbury,
 Jeremiah W. Phelps,
 James Welch,
 John B. Derickson,
 B. B. North.

1866.
 Henry M. Knight,
 Josiah G. Beckwith,
 Henry Davis,
 Wm. Bissell,
 Henry S. Turrell.

1867.
 Josiah G. Beckwith,
 Ralph Deming,
 Samuel T. Salisbury,
 Henry S. Turrell,
 William S. Munger.

1868.
 Jeremiah W. Phelps,
 Josiah G. Beckwith,
 D. E. Bostwick,
 Francis J. Young,
 Wm. Woodruff.

1869.
 Henry M. Knight,
 Walter S. Munger,
 George W. Bell,
 J. W. Phelps,
 J. G. Beckwith.

1870.
H. W. Buel,
J. W. Bidwell,
B. B. North,
F. J. Young,
J. B. Derickson.

1871.
J. W. Bidwell,
Orlando Brown,
C. W. Bull,
T. S. Hanchett,
W. J. Beach,

1872.
Wm. Porter,
H. E. Gates,
Walter S. Munger,
Wm. W. Knight,
Remus M. Fowler.

1873.
Orlando Brown,
T. G. Wright,
William Deming,
Luther H. Wood,
J. B. Derickson.

1874.
R. M. Fowler,
R. S. Goodwin,
J. Knight Bacon,
H. W. Buel,
W. S. Munger.

1875.
W. J. Beach,
J. K. Bacon,
T. G. Wright,
Wm. Woodruff,
J. K. Bidwell.

WINDHAM COUNTY.

1792.
John Clark,
Elisha Perkins,
Elisha Lord,
A. Waldo,
Isaac Knight.

1793.
John Clark,
Elisha Perkins,
Elisha Lord,
A. Waldo,
Allan Campbell.

1794.
Elisha Perkins,
Elisha Lord,
Joseph Baker,
John Clark,
Jonathan Wall.

1795.
Elisha Lord,
Elisha Perkins,
Joseph Baker,
John Brewster,
Jonathan Hall.

1796.
Elisha Lord,
John Brewster,
Joseph Baker,
Joseph Palmer,
Leonard Bacon.

1797.
John Brewster,
Jonathan Hall,
Leonard Bacon,
Thaddeus Clark,
Penuel Hutchins.

1798.
John Brewster,
Joseph Palmer,
Leonard Bacon,
Thomas Hubbard,
Thaddeus Clark.

1799.
Jonathan Hall,
Leonard Bacon,
Thaddeus Clark,
Thomas Hubbard,
Penuel Hutchins.

1800.
Penuel Hutchins,
Leonard Bacon,
Jonathan Hall,
Thomas Hubbard,
Siah Fuller.

1801.
Penuel Hutchins,
Jonathan Hall,
Siah Fuller,
Thomas Hubbard,
Leonard Bacon.

1802.
Penuel Hutchins,
Robert Grosvener,
Siah Fuller,
Jonathan Hall,
Thaddeus Clark.

1803.
Penuel Hutchins,
Joseph Palmer,
Jonathan Hall,
Thaddeus Clark,
Siah Fuller.

* 1806.
Thomas Morse,
Jonathan Hall,
Thomas Hubbard,
Darius Hutchins,
Joseph Palmer, Jr.

