

INAUGURAL ADDRESS,

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BY ALFRED CARPENTER, M.D.,

VICE-CHAIRMAN OF THE COUNCIL.

Delivered December 7th, 1881.

GENTLEMEN OF THE SANITARY INSTITUTE,

It is my duty, in the absence of your Chairman, to preside on this occasion. I am a poor substitute for so accomplished a Hygeist as Professor de Chaumont, but I will do my best to occupy his place. I congratulate you most heartily upon the position which the Sanitary Institute of Great Britain occupies at this present time, notwithstanding the impediments which have been placed in the way of its progress by bodies who imagine themselves to be its rivals, as well as by the difficulties which have had to be encountered in founding a corporation upon so diversified a basis as that which we have taken as our area. I may instance the successes which have attended the congresses held first at Leamington, then at Stafford, then at Croydon, and last year at Exeter. These have given a solidarity to our body, and have placed its objects so forcibly before the public, that it might seem superfluous to urge the points which I propose this evening to submit to your notice. It has been said, and I think with justice, that a corporation like ours which is without pecuniary endowments, and without substantial income from some regular source, can scarcely expect to become an institution which shall be on a firm basis, and capable of influencing public opinion, unless its claims to support are such as are undoubted, and its members much larger in numbers than are at present our own. I wish this evening to point out, not so much for your information as for that of the public at large, the claims for recognition which the Sanitary Institute has upon the general public, and its right to be regarded as one of the necessary institutions of the country.

The volumes of transactions which have been published are standing witnesses of the work which the Institute has already performed. The list of Surveyors and Inspectors of Nuisances

who have obtained the certificate of the Institute, points to the fact that it is in actual operation, whilst the ignorance which has been evinced by some of the rejected candidates for those diplomas, and who already hold office under local boards and town councils, points out in a most decided manner the necessity for better education upon the points which are put forth in the syllabus of the Institute as those necessary for their members to be acquainted with.

Before proceeding to discuss the claims which the Institute has for public support, and the foundations upon which it ought to base its application for a Charter of Incorporation, I may be allowed to refer to the obstacles which have already appeared in its path, and which have postponed the consummation of this object. There has been opposition from members of established bodies who appear to think that the Sanitary Institute is likely to encroach upon the functions of the older bodies and to usurp their privileges. I wish to point out the error of this course of procedure, and to insist upon the fact that there is no antagonism between the bodies in question and our own. I can of course deal only with objections which have been made by individuals to myself, and with which I am personally acquainted.

It has been said that the Sanitary Institute is antagonistic to the *Social Science Association*, and some men have declined to help the one because they belong to the other, and see no object in the establishment of both. I contend that the Sanitary Institute is the legal offspring of the Social Science Association; the natural result of the teachings of social science, and that so far from being antagonistic they stand in the relationship of father and son, and as such ought to have a natural affection for each other. The Sanitary Institute by its certificate proposes to remove one of the many evils which have been so resolutely exposed at Adam Street, Adelphi, viz., the fact that there was no means of knowing the duties of sanitary inspectorship except by learning them after appointment to office; and that sanitary authorities could not tell whether those applying were qualified for the office they proposed to fill. That in electing men as surveyors and inspectors they elected those who had most influence with the electors from personal consideration rather than from any knowledge of the work they were undertaking to perform. The result has been, as is well known to the Social Science Association, that nineteen-twentieths of the inspectors appointed to do sanitary work have no really skilled knowledge of the work they are called upon to perform, because until the Institute was founded there was no guide upon such matters to whom the public could go for undoubted information, and for a stamp of fitness to do the work. The Sanitary Insti-

tute does not encroach upon the Social Science Association in any way, except so far that it organises a sanitary exhibition in the town which it visits, and makes that a financial success which in the hands of the Social Science Association has generally been held at a loss either to the Association or to the local Committee. The Sanitary Institute, however, sees no reason why the Social Science Association, as well as other kindred bodies, should not continue their exhibitions at their places of meeting, if they think fit, as likely to spread better notions upon Sanitary work among the general public, which it is the aim of both bodies to effect, and I have no doubt but that each will assist the other. For until the general public have far better notions upon the scope of that work than they have at present, it will be a long time before the benefits to be derived from such exhibitions will be slight, and the necessity for the performance of that function of the association will cease to exist.

