BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st; and notice is hereby given, in accordance with By-law 5, that Branch Secretaries' subscription accounts close on October 31st, and all unpaid subscriptions must be forwarded after that date to the General Secretary, 429, Strand, London. Post-office orders should be made payable to the General Post Office, London.

British Medical Journal.

SATURDAY, DECEMBER 17TH, 1898.

THE ENTITY OF ENTERIC FEVER.

THE first great step in advance which was made in our knowledge of enteric or typhoid fever dates from the year 1849, when Sir William Jenner first clearly distinguished between the diseases known respectively as typhus and typhoid fevers. The next epoch dates from 1880, when Eberth described a bacillus which he believed to be specific; and from the researches of a large number of observers we now know that Eberth's bacillus is the causative agent of enteric fever. That Eberth's bacillus (bacillus typhosus vel typhi abdominalis) is of this etiological importance, is shown not only by the fact that it is present in every case of enteric fever, but also by the fact that specific preventive qualities and agglutinating properties towards the bacillus are developed in the blood during the course of, and after, the fever.

Although there can be no question that, from the bacterial standpoint, all cases of enteric fever are identical, in that the specific bacillus can and must be found if sought for—always in the spleen, sometimes in the blood—this uniformity is not a characteristic when cases are viewed from the clinical standpoint; in this enteric fever agrees with other illnesses caused by bacteria. The grades of difference which are presented in any series of cases of enteric fever vary from the typical textbook form of attack to a passing indisposition or "febricula," which would easily baffle recognition at the bedside. Enteric fever does not conform to a single type: thus in one case the main character may be a scarcely controllable diarrhœa with its depressing consequences, whilst in another obdurate constipation is a leading feature, or meningitic symptoms may be prominent; yet in all the enteric bacillus can be found.

Thus, although a typical attack possesses definite clinical characters, yet it is clear that aberrant forms of the fever are liable to be confused with infections due to other causes. One form of fever which has often been confused with enteric in past years has been clearly differentiated by the work of Bruce; this is known as Malta or Mediterranean fever. It is due to infection by the micrococcus Melitensis.

But there is another form of infective fever which has been, and probably still is, unrecognised as a separate disease from enteric fever when atypical forms of the two diseases are encountered. This form of fever has a further interest in that it is caused by a bacillus similar to the bacillus typhosus in many ways, although it is clearly separate from it in others. This bacillus was described by Gärtner in 1888 as the cause of an outbreak of illness affecting 58 people, of whom 1 died, which was directly traced to the consumption of the meat from an ox; this ox was slaughtered because it was suffering from diarrhœa. The only person who died is stated to have eaten of the meat in an uncooked condition.

The name given to this bacillus by its discoverer was "bacillus enteritidis." As some more recent authors have applied the name, with slight qualification, to entirely different bacilli, it is perhaps better to speak of it as Gärtner's bacillus, or the bacillus enteritidis (Gärtner). In certain respects—in its morphology (for example, flagella), and physiology (for example, inability to clot milk)—it resembles the B. typhosus, while it shares with the B. coli communis the power of fermenting certain sugars—for example, glucose, maltose. It is, however, very clearly distinguished from both these bacilli, and is so characteristic that it can be recognised easily. Indeed, were it not for the inaccessibility of the original description, and the inclusion of a milk-clotting bacillus under the same name by Lubarsch, it seems unlikely that any confusion between it and the B. typhosus on the one hand, and B. coli communis on the other, would have occurred. Fortunately the culture has been handed down, and is to be found in all bacteriological institutes.

Many outbreaks of so-called meat poisoning appear to have been proved to be due to infection with this bacillus. On another page we print an account of some of these outbreaks by Mr. Durham, who lays stress on the fact that in all cases in which the epidemiological cause has been traceable, the outbreaks have been uniformly due to the consumption of the insufficiently cooked meat of diseased animals. Another mode of infection by the bacillus enteritidis is through the agency of diseased parrots; in this case the fever has been called "psittacosis" by French observers.

When we come to look at the clinical side of the fever caused in main by this bacillus, we find that there is a very considerable variation in the symptoms. The typical attack may be described as a very severe diarrhœa, with very profound collapse, terminating fatally in three or more days: in such cases there may be delirium, either acute or of the low, muttering type; vomiting may be very severe and bloody; the stools may also contain more or less blood. In less severe cases, besides the diarrhœa, vomiting and prostration, a number of other symptoms are found. Perhaps the most constant is the slow convalescence and tardy restoration of strength. Several weeks may pass before a patient is able to get about without the aid of support; three to five or even seven weeks are not infrequently recorded as the period of recovery. In one outbreak van Ermenghem describes the symptoms as "scurvy-like," with derangements of vision and dilatation and inequality of the pupils. Rashes are not uncommon, and desquamation, especially on the hands and feet, is not infrequently observed.

These forms of the fever, whether severe or slight, are characterised by a short incubation period which may not be more than three or four hours, though more usually it

extends to twelve or more hours. The suddenness of the onset with nausea, headache, anorexia, pains in the limbs, joints, and back, together with the shortness of the pyrexia and possible multiplicity of persons attacked, will afford considerable aid in diagnosis. But all infections with the bacillus enteritidis do not conform to this type; in fact when we look to the other extremity we find, especially in the case of "psittacosis," that the incubation period may be as much as seven to twelve days. Diarrhœa is not a marked feature; indeed some observers hold that constipation is the more common; vomiting is said to be rather uncommon. When this form of the disease (psittacosis) was first recognised, one physician held that it was an "epidemic of typhoid fever, with relapses, created spontaneously by the parrots, by which it was modified in its nature." The pyrexia differs from that of enteric fever in that it generally ends suddenly after a few days; but as in the cases acquired from eating unsound meat, relapses and irregularly-occurring rises of temperature are described. The fact that Petruschky has isolated on many occasions from persons suspected to be suffering from enterica a bacillus which he calls "B. fæcalis alkaligenes," but which agrees in its characters with that of the B. enteritidis, is extremely suggestive.