1807.
Thomas Hubbard,
Joseph Palmer, Jr.,
Thomas Morse,
Siah Fuller,
Darius Hutchins.

1808.
Thomas Hubbard,
Siah Fuller,
Darius Hutchins,
Joseph Palmer, Jr.,
Thomas Morse.

1809.
Thomas Hubbard,
Joseph Palmer, Jr.,
Thomas Morse,
Robert Grosvener,
Andrew Harris.

1810.
Darius Hutchins,
Andrew Harris,
Rufus Johnson,
Erastus Bobinson,
Daniel Lyman.

1811.
Thomas Hubbard,
Joseph Palmer, Jr.,
Darius Hutchins,
Siah Fuller,
Andrew Harris.

1812.
Thomas Hubbard,
Siah Fuller,
Rufus Johnson,
Andrew Harris,
Daniel Lyman.

1813.
Penuel Hutchins,
Thomas Hubbard,
Rufus Johnson,
Siah Fuller.
Joseph Palmer, Jr.

1814.
Thomas Hubbard,
Penuel Hutchins,
Rufus Johnson,
Darius Hutchins,
Joseph Palmer, Jr.

1815.
Penuel Hutchins,
Thomas Hubbard,
Joseph Palmer, Jr.,
Andrew Harris,
Rufus Johnson.

1816.
Thomas Hubbard,
Darius Hutchins,
Joseph Palmer, Jr.,
Rufus Johnson,
William A. Brewster.

1817.
Thomas Hubbard,
Darius Hutchins,
Elijah Baldwin,
Charles Moulton,
Andrew Harris.

1818.
Thomas Hubbard,
Joseph Palmer, Jr.,
Andrew Harris,
Silas Fuller,
Penuel Hutchins.

1819.
Thomas Hubbard,
Andrew Harris,
Penuel Hutchins,
Joseph Palmer, Jr.,
William A. Brewster.

1820.
Same as 1819, an ad-
journd Conven-
tion.

1821.
Josiah Fuller,
Andrew Harris,
Earl Swift,
Joseph Palmer, Jr.,
Elijah Baldwin.

1822.
Thomas Hubbard,
Luther Manning,
Charles Moulton,
Earl Swift,
Archibald Welch.

1823.
Josiah Fuller,
Elijah Baldwin,
Waldo Hutchins,
Luther Manning,
Chester Hunt.

1824.
Josiah Fuller,
Joseph Palmer, Jr.,
Earl Swift,
Silas Fuller,
Harvey Campbell.

1825.
Andrew Harris,
Waldo Hutchins,
Chester Hunt,
William Webb,
Elijah Baldwin.

1826.
Andrew Harris,
Joseph Palmer,
Earl Swift,
Archibald Welch,
Luther Manning.

1827.
Josiah Fuller.
Joseph Palmer,
Harvey Campbell,
Asa Witter,
William A. Brewster.

1828.
Elijah Baldwin,
Darius Hutchings,
Hiram Holt,
William H. Cogswell,
Morey Burgess.

1829.
Andrew Harris,
Joseph Palmer.
Orin Witter,
William Hutchins,
Patrick Carpenter.

1830.
Elijah Baldwin,
Joseph Palmer,
Thomas Huntington,
William A. Brewster,
William Webb.

1831.
Hiram Holt,
Andrew Harris,
John G. Pierce,
Isaac Clark,
Samuel Bowen.

1832.
Luther Manning,
Chester Hunt,
Morey Burgess,
Patrick Carpenter,
James B. Whitcomb.

1833.	1841.	1849.
William A. Brewster, Harvey Campbell, William Grosvener, William Hutchins, Charles T. Morso.	Asa Witter, William Hutchins, William Witter, Eleazer Litchfield, William Webb.	Orrin Witter, Asa Witter, Charles H. Fuller, Fenner H. Peckham, DeWitt C. Lathrop.
1834.	1842.	1850.
Andrew Harris, David E. Hall, Wm. H. Campbell, Darius Hutchins, William Witter.	William H. Cogswell, William Witter, Chester Hunt, Asa Witter, Harvey Campbell.	Daniel A. Hovey, Samuel Bowen, Nathan S. Pike, William Witter, David E. Hall.
1835.	1843.	1851.
Hiram Holt, Eleazer Litchfield, Justin Hammond, Virgil M. Palmer, Morey Burgess.	Joseph Palmer, Henry H. Hough, James B. Whitcomb, Calvin B. Bromley, Nathan Adams.	William H. Cogswell, Justin Hammond, Lorenzo Marcy, Samuel Hutchins, Calvin B. Bromley.
1836.	1844.	1852.
Elijah Baldwin, Isaac Clark. Samuel Bowen, John G. Pierce, William Grosvener.	Morey Burgess, Dyer Hughs, Lorenzo Marcy, Orrin Witter, Cyrus Hutchins.	John Hill, Jr., Samuel Hutchins, Horace Burgess, J. B. Whitcomb, Joseph Palmer.
1837.	1845.	1853.
Andrew Harris, Daniel A. Hovey, William Witter, John H. Simmons, Orrin Witter.	William Witter, Justin Hammond, Milton Bradford, Nathan S. Pike, Chester Hunt.	Lewis Williams, Wm. Woodbridge, Nathan S. Pike, Stephen C. Riggs, Dyer Hughes.
1838.	1846.	1854.
Elijah Baldwin, Harvey Campbell, Chester Hunt, Wm. A. Brewster, Benj. B. Spalding.	Harvey Campbell, William H. Cogswell, Eleazer Litchfield, Fenner H. Peckham, Lewis Williams.	D. E. Hall, C. H. Rogers, T. W. Perry, E. Baldwin, Jr., H. Campbell.
1839.	1847.	1855.
Hiram Holt, William H. Cogswell, Darius Hutchins, Justin Hammond, Lorenzo Marcy.	William Witter, Daniel A. Hovey, David E. Hall, Hiram Holt, Lorenzo Marcy.	J. H. Simmons, H. W. Hough, DeWitt C. Lathrop, Wm. A. Lewis, D. A. Hovey.
1840.	1848.	1856.
William Hutchins, William Witter, Calvin B. Bromley, Eleazer Litchfield, John H. Simmons.	Hiram Holt, Joseph Palmer, Elijah Baldwin, Jr., William H. Cogswell, James B. Whitcomb.	Henry W. Hough, L. Holbrook, Calvin B. Bromley, Nathan S. Pike, Asa Witter.

- | | | |
|---------------------|-----------------------|------------------|
| 1857. | 1864. | 1871. |
| Hiram Holt, | D. B. Plimpton, | J. Hammond, |
| Edwin Hill, | J. H. Simmons. | L. Williams, |
| John Hill, Jr., | Joseph Palmer, | L. Holbrook, |
| Lewis E. Dixon, | E. A. Hill, | J. B. Whitcomb, |
| Thos. W. Perry. | Wm. A. Lewis. | T. M. Hills. |
| 1858. | 1865. | 1872. |
| Dyer Hughes, | Harvey Campbell, | Samuel Hutchins, |
| DeWitt C. Lathrop, | Calvin B. Bromley, | Edwin A. Hill, |
| Wm. Woodbridge, | Joseph Palmer, | John B. Kent, |
| Asa Witter, | Samuel Hutchins, | John Witter, |
| William A. Lewis. | E. Huntington. | Chas. Hosford. |
| 1859. | 1866. | 1873. |
| Samuel Hutchins, | James B. Whitcomb, | Wm. A. Lewis, |
| Justin Hammond, | Joseph Palmer, | F. O. Bennett, |
| Lowell Holbrook, | John McGregor, | E. Baldwin, |
| Lewis Williams, | Lowell Holbrook, | T. Morton Hills, |
| Wm. A. Lewis. | T. Morton Hills. | B. Robinson. |
| 1860. | 1867. | 1874. |
| J. Palmer, | Samuel Hutchins, | John Witter, |
| C. B. Bromley, | Charles Bliss, | E. A. Hills, |
| Wm. H. Cogswoll. | Hiram Holt, | Rienzi Robinson, |
| H. W. Hough, | John Witter, | T. M. Hills, |
| G. F. Barstow. | Calvin B. Bromley. | Omer La Rue. |
| 1861. | 1868. | 1875. |
| H. Campbell, | William A. Lewis, | H. Hough, |
| J. H. Simmons, | Lewis Williams, | E. A. Hills, |
| M. Bradford, | Eliphalet Huntington, | E. Huntington, |
| Jno. McGregor, | Samuel Hutchins, | A. E. Darling. |
| J. B. Whitcomb. | Lowell Holbrook. | L. Williams. |
| 1862. | 1869. | |
| Joseph Palmer, | Edwin A. Hill, | |
| Lewis Williams, | T. Morton Hills, | |
| Wm. Woodbridge, | John Witter, | |
| Edwin A. Hill, | Jas. B. Whitcomb, | |
| Lewis E. Dixon. | William Woodbridge. | |
| 1863. | 1870. | |
| Gideon F. Barstow, | Samuel Hutchins, | |
| Calvin B. Bromley, | Lewis Williams. | |
| Samuel Hutchins, | Eliphalet Huntington, | |
| Lewis Williams, | L. F. Bugbee, | |
| William Woodbridge. | Lowell Holbrook. | |

MIDDLESEX COUNTY.

