

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1901.

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British Medical Journal.

SATURDAY, JANUARY 12TH, 1901.

THE INDIAN MEDICAL SERVICE.

COMPLAINTS have been reaching us of late in large and increasing numbers regarding the present and prospective condition of the Indian Medical Service. Our attention has also been drawn to a strong leader in the *Times of India*, entitled *The Decline of the Indian Medical Service*, setting forth in pointed terms the grievances under which its members labour, contending that it offers greatly curtailed advantages and attractions as compared with the past, and is becoming unpopular, and urging that something ought to be done to anticipate and prevent a deadlock such as that into which the sister service, the R.A.M.C., has lapsed through starvation and undermanning.

We have been at some pains to ascertain the grounds and validity of these representations, and have arrived at a strong conviction that they are well founded and deserving of prompt and practical attention. The service has for years been declining as regards the fundamental matter of emoluments. The official pay remains the same, while its purchasing power both in India and at home has seriously dwindled. The scale was originally arranged on the understanding that it might be largely supplemented by private practice, in which medical officers, with few exceptions, were permitted to engage. This source of income has, however, for the great majority of officers, become greatly reduced. Official work has so increased that less time is left for private practice. In large towns European and native medical men have settled in practice, and, being permanent, they have a decided advantage over the official doctor, who is liable to be moved about according to the exigencies of the service. In smaller towns and stations, native practitioners and subordinates, who also are stationary, get most of the practice which the civil surgeon has not the time or opportunity of developing. These circumstances are due to the great progress of medical education, in which the Indian Medical Service has itself taken a leading part, and to the general evolution and development of Indian administration. Again, war, pestilence, and famine demand the increasing attention of Government, and its medical officers are in correspondingly increased requisition. This necessitates movement which creates expense and ruins practice. In former times a civil surgeon was left for years in the same station, and became known and sought after. Now in most cases he is a mere bird of passage. Increased labour, hardship, and expense, with reduced emoluments, in fact, constitute the

main grounds of present discontent; but there are others. The difficulties of obtaining leave are greater, and men cannot get occasional rest as they used to do, or arrange to visit their families at home, or recuperate their health, or refresh their professional knowledge. The establishment is apparently not large enough to meet the claims, habitual and emergent, to which it is liable, and the load has to be borne by an inadequate and jaded team. It is true that the conjunction of plague, famine, and the Chinese war in 1900 threw upon the Indian Government a special and severe pressure which compelled it to employ every medical officer at its disposal who was fit for duty. The service has responded to the emergency loyally; but this was the climax of a series of similar though slighter exigencies imposing similar hardships, the endurance of which threatens, with the present establishment, to be the rule rather than the exception.

It is satisfactory to observe that 29 vacancies are advertised for competition in February. This is a step in the right direction; but if the Indian Medical Service is to be frequently drawn upon for Imperial purposes of the kind and on the scale represented by the Chinese expedition, a considerable augmentation of its strength would appear to be necessary in order to minimise disturbance and curtailment of leave.

The truth is that from one cause or other the Indian service is becoming less attractive, and this is best shown by the decreasing numbers who compete for commissions. The time has come when official inquiry ought to be made regarding the condition and prospects of the service with a view to substantiating, and if necessary relieving, the grievances under which its members consider that they are labouring. If this is not done, and matters are allowed to drift, the time will inevitably arrive when the supply will diminish and prove inadequate to requirements.

That this time may be very close at hand is more than probable. Medical education and training now require the expenditure of more time and money; the abolition of the unqualified assistant has caused a notable rise in the salaries which young medical men can command at home; while there has undoubtedly been an increase in opportunities for employment elsewhere.

We are far from alleging that the Indian Medical Service, though not so lucrative a career as it used to be, does not offer honourable, useful, and comfortable employment. It guarantees a life competency for all; it presents an extensive and varied field of interesting work; it has prizes and rewards for the competent, ambitious, and diligent, and gives scope for research in many directions. Still, the grievances which have been detailed are undoubtedly real, the causes obvious, and the remedies practicable.

The process of resuscitating a decaying service is difficult and costly, and even if popularity and working efficiency are restored by measures of reconstruction and reform, the period of starvation and overwork and consequent inefficiency through which the service must pass while this process is in progress is one of danger and damage to vital public interests. The Indian Medical Service appears to be tending towards such a period, and the position is one which imperatively demands early action.

THE EMBRYO AND ITS GERM CELLS.

EMBRYOLOGY is not all dry detail. Now and again the embryologist gives out to the scientific world a fact, or more often a hypothesis, with a certain kind of picturesqueness about it. Such a hypothesis was the recapitulation theory, whereby it was enunciated that an embryo "climbed its own genealogical tree, seeking its pedigree in the course of its own development"; it is now only a hypothesis, and not, according to some embryologists, a credible one any longer. Nevertheless, it was a picturesque hypothesis, and was not altogether without utility in enabling the mind unversed in embryological detail to grasp, in some fashion, the main principles of development. Then there was the hypothesis of the self-sacrifice of certain parts of the embryo or of its membranes for the developmental progress of the organism—likewise a picturesque theory, helping to make dry details digestible and even attractive. And now there is the hypothesis that the germ cells of the embryo are its brothers and sisters, so to say, and not its offspring!

This very novel, if not really startling, conclusion, is the outcome of an investigation which Dr. J. Beard¹ has been carrying on with regard to the germ cells in *Raja batis* (the smooth skate). The results of the investigation may be summarised in some such fashion as the following. The germ cells of *Raja batis* arise from one of the early cleavage phases of the ovum, certainly before there is any trace of the future embryo formed. At the close of segmentation the normal germ cells are represented by cells of 0.02 mm., with much yolk, and nuclei of a duplicated or twin character; but there are larger cells—megaspores of Rückert—which Beard identifies as germ cells also, or at least as the immediate forerunners of such. These cells take no part in the formation of any embryonic organ, and are, to begin with, outside the embryo in the yolk sac. How then, it may be asked, do these extra-embryonic germ cells gain access to the interior of the embryo? The answer is—by the germ path, which is a very definite one. It is from the yolk sac upwards, between splanchnopleure and gut, in the hinder end of the blastoderm, a path which leads them directly to the position which they ought finally to occupy in the germinal ridge or nidus. In young embryos a great many germ cells may be seen at various points in this germinal path and at its ends.

At this point it may be permitted us to ask whether any of these germ cells wander from the germinal path? The reply, which is contained in perhaps the most generally interesting part of Dr. Beard's paper, is that they do, and that they may be found in many parts of the embryo—for example, in any part of the trunk-mesoblast, and more rarely in the nervous system and skin. Most of these vagrant germ cells no doubt degenerate. Whether they all degenerate or not is of less importance than the fact that in *Raja batis*, a vertebrate animal, a large percentage of germ cells can be discovered in abnormal situations, and that not in one, but in every individual under a certain age. This discovery of "from 28 to 30 per cent. of the primary germ cells at certain periods in impossible situations" agrees well with the theory of origin of tumours of Cohnheim, and with the statement recently made by

Wilms that the dermoids of the testicle or ovary are all rudimentary embryos or "embryomas." But manifestly the vagrant germs in *Raja* will account for tumours of the dermoid or teratomatous type arising elsewhere than in the ovary and testicle. Embryomas, therefore, according to this view, arise from primary germ cells—that is, from germ cells which have not given off one or both polar bodies, which have, in fact, not become secondary germ cells. Here it must be borne in mind that the development of vagrant germ cells into tumours has not been traced, and that, as a matter of fact, vagrant primary germ cells have not been demonstrated to occur in the development of the higher vertebrates. Nevertheless, the hypothesis is suggestive, and may lead to proof or disproof; in either case something will have been gained, and we shall be by so much nearer to the truth.