The extent to which the lungs become implicated in infections by B. enteritidis (Gärtner) is also variable. In some epidemics pneumonic conditions are the rule, whilst in others slight broncho-pneumonia or bronchitis only may be found, or again lung symptoms may be completely absent. Albuminuria and, in severe cases, hæmaturia are recorded; the urine may also give the "diazo" reaction, but there is not sufficient evidence to show how common this feature may be. Taking the typical infections with the B. typhosus on the one hand, and that with the B. enteritidis on the other, there is not much probability of confusion; but we do not know to what extent the atypical forms of the two diseases are confused in bedside diagnosis. Nor do we know the true nature of hosts of passing attacks of fever, of diarrhœa, and the like.

Much further research is necessary in this direction. The modern refinement in methods of isolation and recognition of bacteria affords sufficient machinery for furthering our knowledge of the true nature of these various forms of illness.

In making a differential diagnosis at the bedside the following diseases have to be kept in mind: Enteric fever (enterica), typhus fever (typhus), relapsing fever (recurrens), Malta fever, influenza, and infections with varieties of Gärtner's bacillus. The distinction of these is of considerable importance from the point of view of treatment; this is especially the case, from the point of view of the patient, when enterica can be excluded with certainty. From the writings of French observers the rash in psittacosis may be confused with that of typhus; the presence of relapsing fever may be suggested by the recurrent attacks of pyrexia; the sudden onset and vague muscular pains and headache may suggest influenza, as in an epidemic with which we are acquainted; until we know more of the distribution of Malta (or Mediterranean) fever it is difficult to say how far this affects practitioners in this country, although abroad this specific fever must always be kept in mind.

In all these diseases, with the single exception of typhus, the causative microbe is well known and recognised. The ultimate and actual diagnosis depends upon the confirmation of the presence of the etiological agent; the same is true even when cases come to the *post-mortem* room. There is now evidence that enteric fever may occur without the characteristic lesions of the ileum. Of the cases which have been recorded, many cannot claim to be regarded as indisputable, for we cannot be certain that they were not infections with Gärtner's bacillus. However, Flexner, of Baltimore, has given an authentication of the presence of true Eberth's bacillus in such cases, which cannot be gainsaid. Still, the *post-mortem* appearances of "typhoid fever without typhoid lesions" can be accepted only when the presence of the enteric bacillus and the absence of the B. enteritidis, etc., is demonstrated. A further complication has been introduced by the discovery by Gwyn of another bacillus totally distinct both from B. typhi abdominalis and B. enteritidis in an apparently typical case of enteric fever. Since the diagnosis in this case was established by the agglutinating action of the blood serum of the patient as well as by the isolation of the bacillus, we may consider it more fully on a future occasion, when we propose to deal further with this important subject, especially from the point of view of differential diagnosis by means of the agglutinating power which is acquired by the blood serum during the course of many forms of bacterial disease.[1]

THE DENTAL BUSINESS OF THE GENERAL MEDICAL COUNCIL.

THE dental business, with which the work of the autumn session of the General Medical Council ended, included several matters of importance. For the first time the duty of ascertaining the facts in cases of complaints was relegated, under the terms of the Act, to the Dental Committee, which reported upon two cases of alleged covering, and upon a third case in which a registered dentist had been shown to have given two death certificates. In this last case it appeared that the defendant originally obtained admission to the *Dentists Register* as having been in practice (in conjunction with pharmacy), that he obtained registration as a chemist in virtue of having been in business prior to 1868, and that he kept an open chemist's shop. Hence, although his conduct only came within the jurisdiction of the Council by his name appearing upon the *Dentists' Register*, the case was essentially that of a prescribing chemist, and it was while acting in this capacity rather than as a dentist that he committed the offence complained of. In extenuation it was urged that the documents were not really death certificates (although the words "to certify" occur in them), but were merely information to the registrar; and a promise was given by the defendant through his solicitor

[1] The bibliography of infections with varieties of Gärtner's bacillus is already somewhat extensive. The reader may perhaps most profitably refer to the works of Basenau (Ueber eine im Fleische gefundene infectiöse Bacterie, *Arch. f. Hygiene*, xx, 1894, and Weitere Beiträge zur Geschichte der Fleischvergiftung, *ibid.*, xxxii, 1898), of Kaensche (Zur Kenntniss der Krankheitserreger bei Fleischvergiftungen, *Zeitschrift f. Hygiene*, xxii, 1896) of Descazals (Revue Générale de la Psittacose, *Gazette des Hôpitaux*, 1896, p. 1094) and the editorial review of Psittacosis in the *Gazette Hebdomaire* of April 18th, 1897. Many other references will be found in these papers.

that he would never do it again, nor would he attend patients as a medical practitioner. The Council, the facts being admitted, decided to postpone the further consideration of the case till the next session. The case discloses alike the prevalence in certain districts of what is to all intents and purposes medical practice being carried on by chemists in open shops, and the reprehensible laxity with which registrars accept certificates of the cause of death from unqualified persons; the fact that these two certificates were not in the authorised form, and that the deaths are entered as uncertified, does not make the thing one whit the better, and it is time that some alteration should be effected in this matter of death certificates. In another case it came out that the defendant had no longer any connection with the practice, nor indeed with dentistry at all in any place, and so, even had the Council found against him, their proceedings would have been somewhat futile.