1792.	1803.	1814.
Thomas Moseley, John Ely, John Osborn.	Thomas Moseley, William B. Hall, Elisha Mather.	Richard Ely, Jr., Samuel Carter, John Richmond.
1793.	1804.	1815.
Thomas Moseley, John Osborn, Elisha Phelps.	Thomas Moseley, William B. Hall, Smith Clark.	Richard Ely, Jr., Samuel Carter, Thomas Miner.
1794.	1805.	1816.
John Osborn Thomas Moseley, Ebenezer Tracy.	Thomas Moseley, Richard Ely, William B. Hall.	William Tully, Samuel Carter, Thomas Miner.
1795.	1806.	1817.
Thomas Moseley, John Osborn, John Ely.	William B. Hall, Smith Clark, Levi Ward.	William Tully, Samuel Carter, Thomas Miner.
1796.	1807.	1818.
Thomas Moseley, John Osborn, Richard Ely.	Richard Ely, Jr., Smith Clark, John Richmond.	William Tully, Jesse Bigelow, Thomas Miner.
1797.	1808.	1819.
Thomas Moseley, John Osborn, William B. Hall.	William B. Hall, Richard Ely, Smith Clark.	Austin Alcott. Gideon A. Dickinson. Thomas Miner.
1798.	1809.	1820.
Thomas Moseley, Ebenezer Tracy, William B. Hall.	No record.	Same as 1819. An ad- joined Convention.
1799.	1810.	1821.
Thomas Moseley, William B. Hall, Richard Ely.	Richard Ely, Jr., Smith Clark, Samuel Carter.	Thomas Miner, Samuel Carter, William Tully.
1800.	1811.	1822.
Thomas Moseley, Richard Ely, William B. Hall.	Richard Ely, Jr., Christopher Holmes, John Richmond.	Thomas Miner, Samuel Carter. Andrew F. Warner.
1801.	1812.	1823.
Thomas Moseley, William B. Hall, Richard Ely.	Richard Ely, Jr., Samuel Carter, John Richmond.	Thomas Miner, Samuel Carter, Andrew F. Warner.
1802.	1813.	1824.
Thomas Moseley, William B. Hall, Richard Ely.	Richard Ely, Jr., Samuel Carter, John Richmond.	Thomas Miner, Rufus Turner, Andrew F. Warner.

1825.	1837.	1849.
Thomas Miner, Samuel Carter, Frederick Morgan.	Charles Woodward, Thomas Miner, 2d, A. M. Holt.	Franklin Woodruff. B. F. Fowler, Ira Hutchinson.
1826.	1838.	1850.
Thomas Miner, Rufus Turner, Richard Warner.	Thomas Miner, Asa L. Spalding, F. W. Shepard.	Richard Warner, Datus Williams, Rufus Baker.
1827.	1839.	1851.
Samuel Carter. Edward S. Cone, Dan Platts.	Thomas Miner, Ira Hutchins, Richard Warner.	Alexander H. Hough, William H. Tremaine, G. C. H. Gilbert.
1828.	1840.	1852.
Samuel Carter, Henry Woodward, Rufus Turner.	Rufus Turner, G. H. Abernethy, B. H. Catlin.	George O. Jarvis, S. W. Turner, Asa H. King.
1829.	1841.	1853.
Samuel Carter, Henry Woodward, Thomas Miner.	Thomas Miner, 2d, Seth L. Child, Elisha B. Nye.	Elijah B. Nye, A. B. Worthington, Ira Hutchinson.
1830.	1842.	1854.
Samuel Carter, Richard Warner. Charles Smith.	Charles Woodward, Ira Hutchinson, Rufus Turner.	D. Harrison, F. W. Shepard, R. Baker.
1831.	1843.	1855.
Thomas Miner, Ira Hutchinson, Benj. H. Catlin.	William B. Casey, A. H. King, Datus Williams.	D. Williams, W. B. Casey, S. W. Turner.
1832.	1844.	1856.
Asa H. King. Samuel Carter, David Harrison.	Geo. O. Jarvis, F. W. Shepard, Horace Burr.	Charles Woodward, Elisha B. Nye, Benjamin M. Fowler.
1833.	1845.	1857.
Thomas Miner, Asa M. Holt, Caleb H. Austin.	Ira Hutchinson, A. M. Holt, Richard Warner.	Ira Hutchinson, Geo. W. Burke, G. C. H. Gilbert.
1834.	1846.	1858.
Richard Warner, S. B. Willey, Samuel Carter.	Hamilton Brewer, Rufus Baker, Ambrose Pratt.	Wm. B. Casey, Miner C. Hazen, F. W. Shepard.
1835.	1847.	1859.
Geo. H. Abertheny, Ira Hutchinson. Charles Smith.	Elisha B. Nye, A. H. King, Wm. H. Tremaine.	Elisha B. Nye, A. B. Worthington, Edwin Bidwell.
1836.	1848.	1860.
Joseph Barratt, Asa H. King, B. H. Catlin.	Wm. B. Casey, C. C. H. Gilbert, F. W. Shepard.	Ira Hutchinson, Jno. E. Blake, D. H. Hubbard.

1861.
R. Baker.
H. Burr,
S. W. Turner.

1862.
Miner C. Hazen,
G. C. H. Gilbert,
John E. Blake,

1863.
R. W. Mathewson,
George W. Burke,
Charles Woodward.

1864.
G. W. Burke,
S. W. Turner,
E. B. Nye.

1865.
Sylvester W. Turner,
Rufus Baker,
Ira Hutchinson.

1866.
Ira Hutchinson,
G. C. H. Gilbert,
Miner C. Hazen.

1867
Miner C. Hazen,
Edwin Bidwell,
Charles H. Hubbard.

1868.
Charles H. Hubbard,
Rufus W. Mathewson,
Elisha B. Nye.

1869.
Elisha B. Nye,
A. B. Worthington,
George W. Burke.

1870.
George W. Burke,
Rufus Baker,
Denison H. Hubbard.

1871.
M. C. Hazen,
F. D. Edgerton,
R. W. Mathewson.

1872.
Geo. O. Jarvis,
S. W. Noyes,
J. H. Grannis.

1873.
S. W. Turner.
Elisha B. Nye,
C. H. Hubbard.

1874.
A. B. Worthington,
M. C. Hazen,
C. A. Sears.

1875.
R. Baker.
D. A. Cleaveland,
C. E. Hammond.

TOLLAND COUNTY.