To return to the germ cells which do not wander from the germinal path, and which in due time find themselves on the germinal ridge of the embryo. There they give rise by-and-by to the secondary germ cells, which, therefore, do not arise from somatic cells, do not spring from any germinal epithelium. In the strict sense of the term, then, there is no germinal epithelium; no somatic cell of embryo, epithelial or other, gives rise to a germ cell. Of the primary germ cells, one becomes the embryo and the other finds a resting place in its interior; later they may become individuals of the next generation, but obviously they are at the time brothers and sisters not offspring of the embryo, in which they are found. They may, alas! become tumours of it also. Further, there is thus an actual morphological continuity of germ cells.

While it must be admitted that many points remain uncleared up, and that it does not follow that what is true of the smooth skate will also be true of the higher vertebrates and of man, yet the views which have been advanced have certain merits as working hypotheses at least. It is safe to say, while we wait for further enlightenment, that embryology is not all dry detail.

THE SCHOOL RUN.

THAT the schoolboy must be furnished with time and opportunity for active exercise is a truism which does not call for discussion. Fortunately, indeed, the modern educationalist at least recognises that a proper training of the body, after the fashion still happily known as "play," is the needful complement of those intellectual exercises which—as being ordinarily less to the natural taste—are commonly distinguished by the contrasting term of "work." But in proportion as these forms of active bodily exercise are necessary to their welfare, present and future, and because their details and management are, happily, still so greatly left to the management of the young themselves, their supervision is a matter of some anxious consideration to every schoolmaster; just as their nature and their effects upon the physique of those who take part in them are matters demanding the careful attention of every school medical officer. On the whole, it must be admitted that the unwritten but exacting code by which certain types of school games have been allocated to particular seasons of the year—itsself the outcome of centuries of inventive adaptation—is eminently satisfactory.

¹ J. Beard: The Morphological Continuity of the Germ Cells, in *Raja batis* *Anatomischer Anzeiger*, Bd. xviii, Nos. 20, 21, 1900.

There is, however, a period of the year which presents special difficulties to the schoolmaster, which calls for increased vigilance on the part of the school doctor, and which sometimes rouses in the parental breast fears and protests not always without reasonable warrant. It is in the later autumn and early winter that the early-falling daylight curtails the time for afternoon games, while the lower temperature, so often accompanied in our climate with rain or mist, enforces the need for exercise of the more active type. Football satisfactorily fills the gap for all who can and should play that game. Unfortunately, under the attendant conditions, football has its drawbacks, for the spectators at all events. To stand for an hour or so on wet or half-frozen ground, exposed perhaps to a cold wind or chilling drizzle, even if clad in a great coat, is not in itself the most healthy pastime.

Again, a like difficulty often arises in the later winter or early spring months, when the ground is still quite unsuitable for cricket, while the air may be so warm and close as to rob football of much of its charm and value. It is under these circumstances that the "run" and the paper-chase offer themselves as alternatives. They present obvious claims for consideration; they have some drawbacks of their own; and it would be idle to deny that they are—unless judiciously planned and supervised—attended by a special class of risk which parents themselves are not slow to recognise, as is instanced by a letter on the subject recently published in our columns. In more than one case fatal results have attended the extreme exhaustion entailed on a lad ill-suited to sustain it by a "run" of too great a length, or when undertaken by one physically unfitted for exertion of the kind. And if the element of competition enter too largely into the exercise; or if proper care be not taken in the selection of those who are permitted to take part in it; or if distance and pace be not carefully regulated in relation to the physical capacity of the participants, mischief of a more insidious nature may easily supervene in the case of the less robust, and there may thus be laid the foundation of a physical incapacity entailing serious consequences in after-life.

The kind of exercise is one which the average schoolboy generally regards as less attractive than most other games. Yet it possesses the great advantage of engaging the great majority of, if not quite all, the members of the school in active, continuous open-air exercise instead of employing only the few; it affords, when properly managed, a form of exercise not only good in itself but differing in kind from that required in any other of the ordinary games, and thereby securing results in the way of physical training which are not otherwise easily to be obtained. Incidentally, also, it can be made a means of training the powers of observation—and notably of the topographical sense—after a fashion and to a degree to which other school pastimes do not lend themselves.

We assume that, as in all good schools, each new boy undergoes a careful physical examination by the school medical officer at the time of his entrance, when he brings with him from his previous school or from his home a summary of his health record up to date, with notes as to any tendency to illness and as to the presence of any special physical weakness or defect. As a result the boys can at once be approximately classed as to their capacity for

physical exertion; and the knowledge thus acquired is modified and extended by subsequent supervision and examination from time to time. Moreover, before any boy is allowed to enter for the school runs or other strenuous exercise of the term, he is again examined as to his fitness to undergo the exertion likely to be thus entailed; doubtful cases may be temporarily put aside until the results of further observation enable the doctor to speak certainly for permission or prohibition. Those who appear unduly fatigued by the exercise are again at once examined to the same end. It is equally important that the earlier runs of the season be short, and taken at a moderate pace; their extent being only gradually increased up to the limit of a very reasonable maximum. Each should be shared in either by the medical officer himself or by one or more masters, with eyes keen to detect any sign of flagging or indication of commencing exhaustion. They should be begun only when a reasonable interval had elapsed after the previous meal, and be finished in time to allow each to have at least a good "rubdown" and a complete change into fresh clothing before the next meal or any school work is attacked. Under such conditions a really valuable form of exercise, in substitution for which no precise equivalent is as yet forthcoming, may be practised with much advantage to all those taking part in it, and without risk of untoward results. If it be objected that the precautions indicated above involve an amount of trouble out of proportion to the results gained, and too detailed to be practicable, it is a sufficient reply that in some schools at least the pastime has been and is conducted on these lines, and that the results are regarded by those who take the trouble as a satisfactory recompense of their labours.

INOCULATION AGAINST TYPHOID FEVER.

In the paragraph on the death from enteric fever of Prince Christian Victor at Pretoria, published in the *BRITISH MEDICAL JOURNAL* of November 3rd, 1900, p. 1334, it was stated, on what appeared to be good authority, that the Prince was inoculated against typhoid fever on the way out to South Africa. We are informed by Lieutenant-Colonel R. H. Nicholson, R.A.M.C., the medical officer in charge of officers on board the *Braemar Castle* by which the Prince voyaged to South Africa, that His Royal Highness was not inoculated on the voyage. Lieutenant-Colonel Nicholson adds that from his experience he had formed a favourable opinion of the value of the inoculations, but statistics are not yet available. We believe that the medical department of the War Office is carefully tabulating all the statistics, and it is hoped eventually to have a large mass of such figures founded upon the men's medical history sheets. The returns are as yet, of course, incomplete. In view, however, of the probability of a recrudescence of typhoid fever early in the present year, and of the great importance of determining the value of the inoculations from the point of view not only of the army but of general civilian practice, we hope that it may be possible to collect and tabulate these statistics for a definite period, say the first six months of 1900, and to publish them as a special report, which would be extremely valuable at the present time. At present the impression which the Indian and other statistics so far published leave is that a single inoculation does not confer immunity from attack, but patients who have been inoculated once show a diminished case mortality; a second inoculation appears to confer a very considerable degree of immunity, but more definite statistical information is greatly needed.