I am told that some of the members of the Royal Institute of British Architects are opposed to this Institute obtaining a charter; and that a similar antagonism exists among some of the Surveyors and the Engineers. If we were proposing in any way to educate and examine men so as to fit them for the profession of an architect, of a surveyor, or of an engineer, there would be a reason for this antagonism; but it would be quite out of our province to propose anything of the kind, or in any way to come into antagonism with those bodies in their professional work. It is true that an architect ought to know the principles of public health, so far as they are connected with house-building, and that an engineer should be acquainted with the principles of sanitary science, so far as they are associated with sewage and water supply, and that surveyors could not be fitted for their duties if they did not know how to advise a highway board or a sanitary authority upon the right way to prevent nuisance. But these very points are those which the bodies in question have no means of knowing except from outside help, and especially that help which is forthcoming from members of the medical profession and professed hygeists. It would be far better for each of those bodies to do as the medical corporations are now doing with regard to general education—be content with a certificate from a recognised teaching authority—rather than to examine for themselves into matters which are outside their own immediate work: and it must be acknowledged that vital statistics and the laws of health are no part of the work belonging to either architects, engineers, or surveyors, as such, any more than the teaching of mathematics, or of Greek, or of Botany, are to the medical man. Foundations they may be upon which the science of medicine may rest, but no more necessarily belonging

to it than is the analysis of the water of an underground stream to the work of an engineer.

There is a still more important reason why the Institute should be recognised, and even supported, by the bodies I have just mentioned. Neither of those bodies would trouble themselves to provide an education, and a test of its appropriation, to the large class of men who are now necessary parts of our great sanitary army, viz., the local surveyors in small districts, and the sanitary inspectors of the whole of the kingdom. It is upon the knowledge possessed by these men that architects and engineers have very often to rest. The information obtained from these men is sometimes the basis upon which the professions I have mentioned have to act in deciding upon their own work. The depth of the foundations of a house, or the direction in which a sewer shall be laid, is very often determined by information obtained from men who are totally ignorant of the first principles which ought to guide the members of established institutes of the country in their own immediate work. I think our Institute ought therefore to look to the older corporations for assistance in its labours : for help, not for antagonism, in smoothing away its difficulties. It is to some of them that we should, and do, naturally look for assistance in our work, for some of their members guide our destinies, and take part in promoting our work in connection with the medical element in the council, work which cannot be brought into their own institutes or act in any way as part of their corporations. It would be quite as reasonable for the medical corporations and the British Medical Association to oppose our design from fear that we proposed to provide medical officers of health and medical attendants upon the poor, as for architects or engineers to think that we should in any way encroach upon their domains.

The importance of the duties which surveyors and inspectors of nuisances have to perform is more patent to medical men than to any other distinct class of persons. The ignorance which exists among these officials is marvellous, and yet these men very often guide the health committees of our vestries, our town councils, and our local boards, upon points which are intimately connected with the health of the people, and they are used very often for counteracting the activity of the medical officer of health. No wonder that small progress is made in our work : no wonder that the action of sanitary authorities is unsatisfactory, when the minor details upon which the principal success of the whole is often dependent are carried out in a way which enables the sanitary authority to show to the expert the best way of "*how not to do it.*"

Having dealt with the main object of the Institute, perhaps I

may now be allowed to glance at a few of the subjects which are at this moment most interesting to us as students in the Science of Health, and which come properly before us as part of our work. I will refer first to the existence of fever.

Typhus is amongst us, not to any extent, but there are, or have recently been odd, and only odd cases, in all the principal divisions of the metropolis. The appearance of these odd cases is suggestive of that which the Lisson Grove outbreak has shown us to be possible, if circumstances should arise which should compel people to keep themselves warm by aggregation. Let us understand that the germs or factors of typhus are among us, and it only wants cold, bad food, and close quarters to repeat an outbreak similar to that at Lisson Grove in every crowded part of London. There is, unfortunately, a conflict of sanitary authority still among us. The police have the care of lodging houses, and have to put sanitary laws in force; they have nothing to do with houses full of people, if the place is not registered as a lodging house; whilst the sanitary authority has no right of entry at night, when the over-crowding is in actual operation. In the majority of instances it is to the interest of the occupants of these over-crowded dwellings not to disclose the fact of the over-crowding which does take place, and as a consequence the germs of typhus and relapsing fever are sometimes spread broadcast before the existence of the disease in a given house is even suspected. The sanitary care of lodging houses, in regard to over-crowding, should be with the sanitary authority, with the assistance of the police, and should not be taken out of their hands by the latter, whilst there should be a power to enter in the night any house let out in tenements, whenever there is reason to suspect that there are too many occupants in any of the rooms thus let out as distinct apartments. Again, it is not right that there should be any conflict between the sanitary authority and the destitution authority. The care of the sick should be placed entirely in the hands of the sanitary authority, whilst the destitution authority should look after the able-bodied, the aged, and the infirm, and provide the funds for the expenses which may be incurred in looking after the sick paupers. By this means sickness alone would not be, and should not be, in any way connected with the pauperism of a given individual, as cause and effect.