1792.
Ichabod Warner,
Jeremiah West,
Joseph Parker.

1793.
Ichabod Warner.
Jeremiah West.
Miner Grant.

1794.
Ichabod Warner,
Lewis Collins.
William Grosvener.

1795.
Ichabod Warner,
Joseph Parker,
Lewis Collins.

1796.
Ichabd Warner,
Jeremiah West,
Lewis Collins.

1797.
Ichabod Warner,
William Grosvener,
Simeon Field.

1798.
Ichabod Warner,
Jeremiah West,
Joseph Parker.

1799.
Ichabod Warner,
Jeremiah West.
Simeon Field.

1800.
Jeremiah West,
Nathan Howard,
Ruggles Carpenter.

1801.
Jeremiah West,
Ruggles Carpenter,
Nathan Howard.

1802.
Samuel Willard.
Ruggles Carpenter,
Nathan Howard.

1803.
Nathan Howard,
Ruggles Carpenter,
Samuel Willard.

1804.
Jeremiah West,
Ruggles Carpenter,
John S. Peters.

1805.
Jeremiah West,
Ruggles Carpenter,
John S. Peters.

1806.
John S. Peters,
Ruggles Carpenter,
Nathan Howard.

1807.
Ebenezer Hunt,
John S. Peters,
Ruggles Carpenter.

1808.
Ruggles Carpenter,
John S. Peters.
Eleazer McKray.

1809.
Ruggles Carpenter.
John S. Peters.
Nathan Howard.

1810.
 Samuel Willard,
 John S. Peters,
 Eleazer McKray.

1811.
 Nathan Howard,
 John S. Peters,
 Daniel Peck.

1812.
 John S. Peters,
 Daniel Peck,
 Rodolphus Ladd.

1813.
 Samuel Willard,
 John S. Peters,
 Judah Bliss.

1814.
 Nathan Howard,
 Rodolphus Ladd,
 Silas Fuller.

1815.
 Nathan Howard,
 John S. Peters,
 Daniel Peck.

1816.
 John S. Peters,
 Daniel Peck,
 Eleazer Hunt.

1817.
 Nathan Howard,
 John S. Peters,
 Daniel Peck.

1818.
 John S. Peters,
 Daniel Peck,
 John Grant.

1819.
 John S. Peters,
 John Grant,
 Samuel Simons.

1820.
 Same as 1819. An
 adjourned Convention.

1821.
 John S. Peters,
 Eleazer Hunt,
 Jabez L. White.

1822.
 John S. Peters,
 Nathan Howard,
 Eleazer Hunt.

1823.
 Nathan Howard,
 John Grant,
 Horatio Dow.

1824.
 John S. Peters,
 Eleazer Hunt,
 Joseph Sibley.

1825.
 Allen Hyde,
 Orrin Hunt,
 Abijah Ladd.

1826.
 Eleazer Hunt,
 Orrin Hunt,
 Alden Skinner.

1827.
 Jabez L. White,
 Abijah Ladd,
 Chauncey Burgess.

1828.
 Silas Fuller,
 Horatio Dow,
 Archibald Welch.

1829.
 Silas Fuller,
 Earl Swift,
 Oliver K. Isham.

1830.
 Eleazer Hunt,
 Orson Wood,
 Timothy Dimock.

1831.
 Earl Swift,
 Jabez L. White,
 Warren A. Fuller.

1832.
 Eleazer Hunt,
 Alden Skinner,
 Archibald Welch.

1833.
 Silas Fuller,
 Earl Swift,
 Oliver K. Isham.

1834.
 Ahijah Ladd,
 Horatio Dow,
 Warren A. Fuller.

1835.
 Joseph C. Dow,
 Earl Swift,
 Alvan Talcott.

1836.
 Jabez L. White,
 Horatio Dow,
 Alden Skinner.

1837.
 Archibald Welch,
 Wm. H. Richardson,
 Oliver C. Isham.

1838.
 Earl Swift,
 Joshua C. Blodget,
 Alden Skinner.

1839.
 Orrin C. White,
 Eleazer Hunt,
 Ahijah Ladd.

1840.
 Horatio C. Dow,
 Wm. H. Richardson,
 Joseph C. Dow.

1841.
 Timothy Dimmock,
 Jabez L. White,
 Ahijah Ladd.

1842.
 Orson Wood,
 Horatio Dow,
 Oliver K. Isham.

1843.
 Wm. H. Richardson,
 Ebenezer Lindsey,
 Wm N. Clark.

1844.
 Oliver K. Isham,
 Earl Swift,
 Horatio Dow.

1845.
 F. L. Dickinson,
 Alden Skinner,
 Orrin C. White.

1846.
 Ahijah Ladd,
 Norman Brigham,
 Charles T. Sumner.

1847.
 John H. Manning,
 Wm. N. Clark,
 Alden Skinner.

1848.
 F. L. Dickinson,
 Gilbert H. Preston,
 Alden Skinner.

1849.
 Adonijah White,
 Orson Wood,
 Elijah A. Woodward.

1850.
 Orrin C. White,
 Benj. N. Comings,
 Timothy Dimock.

1851.
 J. H. Manning,
 C. E. Hammond,
 Wm. H. Richardson.

1852.
 Gilbert H. Preston,
 Adonijah White.
 E. A. Woodward.

1853.
 Francis L. Dickinson,
 Ebenezer Lindsley,
 O. K. Isham.

1854.
 T. Dimock,
 W. N. Clark,
 Orson Wood.

1855.
 Orson Wood,
 G. H. Preston,
 H. S. Dean.

1856.
 Edwin G. Sumner,
 F. L. Dickinson,
 William N. Clark.

1857.
 Alden Skinner,
 Henry S. Dean,
 S. F. Pomeroy.

1858.
 John B. Lewis,