It will be remembered that the Dundee and District Branch of the British Medical Association made a communication to the Council expressing the opinion that registered medical men ought not to administer anæsthetics for unregistered dentists, and that the Executive Committee passed a resolution that in their opinion this constituted a sort of covering. This resolution was referred to the Dental Committee, which in its report recommended that if such a charge were brought before the Council it should be entertained and investigated. It having been shown that the practice prevailed to a material extent, especially in the Midlands, this recommendation was adopted by the Council, and its legal advisers are to be requested to draw up a notice in appropriate terms.

It was also decided to issue to all persons (dentists) upon the *Register* a notice as to covering, which is in general tenour similar to that which was issued to persons upon the *Medical Register* last year, but is slightly varied in phraseology, on account of differences in the nature of dental practice which called for more close definition of the matters in which the services of an unqualified person might not be employed.

The application of a dentist qualified in the colony of Victoria to be registered in the Colonial list was granted, this being the first occasion upon which recognition has been accorded to a colonial dental qualification. But the Melbourne medical qualification is already recognised as admitting to the *Medical Register*, and, after careful examination, it was found that in respect of preliminary examination, of curriculum, and of final examination the home requirements had been closely followed, so that there was no reason for refusing the application.

THE PECULIAR PEOPLE AND THE LAW.

THE law applicable to the Peculiar People, and indeed to all persons who deliberately and intentionally abstain from calling in medical aid for their children when ill, was once more declared on Saturday by the highest judicial authority in criminal law—the Court for the Consideration of Crown Cases Reserved. It has been assumed in recent cases that such deliberate abstention, whatever the motive might be, was criminal if it resulted in serious injury to health, and that if the child died in consequence, it was manslaughter. It might have been thought that this view of the law needed no confirmation from any higher authority than that of the judges who have so frequently acted upon it at the Old Bailey. But Mr. Justice Wills, though himself acting on this view, and directing the jury in accordance with it in the case of the man Senior at the last sessions, was troubled with doubts as to whether this view of the law was absolutely unassailable, and in order to set the matter at rest once and for all he "stated a case" for the higher court. The doubt in the learned judge's mind arose from the fact that the statute which now governs such cases, generally known as the Act for the Prevention of Cruelty to Children, 1894, does not specifically mention medical aid as one of the things which a parent is bound to provide, although it was specifically mentioned in the former Act (that of 1868), which, so far as it related to this matter, was repealed by the Act for the Prevention of Cruelty to Children. Section 1 of the last-named statute enacts that if any person "who has the custody, care, or control of any child under the age of 16 years wilfully assaults, ill-treats, neglects, abandons, or exposes such child . . . . in a manner likely to cause such child unnecessary suffering or injury to its health . . . . that person shall be guilty of a misdemeanour," from which it follows, of course, that if death resulted from such conduct the person would be guilty of manslaughter.

Mr. Justice Wills told the jury that the question was narrowed down to whether the defendant's failure to procure medical aid could be called "wilfully neglecting the child in a manner likely to cause serious injury to its health." He told them that the question of motive did not enter into the matter if the defendant had done what was expressly forbidden by statute; but the jury must be satisfied that medical aid and medicine were such essential things for the child that reasonably careful parents in general would have provided them in this case.

The Court for Crown Cases Reserved held that Mr. Justice Wills's direction to the jury was right in point of law, and the Lord Chief Justice in delivering a judgment in which the five other judges present concurred defined wilfully neglecting. "Wilfully," he said, meant that the act must be done deliberately and intentionally, not done accidentally or by mistake or inadvertence. "Neglect" meant the absence of such reasonable care as an ordinary parent would reasonably use for the protection and care of his child; in other words, the failure to take such steps for the protection of infant life and health as the general experience of mankind showed to be right and proper, providing, of course, that the means of rendering such treatment were within the reasonable power and competence of the person on whom the duty rested to render them. That duty might have at different periods of history different meanings. It was a question of degree. But in these days medical aid was within the reach of the very humblest and poorest.

The proposition urged by the counsel for the defendant was that it could not be considered wilful neglect if he was affectionate, and willing to supply everything save medical aid and medicine, and only abstained from supplying them because of his religious views. "But" (said

his lordship significantly) "where could the line be drawn? One could not shut one's eyes to the dangers of the view presented, and which appeared ahead. Take the case of a child with a broken thigh, on which an operation was necessary, which would be dangerous to perform without an anæsthetic; or a case in which tracheotomy was necessary, but it was also necessary in order to save the patient's life that drugs should be administered prior to or during the operation—the learned counsel's contention would cover that."

It is satisfactory to note that in the Lord Chief Justice's opinion the dropping of the words "medical aid" out of the Prevention of Cruelty to Children Act really makes no difference. "It certainly would be a strange result, and one quite opposed to the obvious facts relating to the history of this class of legislation, to suppose that the Legislature intended to take what might be called in this connection a retrograde step, because the provisions of the Act of 1894 showed the Legislature's increased care for the protection of infant children."

THE PREVENTION OF TUBERCULOSIS.

MEETING AT MARLBOROUGH HOUSE.

A PRIVATE meeting will be held, under the presidency of H.R.H. the Prince of Wales, at Marlborough House, on Tuesday, December 20th, to promote the objects of the National Association for the Prevention of Consumption and other Forms of Tuberculosis. It is expected that Lord Salisbury will speak, as well as some representative members of the medical profession. The Prince of Wales desires to show in this way the interest which he has long taken in the question of the prevention of tuberculosis; but we understand that, as is usual in the case of private meetings at Marlborough House, the press will not be invited to attend.

THE SCHOOL OF TROPICAL MEDICINE.

WE have authority from the Foreign Office to state that Lord Salisbury has intimated his desire that the Protectorates under the administration of the Foreign Office should participate in the benefits which will be derived from the establishment of the new School of Tropical Medicine, and that the Lords Commissioners of Her Majesty's Treasury have consented in principle to the Protectorates making the requisite contribution to the funds necessary for carrying out the scheme. We are informed that Lord Salisbury will also nominate a representative on the Board of Management of the Seamen's Hospital Society.