Leaving typhus, let us look at typhoid, or gastric, or enteric fever. Every autumn for some years past this disease has appeared in our midst, and the mortality rises or falls in numbers in close attendance upon the rise and fall of the temperature of the water, and of the soil. Like to typhus the germs are every

where,—they only require to come from a case of the disease as excreta, and to find their way into the water-supply of a given district, when that water is a little warmer than usual, and when oxidation is rapidly appropriating the oxygen naturally contained in that water, to produce an epidemic in any or almost every part of London. As far as London is concerned, if its water supply continues to be taken as heretofore, from streams polluted with crude sewage, the epidemic, some day, will, in my opinion, come with fearful intensity when the temperature of the Thames water is raised a few degrees more than it has been during the past summer. Cases will then be very numerous in all parts of London, except that supplied by the Kent Water Works, and the sewers will become loaded with excreta in sufficient quantity to infect the whole mass of sewage, and enable the gases of decomposition which now arise from badly constructed sewers to carry the factors of mischief in every direction infecting water and milk, and several other articles of food which may be exposed to their influence. The sewers being warmed by the hotter season will give out in autumn and in a mild winter sufficient morbid matter to generally continue sporadic cases, even after the temperature of the Thames water has been reduced to its ordinary standard. For as the sewers of London are now constructed it is very possible in any given place into which typhoid excreta are thrown—such excreta not having been previously disinfected—for them to come into contact with some warm sewage, the warmth having been obtained from the waste-pipe of some steam-engine, or from some hot refuse from a manufactory, the germs of the disease would then multiply to a very considerable extent, and be distributed throughout the district which that sewer provides for. The real remedy for this state of things, is the ruthless exclusion of excreta from every part of the course of the Thames, and every other stream above the intake of water companies, unless that sewage has been previously most thoroughly utilised by irrigation; that principle alone has the power to abstract the factors of disease from the water in which they may be suspended, and in which, unless they be utilised in a proper manner, or destroyed by chemical action, they are certain to increase and multiply in a most rapid manner. Exclude all crude sewage from the Thames, and insist upon the sewers of London being self-cleansing, and not as they are now—simply sewers of deposit, and, in my opinion, typhoid would disappear as an epidemic, and be seldom present amongst us even in its sporadic form.

The subject of summer diarrhœa is intimately associated with that of typhoid. The cause which will produce the one will not fail, under some other conditions, to give rise to the other.

The prime factor is the same in each case, distributed, it is true, in a somewhat different manner, but both requiring the steady opposition of the local sanitary authority to a continued soaking of subsoil with unutilised excreta, and an intelligent supervision of their work by skilled inspectors.

There is a point in this part of the case which would be worthy of enquiry and continued observation by members of the Institute, and which requires a series of observations in numerous places at the same moment to be worth anything, viz.: the variation of the temperature of the soil and its relationship to the quantity of carbonic acid in the ground air, the ground water, and in the atmosphere proper. I believe that there is an intimate relationship between summer diarrhœa, temperature, and moisture, and the presence of an excess of carbonic acid in the subsoil, or in the water. It is in such conditions that the factor, capable of producing typhoid and summer diarrhœa, can assert its individuality.

I may, perhaps, be permitted also to make a few observations upon the subject of small-pox. The Government has, as you are aware, appointed a Commission to inquire into the subject of hospital accommodation for infectious diseases in the Metropolis, consequent upon the dead-lock which has followed the legal decision given in the Hampstead Hospital and Fulham Hospital cases. As I have the privilege of being a member of this Commission you will not expect me to make any revelations as to our plans or our designs.

I can say that the district in which I reside is adequately provided with hospital accommodation for infectious diseases, but, unfortunately, that hospital is in the hands of the destitution, and not in those of the sanitary authority. I have endeavoured to procure a transference of the buildings from the one body to the other, but such is the greed for power on the part of the Local Guardians, that they refuse to part with their hospitals to the Local Board of Health, by which means the hospitals might be made much more useful for the purposes for which they have been erected than they are at present. It has been shown that 80 per cent. of the patients admitted into the Metropolitan Asylums' Hospitals were not paupers. It follows that hospitals in the hands of sanitary authorities proper, will be four times more useful than they are now in our case, in which their operation is mainly limited to the pauperism of the district, and as a consequence they are scarcely used at all, at least in the general way in which they would be if they were not in the hands of the Guardians of the poor. I think it may be taken as an established fact that the pauper class (excluding the casuals) are much better

protected against the effects of small-pox than the class immediately above them, and who are more under the influence of those fanatics, who object to vaccination, and who provide the funds by means of which that inane objection is kept alive. The subject of hospital accommodation for infectious diseases is one which should be considered by the Council of this Institute, and it would assist the Commission if some evidence was formulated, and, with the approval of the Council, tendered to the Commission as the united opinion of the Council of the Sanitary Institute. This, of course, would only apply to the great principles upon which, I conclude, they would be in a great measure in accord, and that no disputed point would be tendered unless carried by a very large majority.