 Wm. N. Clark,
 Gilbert H. Preston.

1859.
 Charles F. Sumner,
 John B. Lewis,
 O. B. Griggs.

1860.
 Wm. H. Richardson,
 G. H. Preston,
 F. L. Dickinson.

1861.
 F. L. Dickinson,
 S. F. Pomeroy,
 G. H. Preston,

1862.
 Stephen F. Pomeroy,
 Wm. H. Richardson,
 N. G. Hall.

1863.
 William N. Clark,
 Edwin G. Sumner,
 A. R. Goodrich,

1864.
 C. F. Sumner,
 G. H. Preston,
 C. B. Newton.

1865.
 Stephen G. Risley,
 N. Gregory Hall,
 S. F. Pomeroy.

1866.
 G. H. Preston,
 Charles F. Sumner,
 O. B. Griggs.

1867.
 A. R. Goodrich,
 William N. Clark,
 C. B. Newton.

1868.
 Charles F. Sumner,
 Stephen G. Risley,
 Gilbert H. Preston.

1869.
 Wm. H. Richardson,
 Stephen G. Risley,
 Maurice B. Bennett.

1870.
 G. H. Preston,
 A. R. Goodrich,
 O. B. Griggs.

1871.
 J. A. Warren,
 S. G. Risley,
 Wm. N. Clark.

1872.
 G. H. Preston,
 A. R. Goodrich,
 J. N. Parker.

1873.
 S. G. Risley,
 M. B. Bennett,
 O. B. Griggs.

1874.
 F. L. Dickinson,
 C. F. Sumner,
 G. H. Preston.

1875.
 H. S. Dean,
 S. G. Risley,
 C. F. Sumner.

Committee of Examination first appointed in 1813.

1813	*Timothy Hall,	1814	1853	*E. Linsley,	1855
	*Joseph Foote,	1818		L. Williams,	1856
	*Siah Fuller,	1814	1854	*J. D. Ford,	1856
1814	*Thomas Hubbard,	1822		W. W. Welch,	1857
	*Nathan Strong, Jr.,	1818	1855	*Reynold Webb,	1857
1816	*Thomas Miner,	1824		B. H. Catlin,	1857
1818	*Warren R. Fowler,	1827	1856	*A. T. Douglas,	1858
1822	*Eli Todd,	1824		N. S. Pike,	1858
1824	*William Buel,	1827		*Charles Woodward,	1858
1825	*Samuel B. Woodward,	1826	1857	P. G. Rockwell,	1859
1826	*Silas Fuller,	1837		Benjamin D. Dean,	1859
1827	*Thomas Miner,	1828		James Welch,	1860
	*Elijah Middlebrook,	1828	1858	B. N. Comings,	1860
1828	*John O. Miner,	1829		*Wm. B. Casey,	1859
	*Conant Catlin,	1829		*Timothy Dimock,	1861
1829	*Thomas Miner,	1830	1859	*A. T. Douglas,	1861
	*Samuel B. Woodward,	1833		*S. B. Beresford,	1862
1830	*Conant Catlin,	1831	1860	Joel Canfield,	1862
	*Andrew Harris,	1833		Wm. Woodruff,	1863
1831	*Luther Ticknor,	1843	1861	Horace Burr,	1863
1832	*Archibald Mercer,	1834		Milton Bradford,	1864
1833	*Thomas Miner,	1834	1862	S. L. Child,	1864
	*Wm. S. Pierson,	1835		Lewis Barnes,	1865
1834	*Dyer T. Brainard,	1842	1863	D. P. Francis,	1865
	*Joseph Palmer,	1836		S. W. Rockwell,	1866
1835	*Earl Swift,	1843	1864	G. H. Preston,	1866
1836	*Milo L. North,	1837		Wm. B. DeForest,	1867
1837	*Thomas Miner,	1841	1865	P. W. Ellsworth,	1867
	*David S. Dodge,	1838		*H. N. Bennett,	1868
1838	*Milo L. North,	1839	1866	Ira Hutchinson,	1868
1839	*Jeremiah T. Denison,	1843		H. M. Knight,	1869
1841	*Archibald Welch,	1846	1867	P. M. Hastings,	1869
1842	*Charles Woodward,	1845		C. L. Ives,	1868
1843	*Silas Fuller,	1846	1868	*D. H. Hubbard,	1870
	R. M. Fowler,	1844		L. Williams,	1870
	Wm. H. Cogswell,	1847		Ira Gregory,	1871
1844	*Rufus Blakeman,	1847		*H. W. E. Matthews,	1871
1845	*Josiah G. Beckwith,	1848		C. F. Sumner,	1870
1846	*George Sumner,	1848	1869	A. Woodward,	1872
	*Richard Warner,	1847		L. S. Wilcox,	1872
1847	*H. A. Grant,	1849	1870	Rufus Baker,	1873
	*Earl Swift,	1849		L. Holbrook,	1873
	William Witter,	1850		F. L. Dickinson,	1874
1848	*Richard Warner,	1850	1871	T. S. Hanchett,	1874
	Alvan Talcott,	1851		D. A. Tyler,	1875
1849	*Hiram Holt,	1851	1872	*Geo. C. Jarvis,	1875
	*Orson Wood,	1852		Robert Hubbard,	
1850	P. A. Jewett,	1852	1873	B. B. North,	
	Benj. Welch,	1853		S. W. Turner,	
1851	Ashbel Woodward,	1853	1874	Geo. B. Farnam,	
	P. W. Ellsworth,	1854	1875	Gideon L. Platt,	
1852	*H. N. Bennett,	1854		Irving W. Lyon.	
	*J. G. Beckwith,	1855			

Committee to nominate Superintendent of Retreat for the Insane, first appointed at the Convention, 1823.