THE LONDON UNIVERSITY AND THE IMPERIAL INSTITUTE.

THE Senate of London University met on Wednesday to consider the offer of the Government to house the University in the Imperial Institute. There was a prolonged discussion, in the course of which it was elicited that the University would have no separate entrance to its own portion of the building, with the exception of a small back door at the end of the East Wing. It would also be necessary to share the chief rooms, such as the Senate chamber and the public hall, with the authorities of the Imperial Institute. No decision was arrived at, and the meeting was again adjourned, with the view of obtaining still further particulars with regard to the proposed transfer to the Imperial Institute.

BACTERIOLOGY OF INFANTILE DIARRHŒA AND CHOLERA NOSTRAS.

THE report of the medical officer of the Local Government Board, just issued, contains an account of further investigations, conducted by Dr. Klein, into the pathogenic properties of bacillus enteritidis sporogenes, an anaërobic spore-bearing bacillus, which he ascertained to be the cause of an epidemic of diarrhœa among the patients at St. Bartholomew's Hospital in 1895. Dr. Andrewes, in his report of last year, showed that the bacillus was not to be obtained from the bowel discharges of healthy persons or of patients suffering from ordinary casual diarrhœa. The investigations reported this year show that the bacillus has been found associated with "food poisoning" due to milk, and also with summer diarrhœa of infants and with English cholera. The bacillus is widely distributed in Nature but is especially abundant and virulent in animal excreta and in matters contaminated therewith, such as crude liquid house refuse, manured earth, and sewage-polluted water. Dr. Klein finds presumptive evidence that it is intimately concerned in the causation of infantile diarrhœa and of English cholera, but in the absence as yet of any satisfactory method of detecting the bacillus in diarrhœa material, unless it be present in spore form, he is prevented from speaking with complete confidence on this point. Further, he has ascertained that milk as sold retail in this country is apt to contain spores of the bacillus, and experimentally that, among food stuffs, milk is a specially favourable multiplying ground for the bacillus. After growth in this medium it is apt, whether or not it forms spores, to be specially vigorous and to exhibit great virulence. Dr. Klein is not yet in a position to state what are the conditions which determine spore formation in the particular species, and what the circumstances which tend to enhance or to annul its virulence. Meanwhile he has, he believes, ground for regarding the bacillus as primarily derived from excrement, and for considering its presence in water, earth, and the like, as a more trustworthy criterion of direct fæcal pollution than the presence merely of bacillus coli.

UNVACCINATED CHILDREN.

THE report of the medical officer of the Local Government Board, which has just been issued, contains a digest of the vaccination officers' return dealing with births during the year 1895. This is the most recent period for which final information is procurable, and the facts given are based on repeated local inquiries concerning each child. It shows that after deducting from a total of 921,512 births those children who were successfully vaccinated, those who died unvaccinated, those who were registered as "insusceptible" of vaccination, and those who had small-pox before vaccination, there still remained 20.5 per cent. who could not be traced, or were otherwise not finally accounted for as regards vaccination. The proportion unaccounted for in the metropolis was 24.9 per cent., that for the rest of England was 19.8, both of which rates show a still further increase on a failure to comply with the provisions of the Vaccination Acts, which has been steadily growing for some fifteen years. Sir Richard Thorne, in commenting upon these figures, adds the observation, "If allowance be made for the further falling off in this respect which is believed to have occurred since 1895, the number of children now born in England and Wales who in one way or another escape vaccination is probably not much less than one-third of the whole. In this way the country is being prepared for widespread epidemics of small-pox, such as have been unknown to the present generation, unless the invariable rush and clamour for immediate vaccination on the part of those who have neglected or declaimed against the operation during times of freedom from small-pox should be capable of being so far met in the moment of emergency as largely to mitigate the impending disaster." The returns show

that 2,962 children were registered as insusceptible of vaccination in 1895. Upon this, Sir Richard Thorne somewhat drily remarks: "In this connection I would point out that the number of consecutive primary vaccinations by the Board's own officers without the occurrence of a single instance of so-called insusceptibility now reaches 107,180."

A PLAGUE-INFECTED VESSEL.

THE arrival of the plague-infected P. and O. steamship *Caledonia* at Plymouth recently was an event which would in time past have created a good deal of excitement; and it argues much for the sanitary efficiency of our ports that it should have passed almost unnoticed. The vessel sailed from Bombay, and two Lascars developed plague by the time she reached the southern entrance to the Suez Canal. The patients, and two other men suspected to be sickening of the same disease, were landed at Moses Wells, a little south of Suez. At the latter port the boat was disinfected, and all possible precautions were adopted, so that any further illness of a questionable character would be immediately detected. The vessel came direct to our shores, instead of making for Marseilles, as is usual, and her detention at Plymouth was but little more than sufficed for the landing of her London passengers. When we say that she entered Plymouth Sound, we say in effect that she touched at one of our model ports; and hence, when she sailed a little later in the day for London, Dr. Collingridge would know that she had received at the hands of Dr. F. M. Williams, of Plymouth, all necessary attention. The passengers and crew were all mustered and examined by the port health officer last named, in the presence of Dr. Bulstrode, who had been sent down from the Local Government Board on behalf of the State Department of Public Health. The absence of all trace of plague since the vessel left Suez, and the fact that so many days had elapsed, made it unlikely that further cases would occur as the result of personal infection; but the names and addresses of all who landed at Plymouth were taken by Dr. Williams as a precaution. The mode of origin of the disease would be an important factor in determining the possibility of further mischief occurring. So far, nothing more is known than is here stated; but in view of the continued prevalence of plague in Western India, the matter is of interest and importance.