THE NEW HOUSE OF COMMONS AND VIVISECTION.

THE *Abolitionist*, which represents the "thorough" system in the antivivisection crusade as opposed to the expediency policy advocated by Mr. Stephen Coleridge, has been sounding the members of the new Parliament as to their views on this question. From the replies published in the issue of our contemporary for November 15th we learn that Mr. Atherley-Jones, Q.C., Liberal Member for Durham North-West, would be "prepared to prohibit vivisection." Mr. Thomas Bayley (L., Chesterfield), "would support a Bill for the prohibition of vivisection." Mr. J. Bigwood (C., Brentford, Middlesex) is "in favour of the abolition of vivisection as now practised," an answer which has a somewhat diplomatic sound. Mr. John Burns (L., Battersea) replies with an uncompromising "Yes," which we presume means that he is an abolitionist. Mr. J. Keir Hardie (L., Merthyr-Tydvil), Dr. T. J. Macnamara (L., Camberwell N.), Mr. D. Pickard (L., Normanton, York), and Mr. Lewis Sinclair (C., Romford, Essex), reply to the same effect, and in equally laconic style. Mr. Robert Cameron (L., Durham, Houghton-le-Spring) mildly hints that he is a member of the Antivivisection Society, and "of course will gladly support the Bill." It might be asked, "Under which King, Bezonian?"—under Miss Cobbe or Mr. Coleridge? But if the *Abolitionist* is satisfied, it is not for us to cavil at the honourable member's answer. Mr. Charles Fenwick (L., Wansbeck, Northumberland), has "always supported the measure, and would do so again." The intentions of Mr. D. Lloyd-George (L., Carnarvon District) are somewhat cryptically indicated by the statement, "Verbal ready reply to interrogation by R. W." In a later issue of the *Abolitionist* the same eminent politician is said to have telegraphed that he is "strongly opposed to vivisection." Mr. J. W. Logan (L., Harborough, Leicestershire), is "entirely with" the promoters of the Bill. Mr. R. W. Perks (L. Louth, Lincolnshire) has "always been opposed to the cruel and revolting practice of vivisection." Mr. Alfred E. Pease (L., Cleveland, York) is "in favour of the total prohibition of vivisection by legislation." Mr. J. G. Shipman (L., Northampton) would "sympathetically consider any Bill for total prohibition." Mr. F. H. Stevenson (L., Eye, Suffolk) replies: "My sympathy is with the general objects of the League. If vivisection could be abolished altogether, so much the better." The sentiments of Mr. Alfred Thomas (L., Glamorgan E.) are, it would appear, to be gathered from the fact that he is "Vice-President, South Wales Branch of British Union." Mr. J. Wilson (L., Mid. Durham) "will vote for the Bill." In the *Abolitionist* for December 15th, 1900, Mr. John Bryn Roberts, M.P. for South Carnarvonshire, writes: "In reply to your note, you can add my name to the list of the supporters of the antivivisection movement, as I am entirely in its favour." We cannot congratulate the *Abolitionist* on the list of its Parliamentary supporters, either in regard to its length or to the importance of the names contained in it. There is not a single one among the nineteen members who have pledged themselves—as far as a politician ever pledges himself to anything—to vote for the prohibition of vivisection whose opinion on the subject is of the slightest value. Some of them are known to be animated by what Mr. Herbert Spencer would call an antimetaphysical bias, while others are delegates whose votes on such a matter could only be the expression of the prejudices of an ignorant constituency. The editor of the *Abolitionist*, had he any sense of humour, might be as ashamed of his soldiers as Falstaff was of the "scarecrows" with whom he would not march through Coventry.

HOSPITALS AND ANTIVIVISECTORS.

It used to be said that if a man would stand at the foot of Nelson's monument and look at the tail of the lion which stood on the top of old Northumberland House he would in a short time gather a crowd which would block the

traffic in Whitehall and the Strand. Mr. Stephen Coleridge seems to have taken this to heart, and is endeavouring, by taking up a conspicuous position and pointing his finger at the medical schools and laboratories, to block the flow of donations and bequests to the hospitals. His latest effort is to issue a large quarto pamphlet, entitled, *The Metropolitan Hospitals and Vivisection: A Guide for the Charitable in the Disposition of their Gifts and Bequests*. The body of the pamphlet consists of a long table, in which those "hospitals that have vivisectioners on their staffs and have attached to them medical schools licensed for vivisection are printed in red ink. Hospitals that have licensed vivisectioners on their staffs, but have no medical schools licensed for vivisection attached to them are printed in italics," while those "that are now entirely free from any connection with vivisection are printed in ordinary type. Intending benefactors," Mr. Coleridge says, "can therefore see at a glance what hospitals foster and what hospitals are free from vivisection." Beyond this and a few aphorisms quoted from Mr. Coleridge's published writings, or compiled by him for the occasion, and duly certified by his name, there is nothing in the pamphlet which can serve as a guide to the potential benefactor. Among the "many excellent institutions enumerated in the list," to which by implication it is recommended that benefactions should be confined, we find the names of the fever hospitals of the Metropolitan Asylums Board, and of lunatic asylums also supported out of the rates. It is to be supposed that these are inserted to eke out the list, for otherwise the names printed in "ordinary type" would have consisted almost entirely of suburban cottage hospitals and of the smaller and less known special hospitals. All the large hospitals, whether with or without medical schools, appear in the fateful red ink or italics. In fact, as the *Times* has well said, the list "may possibly serve a useful purpose, the very reverse of that intended by its compiler. No reasonable person can doubt that the hospitals denounced by Mr. Coleridge are among the very best in existence. If intending donors will act in direct opposition to his suggestions, they will have the greatest obtainable prospect of devoting their money to good and useful purposes." Of the taste and judgment displayed in this publication we will say nothing, not being perhaps impartial judges, but we observe that Mr. Stephen Coleridge has after a period of comparative temperateness undergone the usual fate of a man who, nursing a grievance, shuts his eyes to obvious facts, and can now call names like any virago of his company.

THE TREATMENT OF LONDON SEWAGE.