1823	*Thomas Hubbard,	1829	1853	F. L. Dickinson,	1856
	*Thomas Miuer,	1827	1854	P. A. Jewett,	1856
	*William Buel,	1824		D. P. Francis,	1857
	*Josiah Fuller,	1825	1855	*J. Knight,	1857
	*William Tully,	1824		Isaac G. Porter,	1858
1824	*Eli Ives,	1847	1856	David Crary,	1858
	*Silas Fuller,	1825		C. B. Bromley,	1859
1825	*William Buel,	1838	1857	*N. B. Ives,	1859
	*John S. Peters,	1838		*Geo. Blackman,	1860
1827	*Josiah Fuller,	1829	1858	B. B. North,	1860
1829	*George Sumner,	1831		Wm. Woodbridge,	1861
1831	*Samuel Carter,	1835	1859	G. B. Hawley,	1861
1835	*Thomas Miuer,	1838		Lewis Williams,	1862
1838	*George Sumner,	1842	1860	A. B. Haile,	1862
	*Eleazer B. Downing,	1845		R. Hubbard,	1863
	*Samuel W. Gold,	1842	1861	H. W. Buel,	1863
1839	*Amariah Brigham,	1840		G. H. Preston,	1864
1840	*Richard Warner,	1846	1862	Isaac G. Porter,	1864
1842	Benjamin Welch, Jr.,	1843		Jno. E. Blake,	1865
	Wm. H. Cogswell,	1843	1863	*C. B. Bromley,	1865
1843	*Samuel Buel,	1844		Wm. Scott,	1866
	*Jabez L. White,	1845	1864	A. W. Barrows,	1866
1844	*Norman Lyman,	1845		*J. G. Beckwith,	1867
1845	I. G. Porter,	1847	1865	H. Pierpont,	1867
	*Samuel Beach,	1848		G. W. Russell,	1868
	William Witter,	1847	1866	R. Hubbard,	1868
1846	*Johnson C. Hatch,	1849		G. H. Preston,	1869
1847	David S. Dodge,	1848	1867	Wm. Woodruff,	1869
	*R. M. Woodruff,	1849		E. B. Nye,	1870
	*Sturges Bulkley,	1850	1868	J. C. Jackson,	1870
1848	*Hiram Holt,	1849		Isaac G. Porter,	1871
	*Worthington Hooker,	1851	1869	Samuel Hutchins,	1871
1849	Ashbel Woodward,	1851		H. M. Knight,	1872
	Orrin Witter,	1852	1870	P. M. Hastings,	1872
	*Thomas Miner,	1850		G. L. Platt,	1873
1850	William Witter,	1851	1871	C. M. Carleton,	1873
	*Rufus Blakeman,	1853		J. B. Whitcomb,	1874
1851	George Dyer,	1852	1872	Wm. Porter,	1874
	Wm. H. Cogswell,	1853		E. K. Hunt,	1875
	*J. G. Beckwith,	1853	1873	J. R. Cummings,	1875
1852	A. Talcott,	1854		Wm. Deming,	
	Archibald Welch,	1854	1874	A. Woodward,	
	*S. T. Salisbury,	1855		Melancthon Storrs,	
1853	Myron W. Wilson,	1854	1875	E. K. Hunt,	
	L. Thurston,	1855		Jas. R. Cumming.	

Committee for the nomination of Professors in Yale College, first appointed in 1810.

1810	*John R. Watrous,	1812	1811	*Joseph Foot,	1812
	*Mason F. Cogswell,	1812		*Obadiah Hotchkiss.	1812
	*Eli Ives,	1811			

Standing Committee for the nomination of Professors, first appointed in 1816.

1816	*Mason F. Cogswell,	1825	1850	*Johnson C. Hatch,	1852
	*Thomas Hubbard,	1827		*Josiah G. Beckwith,	1853
	*Nathan Strong, Jr.,	1817	1851	A. M. Huxley,	1852
1817	*William Tully,	1821		E. H. Bishop,	1853
1818	*Thomas Miner,	1821		*Justin Hammond,	1854
1821	*Eli Todd,	1824	1852	R. M. Fowler,	1854
1824	*Elijah F. Reed,	1825		Robert Hubbard,	1855
1825	*Thomas Miner,	1827	1853	O. K. Isham,	1855
	*Samuel B. Woodward,	1827		William C. Williams,	1856
1827	*Jehiel Williams,	1829	1854	*Wm. B. Casey,	1856
	*Isaac Jennings,	1829		David Harrison,	1857
	*Joseph Palmer,	1828	1855	E. K. Hunt,	1857
1828	*Elijah Middlebrook,	1829		R. M. Fowler,	1858
1829	*Eli Todd,	1834	1856	Wm. N. Clark,	1858
	*Andrew Harris,	1830		R. Hubbard,	1859
	*Thomas Miner,	1832	1857	L. N. Beardsley,	1859
1830	*Luther Ticknor,	1831		Jno. Hill, Jr.,	1858
1831	*George Sumner,	1832	1858	*Rufus Blakeman,	1860
1832	*Joseph Palmer,	1834		Wm. Woodruff,	1860
	*Henry Woodward,	1833		Jno. B. Lewis,	1861
1833	*Dyer T. Brainard,	1834	1859	*A. Morrison,	1861
	*George Sumner,	1836		B. H. Catlin,	1862
	*Silas Fuller,	1834	1860	Wm. H. Richardson,	1862
1834	*Rufus Blakeman,	1836		D. H. Hubbard,	1863
	*Milo L. North,	1836	1861	R. A. Manwarring,	1863
	*Andrew Harris,	1840		H. M. Knight,	1864
	*Gaylord Wells,	1835	1862	*J. Palmer,	1864
1835	*Elisha North,	1836		R. Deming,	1865
1836	*Joseph Palmer,	1839	1863	G. L. Platt,	1865
	*William S. Pierson,	1842		D. A. Tyler,	1866
	*Sturges Bulkley,	1842	1864	S. W. Rockwell,	1866
	*Isaac Goodsell,	1843		C. F. Sumner,	1867
1839	*Josiah G. Beckwith,	1842	1865	S. G. Risley,	1867
1840	*Rufus Turner,	1842		*S. T. Salisbury,	1868
1842	*Silas Fuller,	1843	1866	C. E. Hammond,	1868
	William Witter,	1843		J. B. Whitcomb,	1869
	*Orson Wood,	1843	1867	J. B. Lewis,	1869
	*Norman Lyman,	1843		L. S. Paddock,	1770
1843	William S. Pierson,	1847	1868	H. Pierpont,	1870
	*Reynold Webb,	1847		H. P. Stearns,	1871
	*Worthington Hooker,	1844	1869	Robert Hubbard,	1871
	James B. Whitcomb,	1844		S. G. Risley,	1872
	*Elijah Middlebrook,	1845	1870	D. L. Daggett,	1872
1844	Ashbel Woodward,	1848		H. W. Buel,	1873
	Henry C. Beardsley,	1845	1871	E. B. Nye,	1873
1845	R. M. Fowler,	1846		Samuel Lynes,	1874
	E. K. Hunt,	1848	1872	C. M. Carleton,	1874
1846	*George Blackman,	1849		H. S. Fuller,	1875
1847	*N. B. Ives,	1849	1873	G. B. Hawley,	1875
	George B. Hawley,	1850		H. W. Buel,	
1848	Wm. H. Cogswell,	1850	1874	S. G. Risley,	
	*Alden Skinner,	1851		Joel Canfield,	
1849	*Elijah Middlebrook,	1851	1875	Isaac G. Porter,	
	*Norman Lyman,	1851		E. Huntington.	