THE CHELSEA PHYSIC GARDEN.

BOTANY has long since fallen from the high esteem in which it was once held as an item of medical education. When chemistry was nebulous, physics non-existent, and physiology in its infancy, first year's students spent their time in gaining a very thorough knowledge of anatomy and systematic botany. Practical instruction in botany was carried out by a series of herborisings in which the professor and his pupils tramped together over Hampstead Heath, Finchley, Blackheath, or Battersea, collecting the various wild flowers, and afterwards classifying them over an early dinner at one of the numerous taverns. Albert Smith, in his calendar for the London medical students, says of them, rather maliciously, under the month of June, "Botanical excursions in full vigour for the first two Saturdays of this month, after which the students are never known to get beyond Jack Straw's Castle or the Red House, unless they go to Kew Gardens by the boat, and then they return at once, remaining on board, hiding in the fore cabin, and only paying their fares from Blackfriars to London Bridge." These were the halcyon days of the Chelsea Physic Garden, tucked away so snugly by the Hospital for Chelsea Pensioners, and thronged by eager students early in the pleasant summer mornings. Little by little their vogue passed away, until they were no longer self-supporting, and at last became a tax to the Society of Apothecaries, to whom all honour is due for their maintenance. It was for some time a question whether they should be sold and the land built upon. Better counsels fortunately have prevailed. They have passed into the hands of the Charity Commission, who have formulated a scheme for their future management. The gardens are to be vested in trustees. They are to be managed by a committee of fifteen competent persons. They are to be used for promoting the study of botany, with especial reference to the requirements of general education, of scientific instruction and research in systematic botany and vegetable physiology, and for instruction in technical pharmacology as far as the culture of medicinal plants is concerned. The draft scheme suggests that of the fifteen members of the Committee of Management only one shall be appointed by the Society of Apothecaries and the Royal College of Physicians in turn for a term of two years. The Royal College of Physicians very properly took exception to this paucity of representation, and, as will be seen from our report of the comitia held on December 1st,[1] asked that the College should have a permanent representative. It is to be hoped that the Society of Apothecaries will ask for a similar increase, and that the Charity Commissioners will be able to modify the scheme in this respect. It seems then that the gardens have entered upon a new lease of life, for if ever a teaching university should be founded in London, more especially should it be housed in the Imperial Institute, the professors of botany and pharmacology will find the gardens useful and conveniently near.

MOSQUITOS AND MALARIA.

WE learn on trustworthy authority that the Italian investigators have once again succeeded in conveying to man malarial infection by means of mosquito bites. The parasite in this instance was the benign tertian; the mosquito employed was the same as that which has already proved an efficient transmittor of the malignant tertian parasite—namely, anopheles claviger. In this second successful experiment the mosquitos were brought from a distance from a notoriously malarial spot, and liberated on the subject of the experiment in Rome. The investigators referred to have not yet discovered Ross's "germinal rods" in mosquitos purposely fed on crescent-containing blood. We hear, however, that they have found these rods in mosquitos brought from a distance from houses in which there had been malarial fever cases.

A PREMIUM ON INEFFICIENCY.

IF *Mr. Punch* should ever find Parliament too dull, it is to be hoped he will send Toby, M.P., on a visit of inspection to some of the district councils which administer sanitary matter in rural England. His tour might commence, for instance, in Bedfordshire. A rural district council in this reposeful county met recently and discussed the salary of a newly-appointed health officer. This gentleman's predecessor in office received £63, and we gather that this munificent salary was awarded because the Local Government Board considered £42, which the rural authority proposed to give, too little, and refused to be a party to the scandal by paying half the inadequate salary. Had they declined to contribute, the guardians would have had to provide the whole 40 instead of the 30 guineas which was all they would have to find to make up the larger sum. But with a new appointment these local worthies, dignified now as a "Rural District Council," have determined to enhance the importance of their own added glory by dwarfing the meagre salary of their medical officer of health. They accordingly appoint their new man at £50, and ask the sanction of the Local Government Board to this procedure. The Board remonstrate, point out the smallness of the emolument in relation to the area and population of the district, and advise more liberal remuneration. But one member of the local authority has discovered that it is unfair to the nation that the country should be taxed to the

[1] BRITISH MEDICAL JOURNAL, December 10th, p. 1775.

extent of £6 10s., more than the services of the new health officer are thought to be worth. This consideration for the pocket of the imperial taxpayer is truly touching. But the argument in favour of docking the payment to the doctor that appeals to us most is the one that contains a veiled compliment to the former holder of this lucrative and desirable post. It has been discovered that if the highly-paid official who advises these honourable gentlemen only does his duty there will be less for his successor in office to do. We must really quote the *ipsissima verba* of the speaker as given in the *Leighton Buzzard Reporter*: "Several members," said Mr. Goodman, who seems to be a sort of thought reader, "several members thought of proposing that the salary should be £40, for that they thought would have been ample for the amount of work likely to be required in a district of that kind. If the medical officers did their duty they [*sic*] would get little sickness or epidemics, and [observe the *sequitur*] the fact that they had done their work efficiently before was proof that there was less to do now." The meaning of which elegant sentence, so far at least as our unaided powers have been able to unravel the relatives, is that medical officers of health, should be paid salaries in the inverse ratio of the efficiency with which they do their work.

THE CHARITY ORGANISATION SOCIETY AND THE PROPOSED CENTRAL HOSPITAL BOARD.