THE paper on this subject which Professor Clowes, chemical adviser to the London County Council, read before the Society of Arts anticipated to some extent the reports made by Professor Clowes and Dr. Houston to the Council which have been published recently. Professor Clowes referred to the intolerably foul condition of the river Thames before the sewage of London was taken to the two present outfalls at Barking and Crossness, about fifteen miles below the metropolis. This, however, proved insufficient, and it was found necessary to remove the coarser particles of the sewage by screening, precipitation, and sedimentation. The screened filth is disposed of by being dug into the ground; the precipitated "sludge" is sent in tank steamers to be discharged out at sea beyond the river's mouth. The effluents thus clarified pass in two streams to the two outfalls at Barking and Crossness, and discharge into the Thames. Since these processes of chemical treatment have been adopted "the foreshores of the river have become clean, the outrageous foulness of the stream has ceased, and those who live on and near the Thames unanimously express their approval of the improvement effected." It must not be forgotten, however, that these two effluents are merely

clarified sewage containing a large amount of putrescible matter in solution; they amount together to over 200 millions gallons a day, thus forming no inconsiderable tributaries to the river. It is obvious that as the population of London and the abstraction of water from the upper reaches of the Thames increase further purification of the effluents will become necessary, if a recurrence of the former foul condition of the river is to be prevented. The Main Drainage Committee of the London County Council has recognised this necessity. In 1893, on the advice of Mr. Dibdin, it started a large scale experiment, submitting a considerable proportion of the clarified effluent to bacterial treatment in contact beds. The results so far have been satisfactory and indicate the necessity of treating the whole of the London sewage in a similar manner. Professor Clowes has extended and modified the forms of experiment. During recent years (as recorded in his reports to the Council) he has submitted the raw sewage (after screening) to the same bacterial action. His experiments show that the sewage may be purified to a far greater degree by bacterial action without "the intervention of chemicals" (that is, without precipitation), and that the raw sewage, after screening, loses practically the whole of its suspended matter after remaining in the contact bed for two or three hours, the suspended particles of faecal matter being liquefied by the bacteria. The effluent obtained by this bacterial treatment of the raw screened sewage is fairly clear—clearer than the river into which it discharges—and so far purified that it is no longer putrescible, and that fish can live and thrive in it. Seeing that the river water at the points where the effluent is discharged is uniformly muddy, is always brackish, and therefore not capable of being used for drinking purposes, Professor Clowes's claim that "the introduction of such a sewage effluent into the lower Thames is unobjectionable" is justified. A serious difficulty in the treatment of raw sewage directly by contact beds is the rapid diminution of capacity of the beds, owing to deposits on the surface of the coke with which the beds are filled. In the case of the London sewage, this deposit consists of sand grit and fine mud, together with hair, fibrous matter and woody fibre—derived from the wooden pavements—and of chaff and straw derived from the dejecta of horses. Those substances, which consist mainly of cellulose, are acted upon by bacteria only with extreme slowness in contact beds. Apparently the action of septic tanks and anaërobic beds is required for the solution and disintegration of such materials. Fortunately, however, they become so water-logged by prolonged submergence in the London sewers that they rapidly settle down from the sewage if its rate of flow is reduced, and can therefore be removed by "a somewhat rapid process of sedimentation." It may be inferred that the whole of the London sewage may eventually be sufficiently purified by means of contact beds, after screening and partial sedimentation without the use of any chemical agents, thus doing away with the great expense involved in precipitation and removal of the vast amount of sludge which is produced by the present methods.

STATISTICS OF MORTALITY AND MORBIDITY.

WE published in the BRITISH MEDICAL JOURNAL of January 5th a letter which has been addressed on behalf of the Society of Medical Officers of Health to the President of the Local Government Board, asking, among other things, that the mortality statistics published by the Registrar-General should be given for sanitary areas, and that greater use should be made of the returns of notifications of disease by issuing the statistics founded upon them at an earlier date. We sincerely hope that the Local Government Board may see its way to carry out the suggestion; and though the form of publication is a matter of minor importance, we should like to point

out that it would be a great convenience if the statistics of morbidity and statistics of mortality were bound together in the quarterly returns of the Registrar-General, rather than issued as at present in separate publications. The General Register Office appears to be the proper office for the reception, tabulation, and publication of statistical returns. Eventually we may look forward to a step beyond those contemplated above. It ought to be practicable for the sickness statistics of every large town and possibly of every county to be tabulated weekly, and distributed before the end of the week following that to which they relate, to medical officers of health throughout the country. For this purpose legislation will be necessary, requiring every medical officer of health to send up prompt weekly returns to the Local Government Board, and we trust that this will eventually be secured. Meanwhile, the points suggested above form a most useful instalment of reform, and we hope that they will very soon come into actual working.

LONDON'S FIRST LINE OF DEFENCE.

THE half-yearly report of the Port of London Sanitary Committee, which includes the report of Dr. W. Collingridge, M.O.H. for the Port of London for the same period, has recently been issued, and contains some information as to the constitution and powers of the authority, which has now been in existence for a quarter of a century, with a brief review of the work which has been accomplished during that period. Incorporated under the Public Health Act of 1872, the authority is constituted by the Mayor, Aldermen, and Commons of the City of London, and the expenses entailed are thereby ordered to be paid out of the corporate funds. The authority has been reconstituted under subsequent Acts of Parliament, the last of which was the Public Health (London) Act, 1891. By that Act the Local Government Board was authorised to assign to the Port Sanitary Authority any of the powers, rights, duties, etc., of a sanitary authority under that Act. This assignment of powers was made in 1892. The jurisdiction of the Port of London Sanitary Authority extends from Teddington Lock to a point below the Nore lights, and also includes Port Victoria, Sheerness, Queenborough, and part of the River Medway. In consequence of this last provision, the Corporation, by agreement with the Rochester Port Sanitary Board, arranged that a medical officer should be stationed at Garrison Port, Sheerness, to inspect all vessels entering the Medway. In addition to the sanitary control of all vessels on waters within its jurisdiction, the London Port Sanitary Committee exercises powers of inspection of docks, canal boats, and food products and imports. This last item is not the least of the important duties of the inspectors, and some idea of its magnitude may be gathered from the fact that no fewer than four and a-half million carcasses of frozen mutton and lamb were inspected in the course of the year 1899. Dr. Collingridge reports that during the first six months of 1900 over 15,000 sanitary inspections were made of vessels lying within the limits of the Port of London, and in over 1,000 cases it was found necessary to order cleansing, while 198 structural alterations to improve the sanitary conditions were executed by order of the officers of the Board. Dr. Collingridge points to the dangers incurred by the bargemen on board the barges used for the conveyance of manure, refuse, etc. He quotes two cases which were attended with fatal results due to gas poisoning, and urges the adoption of a regulation making double bulk-heads compulsory, as provided by the Canal Boats Act. Increased medical surveillance has been necessary recently to prevent the introduction of plague, and to deal with cases of enteric returning from South Africa. However, only one vessel affected with the former disease arrived during the first six months of 1900, and there was only one case on board.

THE EVOLUTION OF THE POOR-LAW INFIRMARY.

THE 30th annual report of the Medical Officer to the Hospital of the Halifax Union (Dr. Thomas Dolan, J.P.) for the year ending June 30th, 1899, illustrates in a remarkable manner the evolution in the Poor-law infirmary system which has taken place throughout the country in its more enlightened parts, and we are glad to believe is still proceeding in those parts and gradually spreading to other parts. Thirty years ago the wards of this hospital were in close proximity to the rooms for the able-bodied inmates; they were barely furnished, the beds were of straw, and the supply of medical appliances was very limited. The number of patients varied from 80 to 100, and for the care of these there was provided one male attendant, one nurse, and a medical officer who had to provide all drugs and surgical requisites from his own income. In 1871 wards were opened as far as possible removed from the rooms for the able-bodied. The nursing staff was enlarged, the male attendant was displaced, hair mattresses were substituted for those of straw, the supply of medical appliances became sufficiently plentiful, and the medical officer was no longer expected to purchase them. In 1893 a trained lady superintendent was obtained, with an increased staff of nurses, and probationers were accepted for training. In 1897 the foundation stone of an entirely new hospital, quite detached from the workhouse proper, was laid at Skircoat—which will, it is expected, shortly be opened—and the administration of the two branches has been made quite distinct. During the year ending June 30th, 1899, 908 patients have been under treatment, as contrasted with 80 or 100 in 1868; a nursing staff of a lady superintendent, 4 charge nurses, 2 assistant charge nurses, and 11 probationers has taken the place of the 1 male attendant and the 1 nurse; and, as the Infirmary Committee reports, the wards have invariably been found not only clean, but also bright and attractive with flowers and other ornaments. The Committee also reports that the medical and surgical needs of the patients have been ably and carefully attended to by their visiting physician, Dr. Dolan, assisted by Mr. J. M. Longford. It is eminently satisfactory that sick persons who come under the care of the State should receive somewhat beyond the bare necessities of existence.