Catalogue of those who have received the Honorary Degree of Doctor of Medicine from the Connecticut Medical Society, and from the Corporation of Yale College.

	1793.	*Leverett Hubbard, Now Haven.	*Solomon Everest, Canton,
		*Elihu Tudor, East Windsor.	*Joseph Foot, North Haven.
	1794.		1814 by Society.
		*Æneas Munson, New Haven,	*Richard Ely, Saybrook.
		*Seth Bird, Litchfield,	Recommended 1815, conferred 1816.
		*Benjamin Rush, Philadelphia, Pa.,	*Joseph Palmer, Ashford,
		*Samuel Bard, New York,	*Jesse Carrington, Colebrook,
		*John Bard, New York.	*Sylvester Wells, Hartford,
	1795.		*John O. Miner, Groton.
		*James Potter, New Fairfield,	Recommended 1816, conferred 1817.
		*Thomas Moseley, East Haddam.	
	1796.		*William Shelton, Stratford,
		James Clark,	*Philemon Tracy, Norwich,
	1897.		*Simeon Field, Enfield,
		Thaddeus Betts.	*Penuel Hutchins, Killingly.
	1798.		Recommended 1817, conferred 1818.
		*Jared Potter, Wallingford,	*Thomas Coit, New London,
		*Theophilus Rogers, Norwich.	*W. R. Fowler, Washington,
	1799.		*Nathan Howard, Coventry,
		*John Warren, Boston, Mass.	*John S. Peters, Hebron,
	1802.		*Avery Downer, Preston.
		*Jos. Hamilton, Hudson, N. Y.	Recommended 1818, conferred 1819.
		A. Tomlinson, Milford,	*Thomas Miner, Middletown,
		*John Spaulding, New Haven,	*William Buel, Litchfield,
		*Hosea Hurlburt, Hartford.	*William Tully, Middletown.
	1804.		*David Hunt, †
		*Jeremiah West, Tolland,	Recommended 1819, conferred 1820.
		*J. R. Watrous, Colchester,	
		*Samuel Mather, Lyme,	*Samuel Rockwell,
		*William Eustis, Boston, Mass.	*Joseph Palmer, Jr., Ashford.
	1807.		1822.
		*Joseph Trowbridge, Danbury.	*S. B. Woodward, Wethersfield,
	1809.		*E. F. Reed, East Windsor,
		*M. F. Cogswell, Hartford,	*Jehiel Williams, North Milford,
		*Levi Ives, New Haven,	*Nathau Tisdale,
		*Eli Perry, Newtown,	*Samuel Carter, Saybrook,
		*Gideon Shepard, Pomfret,	*Thomas Goodsell,
		*Thomas Hubbard,	1823.
		*Samuel Woodward.	
	1811.		*Josiah Fuller, Plainfield,
		*Eli Ives, New Haven.	*Austin Olcott, Killingworth,
	1812.		*Silas Fuller, Columbus,
		*John Barker, New Haven,	*Isaac J. Hough,
		*Timothy Hall, East Hartford.	1824.
	1813.		*Andrew Huntington, Ashford,
		*Daniel Sheldon, Litchfield,	*Noah A. Lacy, Brookfield,
		*Eli Todd, Farmington.	*T. P. Beers, New Haven,
		*Elisha North, New Haven.	*Allen Hyde, Ellington,
		Recommended 1814, conferred 1816.	*Henry Mitchell, †
		*Nathaniel Perry, Woodbury.	
		*John Bester, Simsbury,	

† By Yale College alone.

Recommended 1844, conferred 1845.		Sabin Stocking,	Glastenbury,
*Benj. Rogers,	Hartford,	*J. D. Wilcox,	Granby,
*George Blackman,	Westport,	Lewis Richards,	New Canaan,
*Orrin Witter,	Chaplin,	*Prof. Jno. A. Porter,	New Haven,
R. A. Manwaring,	Ledyard.	Henry Aldrich,	Rhode Island.
1845.		1855.	
S. S. Noyes,	New Canaan,	Sidney W. Rockwell,	East Windsor,
*S. P. Wattles,	North Stonington,	S. Waldo Hart,	New Britain,
G. H. St. John,	Gaylord's Bridge.	*Warren Thrall,	Glastenbury,
1846.		Erastus Bancroft,	Wolcottville.
G. O. Sumner,	New Haven,	1856.	
*Chauncey Burgess,	Norwich,	*Jno. A. Tomlinson,	Harrodsburg, Ky.,
*G. O. Jarvis,	Portland,	Gilman Kimball,	Lowell, Mass.,
*Joseph C. Dowe,	Stafford.	*Chester Hamlin.	Granby.
1847.		1857.	
Daniel A. Hovey,	Killingly,	Ralph Deming,	Sharon.
Joel Canfield,	Guilford,	1858.	
*Orrin C. White,	Hebron.	Nathaniel D. Haight,	Stamford.
1848.		Recommended by the Society but not granted by Yale College.	
J. P. Converse,	Enfield.	1859.	
1849.		John Boardman Trask,	California.
Wm. N. Clark,	Stafford,	1867.	
*E. Skinner,	Ashford.	Abraham Hosen Robinson,†	
1850.		By Yale College without recommenda- tion from the Conn. Med. Soc.	
*Merrill W. Williams,	New York,	1868.	
*Adonijah White,	Andover.	John Gray,	Groton.
1852.		1870.	
*Wm. B. Nash,	Bridgeport.	Nathaniel Drake Haight,	Stamford.
1853.			
†John Wortabet,	Syria.		
Recommended 1854, conferred 1855.			
Ashbel Woodward,	Franklin,		

Previous to 1793 Yale College conferred the Honorary Degree of Doctor of Medicine. From 1793 to 1813 inclusive, Honorary Degrees were conferred by the Connecticut Medical Society in accordance with its Charter, and during that time the Honorary Degree of Doctor of Medicine was not conferred by Yale College in any case, so far as we (Secretary of Conn. Med. Soc.) can ascertain. When the Medical College was organized and went into operation the Medical Society by agreement with Yale College ceased to act independently in conferring degrees.