A MEETING of the Council and friends of the Charity Organisation Society was held recently to hear and discuss an interesting and important paper by Colonel Montefiore, entitled A Survey of Metropolitan Charities. The object of the paper was to enforce the necessity for a Central Hospital Board for London. The opposition which this proposal meets with from the great hospitals is rather surprising. There are probably no institutions in the kingdom more worthy of support and better managed, on the whole, than the great metropolitan hospitals, but we believe that, included in the vague term "hospitals" there are a number of very dubious institutions, which suck up a large part of the funds contributed for charitable purposes, and divert it from the deserving charities. It is partly for the purpose of separating the two classes, and partly to introduce amendments which we believe to be called for in the system under which medical relief is supplied, that we have constantly supported the principle of a Central Board. Surely those hospitals which are necessary for medical education and for the relief of the poor, and which are well and economically managed, could derive nothing but benefit from the advice and assistance of such a Board, of which they would themselves form a large part. We cannot but believe that this fact will ultimately become clear to the governing bodies of our great hospitals. Meanwhile, our thanks are due to Colonel Montefiore for the perseverance with which he keeps the matter before the public. His paper was accompanied by statistics of our chief hospitals, which will be of the greatest value to all concerned in their management.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

THIS association has recently issued an appeal for further funds, in the course of which it is stated that nineteen of its branches are already self-supporting, but that money was required for extension of the movement. It was further stated that the provident members' contributions amounted to over £5,000 a year, and that they had a staff of more than a hundred doctors, who are general practitioners of the various districts in which the dispensaries are established. There can be no doubt that this Association has for the last twenty years been endeavouring honestly to promote a provident principle among the working classes with regard to medical relief. For a long time it was the only protest against the abuse of the out-patient department of our hospitals, and its dispensaries have always been counted among the best institutions of this character. It is, however, true that they are not altogether popular with the profession as a whole. The fees charged are too small, and more adapted to the condition of the working classes a generation back. This is no doubt due to the fact that the Association has had to compete with innumerable clubs, friendly societies, etc., which pay the doctor a still lower rate of remuneration. It is to be hoped the Metropolitan Provident Medical Association will be able to raise the scale of its contributions at a no distant period. Great discrimination, too, is required in choosing sites for dispensaries. To start one of these institutions in a neighbourhood where the artisan and working-class population are able to pay the ordinary fees of the doctors practising there would be an error of policy. Such a field might be advantageous enough for a dispensary which might be easily made self-supporting and even to pay, but this would be effected at the expense of the profession.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

THE Hunterian Lectures on The Influence of Gravity on the Circulation will be given by Dr. Leonard Hill on February 6th, 8th, and 10th; the Erasmus Wilson Lectures on The Chemical Pathology of Some Infective Diseases will be given by Dr. T. G. Brodie on February 20th, 22nd, and 24th. The Arris and Gale Lectures will be given by Mr. B. G. A. Moynihan, of Leeds on February 27th, March 1st and 3rd. The subject of this course of lectures is The Anatomy and Surgery of the Peritoneal Fossæ. Other courses of Hunterian Lectures will be given in March by Professor C. Stewart and by Mr. F. G. Parsons, who has chosen the subject, Joints of Mammals contrasted with those of Man.

THE CHELSEA WATER SUPPLY.

A REPORT on the examination of the water supplied by the Chelsea Waterworks to the Parish of Chelsea during the year ending November, 1898, has recently been issued by Dr. Louis C. Parkes, Medical Officer of Health for Chelsea, and Dr. S. Rideal, F.I.C. The water was examined daily as to colour and appearance in a two-foot tube, and and its temperature ascertained, and weekly samples were taken for bacterioscopic examination. By the former means a pollution of the water supply owing to fracture of a water main was at once discovered, and investigation then showed that the town hall supply was not drawn from the ordinary domestic service main but from the hydrant service. This defect was accordingly rectified. During the hot months, on twelve occasions after standing for 24 or more hours a considerable green algid growth was noticed in the water, showing that the spores of these algæ had passed through the company's sand filter beds. The annual range of temperature was found to lie between 40° and 70° F. For nearly four months it was above 60° F. Water of this temperature is of course very favourable to the rapid multiplication of any contained micro-organisms. The number of bacteria present was estimated weekly by gelatine plate cultures at 60° F. The average number of colonies developing at this temperature in 41 samples was 85 per cubic centimetre of the water. Agar-plate cultivations at blood heat were made at the same time, and the colonies counted after forty-eight hours' incubation. On one occasion no colonies developed, and on fifteen occasions less than five colonies developed for each c.cm. of water taken. Only once was the number of colonies in the agar plates very high, and that was on September 19th, when the temperature of the water was 67° F. On this occasion over 400 colonies, which proved to be due to a micrococcus, were counted. The number of colonies appearing at 60° F. (in gelatine), and at 98° F. (in agar) respectively showed no constant ratio. Considerable

importance is attached by the investigators to the organisms developing at blood heat on the grounds that these bacteria can retain their vitality, and may also multiply, in the human body, and that it is known of some of them that they are derived from the intestinal tracts of man and animals. The blood-heat organisms were found to be much in excess of the average, at a time at which autumn diarrhœa was most prevalent. Forty-four samples were cultivated according to the Parietti method. In 70 per cent. growth occurred with 0.2 to 0.5 c.cm. of the water, and on six occasions when subcultures were made, this growth was proved to be due to the B. coli communis. It was found that whenever the number of blood-heat organisms (ascertained from the agar plates) was high, growth occurred in the Parietti medium. The oxygen required to oxidise organic matter varied during the year between figures corresponding to 0.022 to 0.127 gr. per gallon, which are equivalent to the figures given by pure waters. No relationship could be traced between the amount of oxygen required and the number of bacteria in the water. Drs. Parkes and Rideal conclude that reliance should not be placed upon sand filtration alone when the water is derived from a tainted source such as the Thames, a river with a very considerable inflow of surface water.

THE LIFE-TABLE FOR OLDHAM.