THE FATHER OF MODERN ELECTRICITY.

Dr. WILLIAM GILBERD, Queen Elizabeth's physician, is at length to receive honour in his own country. Three hundred years have elapsed since Gilbert laid the foundations of electrical science in his famous work *De Magnete*, published in 1600. It is time that Englishmen should do some honour to the man who was called by Priestley "the father of modern electricity," and by Poggendorff "the Galileo of magnetism." Gilbert was born at Colchester and received his early education in the grammar school of his native town. In due course he proceeded to St. John's College, Cambridge. Soon after taking his first degree in 1560 he became a Fellow of his College, where he remained in residence, taking part in its affairs, for ten years. As was said by Mr. Joseph Larmor in his presidential address to the Section of Mathematical and Physical Science at the last meeting of the British Association, all through Gilbert's career, both at Colchester and afterwards in London, where he attained the highest position in his profession, he was an exact and diligent explorer first of chemical and then of magnetic and electric phenomena. Hallam, in his *History of European Literature*, says of Gilbert, "In his Latin treatise on the magnet he not only collected all the knowledge which others had possessed, but he became at once the father of experimental philosophy in this island." Mr. Larmor adds that no demur would be raised if Hallam's restriction to this country were removed. It is extraordinary that such a man should have so long remained without any public memorial in his own land, and we are pleased to be able to announce that this reproach is

about to be removed from us. The medical profession at Colchester—the birthplace and burial-place of Gilbert—have the honour to be the originators of the first proposal to do suitable honour to his memory. At a meeting recently convened by the Mayor of Colchester (Mr. Claude E. Egerton-Green), and addressed by Dr. Elliston (President of the British Medical Association), Professor Silvanus Thompson, Dr. Fenn, Mr. Henry Laver, Mr. Edgar A. Hunt, and others, it was decided that the medical men of Colchester should be invited to erect a full-length marble statue of Gilbert, to occupy a niche in the main façade of the new Town Hall of the borough. Mr. Henry Laver, F.S.A., was appointed Treasurer to the movement, and has already received promises of subscriptions amounting to £130. The minimum total required for the statue is £150, and it may be hoped that no difficulty will be experienced in raising something more than this so that the statue may be made worthy of Gilbert and of the profession to which he belonged. Lord Kelvin has, we understand, written expressing his cordial approval of the proposed memorial.

A NEW HEALTH RESORT.

WE adopt this title—under protest—as a compliment to the editor of the *Yukon Sun*, who deserves every compliment for publishing a special illustrated number of his paper giving a more realistic picture of Dawson City than is to be found in more pretentious publications. It is, indeed, coloured in rosy hues, but this we are assured is characteristic of the Yukon country, at any rate at certain seasons of the year. "The colouring in the Yukon is," we are told, "a thing to dream about; delicate violets and pearly greys, velvety browns, translucent sapphires; Nature lays no strong colours upon her palette to paint the Yukon hills. A new colour world awaits the artist in the superb lights of the Yukon." "Winter," we are told, "is pre-eminently the season of the Yukon." Daylight comes in midwinter about 9 A.M., darkness at 3 P.M., and between there are "six hours of the same soft grey light that a cloudy day brings in the East," while "the mountain tops are tipped with a lovely sunlight." Moreover, "Dawson is splendidly healthy, the sanitary conditions are good, drainage and pure water have been supplied, a strict health ordinance is as strictly enforced." If in spite of everything a Dawson citizen is so injudicious as to fall ill, he has two large general hospitals to choose from, the one Protestant the other Roman Catholic, besides several private hospitals. Lastly, "Dawson appears to be a particular healthy place for children." So much for the author of the first paper. Dr. J. H. MacArthur, Medical Officer of Health, who comes next, is a little less enthusiastic, and a little more guarded as becomes a man who has to deal with figures. The number of deaths in 1899 was 140, which gives a death-rate of 7 per 1,000 on the estimated population. In the first seven months of 1900 the deaths numbered 51, which gives a death-rate of 5.42; but, as the medical officer of health observes, the age distribution of Dawson is peculiar, and the birth-rate for the first seven months of 1900 was only 1.5 per 1,000 of the population. The most fatal diseases appear to have been pneumonia, tubercle, and diseases of the circulatory system. His account of the climate of the Yukon is as follows:—"During the summer months [it] is all that could be desired—dry, bracing atmosphere, clear sky or stratus clouds, very little rain, and never excessively hot. This condition gradually, through the autumn, cools off to our winter, which has a temperature ranging from zero F. to 60° F., below, dry atmosphere, short days, and unless when extremely cold not at all disagreeable if one is suitably clothed."

EDUCATION AND VISUAL ACUITY.

A VARIETY of considerations have recently again attracted public attention to the question of how best to secure in

the rising generation the fullest development and education of vision in the adequate equipment of the individual for the battle of life. Complaints have reached us to the effect that the School Board has been even too solicitous for the frequent examination of the eyes of school children, and some of our ophthalmic hospitals have been thronged almost to overflowing with the crowds of ametropes, real or alleged, driven thither by peremptory notices from the head teachers. Not long ago General Buller called attention to the superior range of vision enjoyed by Boer marksmen, to which he attributed some of the untoward events which have unfortunately been too frequent during the present campaign. Doubtless in this connection the training of the higher centres is of as great moment as the accuracy of refraction or the perceptive acuity of the retina. The young Boer is perhaps less solicitously corrected with glasses in the matter of defective refraction, and is no doubt in less danger of being afflicted with "blinded eyesight poring over miserable books" than is the case with our young barbarians at home; by his outdoor, pastoral, and sporting proclivities the whole visual apparatus of the young Boer, from start to finish, probably receives, in amount and in degree, a training in acuity which he is well able to turn to "slim" account when occasion demands. The mental state of directing the attention to particular objects, or characteristics or certain grouped associations as evidenced in the different modes in which a doctor and an artist would view or visualise the same face needs to be considered. The interesting article by the Hon. John Collier in this month's *Nineteenth Century* (whose survival of the epoch whence it was named we cordially welcome) serves to show how great a part the higher mental factor plays in the uses to which we put our vision by recalling the varying ideals of human beauty to which in different ages and among diverse people appeal has been made in the pictorial and plastic arts. The training of the higher centres is not likely to be lost sight of as technical instruction in its industrial application is now so much to the fore, and the new rifle ranges, State-aided and rate-aided, will, we trust, in due time achieve all that is necessary to place our volunteers on a level with any they may be called upon to meet. We are not sure, however, that, apart from correction of visual defect and appropriate mental training, there does not remain something to be done by the typographical art. The real or assumed excess of myopia in German schools has often been attributed to the print employed, and we are occasionally scandalised by atrocious specimens of printing and setting in textbooks, school manuals, and bibles, which are placed in the hands of scholars. It would be well if school managers and School Boards would direct their attention not merely to examining the eyes of their scholars, but also to endeavouring to secure that the printing and typing of the schoolbooks employed are uniformly worthy of the country which is proud to claim Caxton amongst her greatest reformers.