The Charter of the Medical College, after providing for degrees to be conferred by examination, provided that "The President of the College may also confer the *Honorary* Degree of Doctor of Medicine upon those persons whom the President and Fellows of the Medical Society shall recommend for that purpose."

† Conferred by Yale College without the recommendation of the Conn. Med. Society.

In the foregoing list, after 1813 the Honorary Degree was conferred by the President of the College on the recommendation of the Medical Society except those marked thus (†) where the degree was conferred by the vote of the President and Fellows of Yale College without any advice from the Medical Society. Previous to 1820 the Annual Convention was held in October and degrees recommended by the Convention were not conferred until Commencement in the following year.

EXCHANGES.

According to the By-Laws of the Society, Chap. II, Sec. 5, p. civ, the Secretary is required to send a copy of our Proceedings to other State Societies. This rule has been complied with so far as the organization of other State Societies is known. We have in return received the Proceedings of other societies and learned bodies as follows:

1. The Maine Medical Association. This is an enterprising organization which admits regularly educated female practitioners. The Society meets at Portland the second week in June and continues its session three days. Charles O. Hunt, M.D., of Portland, Permanent Secretary. Their Transactions form a pamphlet of a little over 100 pages annually.

2. The New Hampshire Medical Society holds its Annual meeting, a two day's session, at Concord, the second week in June. G. P. Cohn, M.D., of Concord, Secretary. Their Transactions comprise about 100 pages, and contain valuable reports on Climatology, together with the Annual Address of their President, and other interesting papers.

3. The Vermont Medical Society, L. C. Butler, M.D., of Essex, Secretary, holds its Annual Meeting the second week in June, a two days session. A pamphlet of 160 pages holds their Transactions for three years. But the Vermont Medical Society appears to be remarkable for its social qualities. The Vermont Medical Society, together with the Vermont Pharmaceutical Association, hold a Semi-Annual Meeting and make excursions to the noted mountain resorts, where they invite their friends of their own and other States, and combine the literary and social in delightful harmony.

4. The Massachusetts Medical Society is a well known and large society, meeting in Boston the second week in June. They hold an adjourned meeting in October. Francis W. Goss, M.D., of Roxbury, is Recording Secretary, Chas W. Swan, M.D., of Boston, Librarian. The meetings of this Society are grand social gatherings duly seasoned with an address by the President and a goodly show of scientific papers. Their Annual Proceedings and Transactions comprise about eighty pages.

5. The Medical Society of Rhode Island holds its Annual Meeting the second week in June. It holds Quarterly Meetings in September, December and March.

6. The Medical Society of the State of New York, Wm. H. Bailey, M.D., of Albany, Secretary, is a very large society, too well known to require any statements from us. This society meets in Albany the first Tuesday in February and continues its session three days. They also admit well educated female physicians. Their Transactions form a goodly octavo volume each year. One of the best papers in the last volume is on Histology, by a lady, Miss ————. Until recently the Transactions of the N. Y. State Medical Society were published by the State, as were also the Transactions of the N. Y. Homeopathic Society. All this is now changed and the Proceedings show a decided improvement.

7. The New Jersey Medical Society, Wm. Pierson, Jr., M.D., Secretary. This Society celebrated its Centennial in 1866. This Society meets the fourth week in May. Their Transactions form a thick volume of about 300 pages, embracing a large amount of information on sanitary affairs collected from all parts of the State.

8. The Pennsylvania Medical Society, Wm. Atkinson, M.D., Secretary, meets the second week in June. Their Transactions for 1874 form a volume of 454 pages. This volume contains reports from twenty counties on matters of general interest to the profession, and ten articles by some of the ablest physicians and surgeons in the State. The College of Physicians and Surgeons of Philadelphia send their Proceedings and receive ours in exchange.

9. The Seventy-fifth Annual Session of the Medical and Chirurgical Faculty of Maryland, W. G. Regester, M.D., of Baltimore, Secretary, met in April, 1874. Their Transactions form a volume of about 200 pages.

10. Medical Society of Virginia, Fifth Annual Session, Oct. 1874. Transactions 78 pages.

11. Twenty-first Annual Meeting of the Medical Society of North Carolina, James McKee, M.D., of Raleigh, Secretary, was held at Charlotte, May, 1874. Transactions 134 pages.

12. The South Carolina Medical Association held its Seventh Meeting since its reorganization at Charleston, April 13 and 14, 1875; Dr. J. S. Buist, Cor. Sec.; H. D. Fraser, M.D., Rec. Sec. Their Transactions comprise about 200 pages.

13. Transactions of the Medical Association of Alabama, 28th Session, 1875, 360 pages; Benjamin H. Riggs, M.D., of Selma, Secretary. This volume is fully equal in apparent ability and interest to any of our exchanges.

14. The Michigan State Medical Society, Geo. E. Ranney, M.D., Secretary, sends a volume of about one hundred pages for the year 1874. School Hygiene, Ophthalmology, and Operative Surgery are treated by live men.

15. The Illinois State Medical Society, T. Davis Fitch of Chicago, Permanent Secretary, is represented by a bound volume of Transactions of 250 pages for the year 1874.

16. The Minnesota State Medical Society, Chas. E. Smith, M.D., of St. Paul, Rec. Sec., and J. E. Bowns, M.D., of St. Peter, Cor. Sec., publishes Transactions for 1874, 86 pages.

17. The Wisconsin Medical Society, J. T. Reeve, M.D. of Appleton, Secretary, publishes interesting Transactions of about 175 pages annually.

18. Proceedings of Nebraska Medical Society, 1872, were received.

19. Colorado Medical Society sent Proceedings for 1873.

20. Proceedings of the Kentucky Medical Society were received for 1873.

21. Proceedings of the Medical Association of the State of Arkansas, Fifth Annual Session, 1874. The Proceedings of this Society have been received for three years.

22. From the Transactions of the Medical Society of California, 1872-3 and 1874-5, we learn that our profession on the Pacific coast are active workers.

We regret that neither time nor space allows us to give more extended notices of the Transactions of our sister Societies. To all these we return the Transactions and cordial greetings of the Connecticut Medical Society.

M. C. WHITE, *Secretary.*