THE last few years have been marked by a new departure in the vital statistics of large urban districts, in the shape of local life-tables. The first of these to appear was, we believe, that of Dr. Tatham for Manchester, followed by that of Dr. Newsholme for Brighton, Dr. Chalmers for Glasgow, Dr. Mumby for Portsmouth, Dr. Hayward for Haydock, Lancashire, and now we have before us Dr. Tattersall's life-table for Oldham. All these life-tables deal with the vital statistics for the years 1881-90 of the above communities. The Oldham life-table, like the Brighton life-table, on which it has been modelled, is constructed by what is known as the graphic method, the other life-tables mentioned above by analytical methods, that for Haydock having been constructed by an ingenious curtailed method. In adopting the graphic method, the medical officers of Brighton and Oldham have followed the example of the majority of actuaries, who look more favourably on the graphic than on the analytical method, and adopt it in the majority of their calculations. For the somewhat uncertain data which are embodied in the census and death returns, the graphic method presents great advantages besides its simplicity and elegance. It is well known that the ages, both of the living and the dead, tend to be returned in round numbers at decennial periods, for example, 20, 30, 40, and 50. A curve of the population shows hillocks at nearly every decennial interval. The graphic method enables these hillocks to be smoothed out, and thus gives a truer result than the original figures. A table is given by Dr. Tattersall which compares the main results of his with preceding life-tables. For males the expectation of life at birth is 34.7 years in Manchester, 35.2 in Glasgow, 36.9 in Oldham, and 43.6 in Brighton. At the age of 20 years the male expectation of life is 34.6 years in Manchester, 35.7 in Oldham, 36.9 in Glasgow, and 40.5 in Brighton. In Oldham the expectation of life is generally better than in Manchester up to the age of 60, beyond which point it falls slightly below it. Oldham is slightly better than Glasgow during the first five years of life; beyond that point the Glasgow conditions are more favourable to life than those of Oldham. Brighton, as might be expected, shows more favourable conditions throughout the whole of life.

HOSPITAL ABUSE IN PARIS.

THE abuse of medical charities in Paris is becoming more widespread, and the public conscience on this point appears to be gradually becoming seared. The old dread of the hospital—which used to be regarded by respectable French people in much the same way as the workhouse is among us—is giving place to a tendency, which is said to be steadily increasing, on the part of well-to-do people to make use of these charitable institutions on false pretences. Rich people carefully got up in the guise of poverty present themselves at the hospital clinics; their object is mostly to secure a revision of the diagnosis made by their private medical adviser. Having got this and a prescription, they can be seen getting into their carriage, which has been left at what they consider to be a safe distance from the hospital, and driving away, pleased no doubt at the thought of having saved a consultation fee. Quite recently, at Dr. de Wecker's clinic in the Quinze Vingts Hospital, a lady wearing diamond earrings of the value of £160 was seen to take them off as she went into the waiting-room. It is satisfactory to record that Nemesis quickly overtook her, for her pocket was picked, and she offered 20 francs reward—the amount of the fee which she tried to save—but in vain. It is to be hoped that this will be a warning to others of her kind. Wealthy people will even do all they can to gain admission into hospitals to be operated upon. With a little diplomacy this can generally be effected in France. They do not hesitate to borrow receipts for rent and other certificates of identity from acquaintances living in a different quarter, and thus gain admission to a hospital under a false name. There is a sort of inquiry, but it is altogether inadequate, and the frauds are so skilfully conducted that they are difficult to detect. As the hospital accommodation of Paris is, in proportion to the population of the city, very limited, it is clear that if well-to-do people occupy beds intended for the poor, they are guilty not only of a peculiarly revolting form of selfishness, but of downright fraud. A suggestion has recently been made that persons abusing medical charities in such a manner should be prosecuted for fraud. A similar measure was proposed in the *Practitioner* some time ago, with the object of checking hospital abuse in this country, and we think the suggestion deserves consideration. A notice to the effect that persons detected in abusing the charity would be dealt with in that manner might be placed in a conspicuous part of the out-patient room. This measure would probably be more effectual as a deterrent than appeals to a sense of honour which does not exist, or homilies on the disgrace of accepting charity on false pretences.

A CHINESE MEDICAL JOURNAL.

OUR Hong Kong Correspondent writes: The first number of a new magazine with the title *A Monthly Journal of Medicine, Surgery, and Hygiene* has just appeared. It is edited by Wan Tün Mo, a diplomate of the Imperial Medical College, Tientsin, and Resident-Surgeon Alice Memorial Hospital, Hong Kong. The publication of this journal marks an epoch in the history of Western medical science in China. Slowly but surely the more enlightened Chinese are becoming convinced of the superiority of Western methods of medicine, surgery, and hygiene. In the first issue the scope and object of the magazine are set forth in the following passage: "The journal is published solely for advancement of medical science and all contributions to its pages must be in strict harmony with the great facts on which true medical science is based with special reference to the facts of anatomy, physiology, botany, chemistry. Each issue is to consist of six sections: (1) Leading articles and translated selections from recognised authorities in medical world; (2) special cases and treatment; (3) to deal with new methods; (4) to give instruction in first principles of anatomy and physiology; (5) notes on laws of health, food, sanitation; (6) miscellaneous, including news of special interest to students of medicine. Western doctors in China will be asked to report cases of special interest.

Illustrated plates and diagrams will be used." The first issue contains three leading articles—two from Western sources treating of diagnosis and treatment of disease; the third is an exhaustive inquiry into the nature and causes of bubonic plague. There is also an introductory article on the study of anatomy and physiology. The section on hygiene treats of impurities in water and maladies to which they give rise; preservation of eyesight, means of maintaining the body in health, and the importance of pure air. Dr. Wan, the editor, is a man of large professional experience, and it is hoped that his new venture will have great success.

THE CASE OF THE LATE MR. H. K. HUNTER, L.S A.