MUNICIPAL BACTERIOLOGY AT THE END OF THE CENTURY.

In the hygiene of communities a new feature, which has been steadily becoming more prominent in the last decade, and which, though yet of small proportions, is likely to develop enormously, is the use that is being made of bacteriology by many sanitary authorities. A large proportion of the old vestries of London either supported a bacteriological laboratory or retained the services of a bacteriologist for the purpose of assisting the medical officer of health at the outbreak of an epidemic, and of practising that preventive medicine of wider scope which deals with the introduction or conveyance of infective diseases in articles of food. Outside London many of the great cities have called in the aid of bacteriology, while numerous smaller and less wealthy sanitary districts obtain similar advantages by subsidising one or other of the large laboratories in London or else-

where. The cost to the ratepayers for investigations of "swabbings," serum tests, and food analyses is almost infinitesimal; but when we consider what an enormous expense to a community may be saved by the early "scotching" of an epidemic; how the outlay of a few pounds may prevent the expenditure of thousands, apart from the misery and deaths due to an epidemic, that public health body which does not avail itself of bacteriological assistance is surely not doing its duty by its electors. On these grounds alone the medical officer of health is surely worthy of a higher salary than he usually receives, and we believe we are right in saying that at present there is only one town in England that pays a higher salary to the medical officer of health than to the town clerk. It is therefore pleasant to place on record an instance in which the efforts of the medical officer of health have met with recognition and reward. As was noticed in the *JOURNAL* three weeks ago, the Borough Council of Lambeth, as one of its first acts, increased the salary of Dr. Priestley. Since his instalment as medical officer of health it has been his practice to issue to the Lambeth Vestry pamphlets and reports, detailing some of the results achieved by bacteriology, and he has just issued a report to his new Borough Council, dealing with the results of 1,000 bacteriological examinations made in the Lambeth laboratory. The majority of these, over 600, were in connection with "throat" cases, of which 30.8 per cent. were proved to contain Klebs-Loeffler bacillus. The value of such investigations is discussed in his report, and the advantages accruing therefrom are impressed on the Mayor and Corporation.

CARDIFF INFIRMARY.

For some time there has been a good deal of unrest and disquiet in regard to some features of the management of the Cardiff Infirmary, largely fostered by a certain section of the governors and others interested. At a special meeting of the governors held on December 14th, 1900, an important new rule was adopted. This rule allows workmen, members of associations, and other bodies who subscribe to the institution to elect one of their number as a president, vice-president, or governor annually or for life, in the same way as ordinary subscribers. This rule is said to have given great satisfaction to the classes concerned. The antagonism existing between certain members of the Executive Committee and the medical staff was unfortunately illustrated by an incident which took place at a meeting of the Committee on December 19th, 1900. The post of Assistant House-Surgeon to the infirmary being vacant, the medical staff recommended one candidate to the Committee, passing over another who, though he held a senior diploma, yet was not in their opinion so suitable for the present appointment. Certain members of the Committee took exception to this, and an animated discussion ensued, during the course of which the Mayor made some remarks rather unfavourable to the medical staff. These were resented by Dr. C. T. Vachell, the Senior Physician, who as a protest at once tendered his resignation as a member of the medical staff. The candidate who was passed over by the medical staff was ultimately elected by a small majority. Subsequently a meeting of the medical staff was convened, but we do not learn that any further action has been taken. It is hoped that Dr. Vachell will reconsider his decision, as otherwise the services of a valued officer will be lost to the infirmary. A considerable amount of attention is locally attracted to the infirmary at the present time owing to the great and successful efforts now being made by the Mayor, Mr. T. Andrews, and others to clear the institution of the heavy debt of about £11,600 with which it is now burdened.

MEDICAL CORONERS.

THE present epidemic of peripheral neuritis from the drinking of arsenically-contaminated beer by means of its

fatal cases again brings into clear relief the desirability of coroners having a solid grounding in medical knowledge. Probably the ideal position would be for the coroner to be both a trained medical and legal expert, but in the absence of such high qualification we cannot but again emphasise the preferential claim of the medical man. It is a curious fact, as pointed out by Dr. Major Greenwood in a paper contributed to the *Sanitary Record* some years ago, that whilst it is almost unknown for a qualified lawyer to undertake the study of medicine as an addendum to his legal training, it is not an uncommon thing for a medical practitioner to qualify himself as a barrister-at-law for such posts as require a combination of medical and legal knowledge and acumen. The knight of the shire, who in former days was appointed as Crown officer, can hardly be called the prototype of the present day coroner, although he was certainly the first link in the chain of evolution of the office. As Dr. Greenwood has said, the duty of the ancient coroner was to watch, on behalf of the Crown, the many more or less independent jurisdictions which were more or less tyrannically exerted in regard to the liberty and even the life of the subject. But the strictly legal duties have now fallen into the background, and the function of the coroner is in relation to uncertified or suspicious deaths alone. In the last analysis of the present state of affairs the exercise of a coroner's powers is moulded by medical evidence, and it is obviously of the first importance that he should be able to estimate accurately the soundness and the value of the medical evidence and medical opinion adduced before the jury in his Court. It will appear to many that the tendency to appoint medical coroners which is particularly obvious in the large towns of our country is one which should be by every means encouraged, as tending to the welfare of the State, above all in protecting our fellow countrymen from crime, and that both by deterring the evil-disposed and by leading to the punishment of the actual evildoers. For the historical accuracy of the following illustration of this position we are not prepared to vouch, but it does not strike us as intrinsically improbable. An inquest was held on the body of a man found dead in the road. A necropsy was made by order, and a renal calculus was found. The verdict arrived at, according to the veracious narrator, was that no blame attached to anybody, as the deceased had probably swallowed the stone as he was lying on the gravel path upon which he had fallen, presumably while in a state of intoxication.

LECTURES ON MEDICAL ETHICS IN PARIS.