There is another subject which ought to engage the attention of the Institute as it is intimately associated with the health and the well-being of the people. I mean the water supply of great towns. There are arguments in favour of companies, as well as against them, and they are debateable points, but there surely is no valid argument against the necessity for a constant supply; for an abundance of water of a pure character at the corners of our main streets, and for a removal of those anomalous conditions which allow of whole districts being deprived of a necessary of life at the will of a commercial company, without the power of recovery of any of the damage which must necessarily arise to those exposed to the mischief, although the water has been already paid for by the unfortunate inhabitants. Water companies ought, as well as railway companies, to be liable for neglect to perform their contract, and for illness which they may have caused by distributing an impure article. If a railway company issues a ticket, but fails to convey the passenger, the latter has his remedy at law; a customer of a water company is deprived of his supply for days together, and appears to be without remedy. If a passenger is injured by the fault of a railway company's servant, the passenger has his remedy: the same should be law as against a water company, and it appears to me to be a part of the work of the Sanitary Institute to urge that such provisions should become law, and that the loss caused to an individual by the distribution of typhoid disease should be recoverable from the body distributing it, whether a company or a corporation.

I must not pass over the subject of smoke prevention without observation, having myself been instrumental in forcibly directing the attention of the public to the damage which accrues from the present faulty plan of burning coal, and the mischief which results to organic life from its use as at present carried out. I may be allowed a word or two in support of the principle

contained in the use of gas in the place of coal. I believe that we are year by year taking away more and more of that sunshine which is naturally our portion, and that we are year by year diminishing in consequence the proper proceeds which ought to be derived from the fruits of the earth. A cloud formed of vapour obstructs, and it is natural to our atmosphere that it should obstruct, the light of the sun, but let that cloud be only slightly imbued with a ton or two of coal diffused through it in the form of an impalpable powder, and the obstruction to the passage of the light and heat of the sun becomes immense. It injures vegetation, it injures animal life, and it is a damage to the prosperity of our country. Electricity is coming to our rescue, and when gas companies find out that the necessity for high illuminating power no longer exists, that a gas which shall produce more heat and less light is the more advantageous, and that it must be produced at a low price, say 2s. 6d. or even 2s. per thousand feet, we may hope to see it come into general use for cookery, for ventilating and heating purposes, to the immense advantage of the health of our people and the restoration of some of that sunshine which cooks and manufacturers are at present diminishing very materially in amount.

Electricity will light our places of public assembly, and let us hope our houses also; without destroying the salubrity of our atmosphere indoors; and whilst deposing gas from its present position as our principal lighting agent, it will compel it to occupy the place which belongs to it, viz., the production of heat, and then the thousands of tons of coal which now float in the air of our country and coat our trees, our shrubs, our animals, and even our annual plants with a coating of black, will no longer be permitted to begrime our landscape and deprive us of that sunshine which is not more plentiful with us than is necessary. There will be a much greater scope for gas manufacture than that which exists under the present regime, and gas shareholders need not in any way be afraid that their dividends will not be forthcoming.

The work of the Institute, however, is to try and interpret the laws of nature without reference to financial considerations, and if a certain action tends to diminish the health of the community, though financially that action may be profitable, it is our duty to point out the injury which results from it, and it may be even to suggest a remedy.

There is no greater injury to the community at large than that arising from the want of knowledge, which is so perceptible in the minor officers of our great sanitary army. If the corporals and sergeants of a regiment do not know their duty, how

is it possible for the captains and colonels to do their work? confusion must arise and there must be defeat in action.

The Sanitary Institute proposes to remedy this defect by imbuing the sanitary authorities of the country with the belief that the best way to do a thing is *to know how*, and that the stamp which the certificate of the Institute affords is the best guarantee that any sanitary board can possibly have that the candidate for a given office of surveyor or sanitary inspector has the requisite knowledge; and it is upon this fact that we ground our hope for a long and beneficial page in the future history of the institutes of our country, and in course of time to obtain a Charter of Incorporation from the Government.

It has been already announced that the next congress of the Institute will be held at Newcastle-on-Tyne in the autumn of 1882. It is a great advantage to have time for preparation, and I trust that the members of the Institute will take care that the meeting be even more successful than any which has preceded it. The arrangements which the Council are making for the formation of a local branch of the Institute in the town which invites them will be the means whereby a lasting impression may be made upon the district, and something tangible left behind, which shall mark the visit, and make it remembered by the student in sanitary science whose enlightenment commenced with the visit of the Institute to his place of residence. At any rate, *Rest and be thankful* is not the motto of our association. Let us determine that *Excelsior* shall be emblazoned upon our flag, and that we will not rest until we have planted it upon the highest pinnacle of the fortress of health.

A cordial vote of thanks was passed to Dr. Carpenter for his address. The proceedings then terminated.