IN answer to numerous inquiries as to when this case will be heard, we are informed on the best authority that there is no probability of a Crown Court sitting before the Christmas vacation. The difficulty in the Court being formed is mainly caused by the absence of so many of the Queen's Bench judges on circuit. The General Medical Council and the Society of Apothecaries are both desirous of having the case disposed of at the earliest opportunity.

CYCLO-THERAPEUTICS.

DR. SIEGFRIED, of Bad Nauheim,[1] has strongly recommended cycling as a means of obtaining active and passive movements in the lower limbs, which are at the same time relieved from supporting the body weight. He has employed it both in local affections, such as joint diseases, muscular atrophies, and peripheral paralyses, and in central disorders, as general failure of strength, cardiac insufficiency, and diseases of the brain and cord, when other methods would have been impossible. The author is convinced from his own personal experience that modern improvements in machines have reduced their friction to a minimum, and so prevented wasteful expenditure of energy. He quotes four cases in illustration of his views, one of which presented some remarkable features. The patient, a man, aged 33, had suffered for four years from recurrent rheumatic attacks resulting in permanent flexion of the left hip and complete ankylosis of the left knee, together with great muscular atrophy. Very little improvement was effected by ordinary methods of treatment, so that Dr. Siegfried determined to try the effects of cycling. The patient had at first to be held on the tricycle by two assistants, and to use a considerably shortened pedal crank for the left foot. He was able to remain on only for five minutes at a time when commencing, but in three months could ride 15 miles a day regularly; five months later he could accomplish 35 miles a day without fatigue, and was, in fact, completely cured. It should be noted that the previous use of exercises and massage had proved ineffectual. The second case was one of chronic gout, with great deformity of both knees, hands, and shoulders, so that he was unable to rise from a chair without assistance. Two years' tricycling effected an almost perfect cure of both the physical condition and its attendant mental depression. In another case the patient had suffered amputation of the right thigh in the lower third; the artificial limb was fixed to the pedal of the tricycle, and the wasted thigh muscles greatly benefited. At the same time his cardiac rhythm was rendered regular, as shown by sphygmographic tracings. The last patient was a girl, aged 20, with cardiac insufficiency; the combination of cycling with baths containing carbonic acid gas effected a rapid cure. The author bases his conclusions on 97 cases, from which he has obtained more than 400 pulse tracings. He insists that the patients must be taught that cycling is for them a treatment, not an amusement, and that the physician must keep their exercises under his own observation. Where this precaution has been neglected more harm than good has often resulted, particularly in neurasthenics. Dr. Siegfried concludes by agreeing with Eulenburg's statements as to the value of cycling in diseases of the spinal cord, and by asserting that it can do no harm, and when successful produces better results than those obtained by other mechanical agencies.

[1] *Deut. med. Woch.*, 1897, No. 27.

MEDICAL PRACTICE IN PORTO RICO.

ENTERPRISING members of the profession in America are beginning to look for new spheres for the lancet in the colonies which have been won for the United States by the sword. But the prospect of their finding fresh fields and pastures new in their conquests does not appear to be very brilliant. Manila offers few attractions, and swarms with native doctors and with quacks of every shade. At Porto Rico there is plenty of sickness, but every native is his own physician. Rich and poor alike doctor themselves with herbs, in which they have a satisfying faith. So far it would seem that the only "open door" for medical men that is worth entering is in Cuba.

THE Queen has appointed Staff-Surgeon James Lawrence Smith, M.B., R.N., to be a member of the Fourth Class of the Royal Victorian Order. Staff-Surgeon J. Lawrence Smith was Surgeon to H.M.S. *Blonde* at the time of the death of Prince Henry of Battenberg on that ship.

DR. JAMES PURVES STEWART, who formerly held the appointment of University Assistant to Sir Thomas Grainger Stewart in Edinburgh, and who has since been Senior House-Physician to the National Hospital for the Paralysed and Epileptic, Queen Square, has been appointed Assistant Physician to the Westminster Hospital.

SURGEON-GENERAL WILLIAM TAYLOR, Army Medical Staff, was on December 10th invested by Her Majesty at Windsor with the decoration of the Military Division of the Third Class of the Order of the Bath for services in Egypt and the Soudan, including the battles of Atbara and Khartoum.

OWING to Dr. Cavafy's resignation of the post of Physician to St. George's Hospital, Dr. Ewart becomes Senior Physician, Dr. Rolleston full Physician, and Dr. A. C. Latham Assistant Physician. Dr. Latham has filled the posts of curator of the museum and medical registrar in the hospital, and was formerly Radcliffe Travelling Fellow, University of Oxford.

DR. JAMES LITTLE was on Wednesday nominated by the Academic Council as Regius Professor of Medicine in the University of Dublin, in succession to Sir John Banks, K.C.B., resigned. The new Professor is Physician to the Adelaide Hospital, Dublin, Crown representative on the General Medical Council, and has been President of the Royal College of Physicians and of the Royal Academy of Medicine.

DR. HAYDON, of Melbourne, visited India during the plague, and took back with him to Melbourne some cultivations of the plague bacillus. In consequence of the outbreak of plague in Vienna the Government of Victoria, fearing a similar occurrence, demanded from Dr. Haydon the surrender of the cultivations, and on his refusal to give them up unless compensated, seized and destroyed them.

MR. HAYTER LEWIS, for many years Professor of Architecture in University College, London, died on December 12th, at the age of 80. He was one of the first architects to recognise the importance of sanitary science to his art. He was a man of great erudition, and possessed a singular charm of manner, which endeared him to a wide circle of friends.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL.—This institution has entered on a career of extended usefulness. A new building has been recently erected in Church Street, Brighton, at a cost exceeding £7,000, and it was declared open on November 29, by the Duke of Norfolk.