THE suggestion has not infrequently been made that a course of instruction in professional ethics should be added to the medical curriculum. Doubtless the subject is one of the very greatest importance; but the compulsory course of study is already so heavily burdened that it is not easy to see how a place could be found in it for anything which is not on the programme of examination. Voluntary or post-graduate courses of medical ethics might, however, be organised. Readers of the *BRITISH MEDICAL JOURNAL* will easily believe that there would be an *embarras de richesses* in the matter of teachers, but there might perhaps be some difficulty in finding learners. Yet that students are willing to be instructed is shown by the example of Paris. In the Medical Faculty of that city a course of lectures on medical ethics was delivered in November, 1899, with considerable success. In 1900, again, Drs. P. Le Gendre and G. Lepage lectured on the subject in the small amphitheatre of the Faculty. The attendance was larger than in 1899, and several practitioners sat among the students. A summary of the lectures will doubtless be interesting, and may possibly be of some use as supplying a model for similar courses in this country. The first was devoted to a consideration

of the duties of practitioners to patients, the psychology of the patient and his environment, the manner in which visits should be made, their frequency and duration, the writing of prescriptions, and the precautions to be observed in speaking to the patient and his family. In the second lecture the duties of the student in the hospital, and especially his bearing towards the patients, were dealt with. Among the other matters considered were the replacement of the staff by students, the transfer of practices, the installation of the young practitioner, his duties towards the State (registration of diploma) and towards his brethren (the formal call and the establishment of a good understanding), the relations of practitioners among themselves, the rules that should guide the practitioner when called to a patient who had been attended by someone else, the manner in which consultations should be conducted, the reciprocal obligations resulting from them, and the fees of the consultant and the general practitioner. The third lecture was devoted to the development of the idea that medicine is neither a priesthood, obliging the practitioner constantly to sacrifice himself to the interests of others without earthly reward, nor a business in which it is permissible to get from his diploma all possible pecuniary profit, but a liberal profession in which the material help given is complemented by a moral action the value of which cannot be estimated in money. "One must not listen," it was urged, "to those that would lower us by introducing commercial methods among us. It is not as tradesmen that we can demand payment of fees, but by making society understand that its interest lies in ensuring our independence, and that by reducing some of us to live by illegitimate means it runs the risk of causing gradually to disappear from its midst that delicate and precious wheel of the social mechanism, the doctor with a conscientious sense of his duties and ability to fulfil them." One lecture was given to an analysis and commentary of the Medical Law passed in 1892. Another subject discussed was the relation of the practitioner to administrative bodies, great and small, and to judicial and public authorities in regard to expert evidence. Among other subjects treated were medical assistance, insurance and provident societies, the relations of practitioners with their brethren in the public services, dentists, specialists, physicians to watering places, pharmacists, and midwives. The illegal practice of medicine by pharmacists and midwives, and the practice of pharmacy by doctors, were also considered. Next came the question of fees, the manner of fixing them, the desirability of a general tariff, the regular sending in of accounts, and the recovery of debts by legal process. Illicit profits, as by dichotomy, secret commissions from instrument makers, etc., were dealt with; after which professional associations of all kinds, benefit funds, sickness assurance, medical defence were discussed. The question of overcrowding of the profession, and the remedies needed, received attention. Among the latter were more difficult access to the profession by making the period of study longer, by establishing a statute of limitation for examinations, which would eliminate "chronics," and by refusing to create new faculties.

FEMALE ARMY MEDICAL OFFICERS.

DR. ANITA NEWCOMB MCGEE, daughter of Professor Simon Newcomb, the astronomer, was appointed Assistant Surgeon in the United States army in August, 1898, to aid in the selection and equipment of a corps of army nurses for field and hospital work. The appointment carried with it the rank of first lieutenant and the right to wear the shoulder-straps and uniform of an officer of that grade. Dr. McGee did not, however, use this right. The work for which she was appointed having now been fairly organised, Dr. McGee has resigned and no successor is to be appointed. In accept-

ing her resignation, Surgeon-General Sternberg complimented her highly upon the services which she had rendered. Dr. McGee was the only woman serving as medical officer and holding the rank of lieutenant in the United States army. This lady's career as a military surgeon may perhaps suggest to our own War Office a means of extricating themselves from the difficulty in which their foolish policy in regard to the medical service of the army has landed them. As they cannot get a sufficient supply of men, how would it be if they were to try women? Officials are largely governed by precedent, and one can be furnished for the plan here proposed. There is on record at least one well-known instance of a woman serving as a medical officer in the British army and rising to a high rank in the service. She had enough of the military spirit to satisfy even the German Emperor, for she fought a duel.

THE BACTERIOLOGICAL INSTITUTE OF CAPE COLONY.

THIS institute was founded in 1891, and from that date has been under the charge of Mr. Alexander Edington, some of the results of whose work have been noticed from time to time in the *BRITISH MEDICAL JOURNAL*. He has recently issued his report for 1899 of the work done at the institute. It is accompanied by four appendices, one of which deals with the pathology of horse sickness and the researches which Mr. Edington has made with the object of devising a method of protective inoculation. The naked-eye lesions of this disease are well described, and consist of serous effusions into the pericardium and pleural cavity, with extravasations of plasma into the various planes of connective tissue of the head, neck, and thorax. Petechiæ and larger extravasations of blood are found under the endocardium, and the myocardium undergoes degenerative changes. There is extensive œdema glottidis and marked injection of the conjunctivæ. The spleen is enlarged and congested, and there are evidences of nephritis. Mr. Edington states that he finds an almost total absence of any true inflammatory phenomena, the conditions appearing to resemble rather those of acute venous congestion with exudation of blood plasma. A series of inoculations with various fluids taken from infected animals was instituted, and it was found that virulent blood killed practically every horse inoculated with it, but inoculation with "attenuated virus" acted irregularly owing to the varying susceptibility of the horses experimented upon. This placed great difficulties in the way of efforts to obtain a reliable method of preventive inoculation. Serum obtained from "salted" animals has no curative properties, and possesses no appreciable antitoxic property. The outcome of the experiments is that Mr. Edington relies for preventive inoculation upon a mixture of virulent blood and serum, which is injected upon three or four successive occasions, the proportions of the mixture being different each time. The quantity of virulent blood used is, on all occasions, the same, namely, 0.5 c.cm., the amount of serum admixed being reduced from 50 c.cm. to 15 c.cm. A final injection of 0.5 c.cm. virulent blood alone is given, and if the animal withstands this inoculation it is considered "salted." The inoculations extend over a period of 30 to 40 days. But until some reliable method of standardising both blood and serum is found, it is only to be expected that the results will lack complete uniformity. Mr. Edington speaks very hopefully of the method, and, knowing that there exists in South Africa a considerable division of opinion as to the reliability of the method and permanence of the results, we await with interest the statistics which veterinary surgeons with the forces in South Africa should be able to supply. The method was detailed by Mr. Edington himself in an address recently delivered before the Glasgow Philosophical Society, but neither then nor in his report did he refer

to any investigations he may have made into the exact nature of the virus. From many of the aspects of the disease, and the lesions found, it would not be surprising to learn that the contagium belongs to the order of hæmatozoa, and that it may be comparable with the malarial parasite. Mr. Edington has already drawn attention to certain points of resemblance that exist between the two diseases. To the other work performed by the Colonial Bacterial Institute only a brief reference is necessary. It consists in the distribution of various vaccines, antitoxins, and of a fungus pathogenic to the locust that plague of South Africa, which fungus has lately been imported into India for a similar use. A certain number of routine bacteriological and other investigations are carried out for the practitioners resident within the colony. Some are undertaken gratis, but for the majority a fee is charged, and amongst the latter we find that water is analysed (presumably chemically) for the small sum of half-a-guinea.

HYPNOTISM IN FRANCE.

By a recent decision the Cour de Cassation—which is the High Court of Appeal in France—has finally settled a question which has been left open ever since, six or seven years ago, two provincial assize courts gave contradictory decisions upon the question whether the treatment of patients by hypnotism or so-called "magnetism" constituted a breach of the law which forbids the practice of medicine by those who do not possess proper qualifications. The French law is so precise that there was no great difficulty in coming to this conclusion, the only defence being that the treatment of patients by hypnotism did not constitute the practice of medicine; but this contention was promptly set aside, as it cannot be maintained nowadays that medical treatment is limited to the administration of drugs. The French law restricting the practice of medicine to properly-qualified persons is founded upon the principle that for the welfare of society no one should be allowed to exercise such delicate and important functions as are implied in the treatment of disease unless he has passed through as complete a training as the existing state of science can afford in all those branches of learning bearing upon the structure, functions, and diseases of the human body, as well as upon the actions of remedies.

LEAD POISONING IN ENAMEL WORKS.

ONE of the recommendations of the White Lead Commission was that, in the event of workers being obliged through plumbism temporarily to relinquish their employment, none should be re-employed until examined and certified to by a factory surgeon. The Home Office adopted this recommendation, and included it in its special orders. The recommendation was made as much in the interests of the workers as of the employers, for it was found that through poverty many of the hands returned to the factory before they had recovered from lead poisoning, and consequently experienced a relapse. It is well known that one attack of plumbism predisposes to another. Recently an enamel company has been prosecuted for three contraventions of the law, the principal offence, however, being that of re-employing a female worker who had been suffering from plumbism without receiving a medical certificate as to her fitness. It was shown by the Principal Lady Inspector of Factories who prosecuted, that there had been a breach of the Act of 1891 and of the Special Orders issued in 1898 in reference to certain dangerous trades. In the enamel factory alluded to a considerable amount of dust was generated in the grinding and crushing processes, and the dust contained both lead and arsenic. It was while working in one of these departments that the woman in question, working without the required overall, contracted lead poisoning

We have frequently recommended that when new hands are taken on in any factory where a dangerous trade is carried on, it should be the duty of a responsible official of the factory to read to them the regulations of the Home Office, and to explain the particular risks to health incurred in the occupation. To plead ignorance of the regulations is no excuse. A fine was inflicted for breaking the law, and the lesson taught will, through the public press, reach others in this and similar trades in which lead is used.

COMPANY LAW.

A REPORT was published last week in the BRITISH MEDICAL JOURNAL of the case of Cunningham *v.* the *Daily Express*, and in connection with the hearing of the case some facts came to light with regard to the formation of the Consumptive Institute and Sanatoria, Limited, and we therefore published a list of subscribers to the Memorandum and Articles of Association, and a note of the objects with which the Company is stated to have been formed. There are certain matters in connection with this Company to which it may not be unprofitable to call further attention. It appeared in evidence that the persons to whom the project was in the first place submitted declined to find the money to finance it. Nevertheless a company was formed and registered, having a capital divided into shares, and also limited by guarantee. This last provision enables it to be registered without any capital whatever being subscribed, and apparently it has none. Its ostensible purposes, as set forth in its Memorandum of Association, were to enter into an agreement with John Bernard Cunningham (which had not been filed), to encourage discovery and investigation, and to make known the nature and merits of any cure, preventive, or treatment of consumption, and establish sanatoria for tuberculous or other patients. It may be remembered that Cunningham in cross-examination stated that he used the same fluid for the cure of cancer as in cases of consumption, but this liquid is not, so far as we have observed, mentioned in the Memorandum or Articles of Association of the Company, which are very widely drawn. Cunningham is alleged to possess an American degree, but has no qualification registrable in England, and it would seem possible that it was intended that he should practise under the ægis of the company. If this be so, it serves as an additional reason for pressing on legislation to regulate the conduct of medical practice by companies. According to the report in the *Times* it came out incidentally in a cross-examination that the profits of the Viavi Company, particulars of which we published some time ago in connection with an inquest, had been stated by Cunningham to amount to £2,000 a year, and that its virtual proprietor was a lady. It is very much to be regretted that Mr. Ritchie thought fit to drop out of the Companies Act of last session the clause which prohibited the practice of medicine by companies, and it is to be hoped that it may shortly be reintroduced in some form.

PRACTICAL HYGIENE FOR TEACHERS.

THE Sanitary Institute has arranged for a course of lectures on Practical Hygiene for Teachers, to be held at Bedford College and at the Sanitary Institute. It will include practical demonstrations and visits to schools and places where the application of hygiene in practice may be seen. Opportunities will be given to students to obtain practical acquaintance with the various subjects dealt with in the laboratories of Bedford College, and for practical demonstration of sanitary appliances in the Parkes Museum. The course will consist of thirty lectures. In the Lent Term Dr. J. S. Edkins will give ten lectures on physiology and allied sciences at Bedford College; in the Easter Term Dr. Henry R. Kenwood and Mr. J. Osborne Smith, F.R.I.B.A., will give a course of seven lectures on construction and

practical sanitation of schools; and in the Michaelmas Term Miss H. Robertson, B.A., will give five lectures on hygiene and education; and Mr. W. C. C. Pakes, M.R.C.S., D.P.H., eight lectures on infectious diseases and disinfection. The course will afford a preparation for the examination which the Sanitary Institute holds for its certificate in practical hygiene for school teachers. Full particulars can be obtained on application to the Secretary of the Institute, 72, Margaret Street, W. The fee for the whole course is £5 5s., but the terms can be taken separately. The result of this experiment will be watched with interest, for there is no doubt that it is eminently desirable that teachers should become acquainted with the theory and practice of hygiene, more especially in its application to school life. Provided that the teachers are not encouraged to believe that by attending this course of lectures and obtaining the certificate of the Institute they are turned into sanitary experts, nothing but good can result.

MOSQUITOS AND YELLOW FEVER.

A CABLEGRAM to Surgeon-General Sternberg, quoted in the *Philadelphia Medical Journal*, announces that the recent experiments with mosquito inoculation in Cuba have been completely successful in 80 per cent. of the cases under treatment. These experiments are being conducted by Dr. Reed and other surgeons of the United States army near Havana. They are based upon conclusions reached by Major Reed and other medical officers recently appointed to conduct scientific investigations with reference to the acute infectious diseases prevalent in Cuba. So far the experiments have been confined to Spanish immigrants desirous of immunity against yellow fever who have voluntarily presented themselves for inoculation with an understanding of the nature of the experiment. The diagnosis was in all the cases confirmed by Professor Guitéras, Dr. Finlay, and other Havana physicians having special experience of yellow fever.

THE annual meeting of the Neurological Society of London will be held at 11, Chandos Street, W., on Thursday, January 24th, for the election of office-bearers for 1901. The Presidential Address will be delivered by Dr. W. J. Mickle, who has chosen for his subject Mental Wandering.

THE general meeting and election of officers of the Harveian Society will take place at the Stafford Rooms, W., on January 17th, at 8 P.M., and will be followed by a *conversazione*, at which there will be an exhibition of objects of interest from South Africa.

THE President of the Royal College of Physicians of Ireland, Sir C. J. Nixon, M.D., will entertain His Excellency the Lord Lieutenant of Ireland, the Chief Secretary for Ireland, the Fellows of the College, and a number of distinguished guests at a banquet in the College hall on January 26th.

AN election of a member of the General Medical Council to represent the registered medical practitioners in Ireland is about to take place owing to Sir William Thomson's term having expired. We understand that Sir William will offer himself for re-election. Nomination papers must be received by the Registrar of the Irish Branch Council not later than the 18th instant.

THE fifth meeting of the International Zoological Congress will take place at Berlin in August next, under the presidency of Professor K. Möbius. Among other papers promised is one by Professor Grassi, of Rome, on the Malaria Problem from the Zoological Point of View.