

BRITISH MEDICAL ASSOCIATION:  
SUBSCRIPTIONS FOR 1880.

SUBSCRIPTIONS to the Association for 1880 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, MAY 22ND, 1880.

EDUCATIONAL OVERSTRAIN.

THERE has been a good deal of correspondence lately in non-professional as well as in the medical journals, concerning the mental strain to which children are submitted in our public and private schools, and the ill effects resulting therefrom. It is our present purpose to inquire whether this evil, which has always existed more or less, is very much upon the increase. Many circumstances have occurred within the last few years which incline us to believe that it is; but whether to the extent suggested by the tone of the correspondence, is not quite so certain. Great Britain has gradually awoke to the necessity of a general system of education; and public opinion is in favour of a higher standard of culture for all classes, and appears to be especially desirous that young women should have equal advantages with young men; and accordingly we have initiated a system of compulsory education applicable to all classes, secondary schools, middle-class examinations, and a complicated machinery for assuring ourselves of the educational standard of candidates for public offices and certain professional degrees. The strain has been rather suddenly applied, and it is not to be wondered at that its effects have proved prejudicial in a certain number of cases.

Every one possessed of any knowledge of the social condition of the poorer classes in England must have anticipated conflict between teacher and parent, as an almost necessary consequence of the initiation of a system of compulsory education. It could not be expected that the mother, herself uneducated, could properly balance the good accruing to the child against the loss of its services in the household for even a few hours of each day. To her it was a great hardship, and one not to be estimated except by those who know how much domestic work is done by very young children. But the thing had to be done; the system had to be commenced, and the hardship of double work had to fall on both parent and child. From this arose numerous complaints of overstrain, some of them probably well founded, the majority, however, the outcome of grumbling and discontent. It is well to remember, however, that the new system did not by any means bear so hardly in Scotland as in England; for, in the former country, an educational system, practically compulsory, had existed for many generations, one which was by no means elementary, and one which had worked itself into the minds of the people as part and parcel of daily life. It would not be fair, therefore, to compare the immediate effects of the education Acts of the two countries; and it is only justifiable to speak of them in the same sentence, in the hopeful view that in England, as the people become accustomed to the measure, friction will disappear, and there will grow insensibly a pervading recognition of the advantage of education. Any complaints of overstrain from this quarter may fairly be set down to the as yet imperfect accommodation of the people to the system.

The effects of overstrain are to be sought for amongst children attending public, and more especially private, schools. If we survey the public-school boy overhead, we find a tolerably healthy young animal, robust in body, lusty in all his members, and, with rare exceptions, certainly not overburdened with knowledge. We very rarely come

across boys wearing spectacles, which, especially in Germany, is the outward and manifest sign of an overexerted nervous function. The general fault of our public schools is that the average and stupid boys do not receive the same amount of attention as the head boys of the form; and it doubtless occasionally happens that the latter are overtaxed by their masters, from the very natural desire to nourish that part of the field which brings forth good fruit; but it is not likely that much harm will accrue to the public from this source. In fact, as pointed out by the lady practitioners who have addressed the papers, a much greater danger from overstrain lies in the path of girls. The desire on the part of teachers of middle-class schools to raise their pupils to the highest standard; of proprietors of public and semi-public seminaries to keep ahead of the times; the earnestness with which individual girls apply themselves to sciences, for the mastering of which they have received imperfect training; and last, not least, the pride of parents in seeing their children first in the race, are the real causes of the mischief complained of. The old French proverb holds good: we cannot make omelettes without breaking eggs. On the whole, we believe that the ill effects of overstrain have been somewhat overstated, and that the number of sufferers is merely proportionate to the number of advanced students. We do not say that the observation of these cases has not warranted the raising of a warning voice, but we are much induced to believe that that voice has been pitched too high. Still, we are entirely at one with the various newspaper correspondents in strongly urging on parents the necessity of watching carefully the effects of mental labour on young persons. It is altogether a family matter, for overstrain is almost entirely within the power of parents to restrain; and we cannot see what our profession can do more than give general advice on the matter, in the same way as it lifts its voice against other unhealthy conditions. If a father or a mother desire the child to be crammed and urged to work beyond its powers, he or she is alone responsible for the existence of a nuisance which they themselves have the power to abate. Preceptors, for the most part, are alive to the necessity of physical labour and athletic exercises as the best means of maintaining equilibrium; and it rarely happens that we hear of well substantiated complaints against the dietary. We believe one very effectual means of reducing overstrain would be the abolition of the system of giving prizes. Many a boy and girl seriously injures health by secretly studying to obtain a premium, which only serves to satisfy temporary ambition. But, after all, the public must weigh the advantages accruing to the public good from superior education against that certain small proportion of sufferers which is the probable outcome of general increase of brain-tension. As a rule, however, we believe with Dr. Wilks that young women and girls suffer much more widely from indolence and frivolous dissipation than from intellectual overwork.

It is not within our province to discuss the quality or quantity of the various curricula adopted in certain schools; although, in many instances, we believe they are not conducive to a high standard of education, and are often ridiculously diffuse. Nor do we feel called upon at the present moment to catalogue the symptoms of an overworked brain. All we need do is to impress upon parents, whose children are distinctly and definitely suffering from overwork, to remove the cause of the evil, and to devote, not sacrifice, a year, during which the brain may remain fallow, gaining that rest which will enable it to exercise its influence over the bodily health, and to receive the seeds of knowledge with a fair prospect of germination.

MEDICAL CHARITIES (IRELAND) BILL.

A BILL bearing this title was brought in by Messrs. Meldon and Errington, and ordered to be printed by the House, just prior to the dissolution of Parliament, and will be resuscitated this session. It purports to amend the Medical Charities (Ireland) Act. When this Act was before the legislature in 1850, powers were given whereby not only relieving officers, but every member of the dispensary committee, and certain officials called wardens, were empowered to issue dispensary tickets; the outcome of which has been that, owing to the large number

of persons to whom the power of giving tickets was conceded, a very great abuse of the privilege has sprung up. Various suggestions for mitigating this have been made. The Bill before us proposes to deal with this evil, first, by abolishing the office of warden and limiting the power to issue tickets to the relieving officer, and to the members of the dispensary committee (we are of opinion that the authority to do so might be still further curtailed); secondly, by conceding to the dispensary medical officer the authority to apply to a justice, or justices, sitting in petty session, or to the dispensary committee, to have the ticket cancelled in all such cases where evidence is forthcoming that it has been improperly issued, such decision to be final. By another clause it is provided that the Local Government Board may, by sealed order, remove from office any member of committee, or relieving officer, who shall knowingly or wilfully issue a medical relief ticket to a person who is not a poor person within the meaning of the Act; and it shall be lawful for the medical officer who shall have received such order, to proceed against the issuer for the recovery of such fees for his attendance upon the person for whom the ticket was issued, as he would be entitled to in case such person had been attended as a private patient.

If, however, the case be one that is open to legitimate doubt, then the relieving officer may grant a provisional ticket, on a special form, such form conveying an undertaking on the part of the applicant that he will, if called on, pay to the guardians of the union in which such dispensary is situated such fees as the medical officer would be entitled to receive if he had been called on to attend him in his private capacity; such fees, when recoverable, to be paid over to the dispensary medical officer to whom such ticket has been directed.

Provision is also made whereby, after the passing of the Bill, dispensary medical officers will be entitled to a fee of not less than £1 1s. or more than £2 2s. for the examination and certification of pauper lunatics. The absence of such regulation in the administration of dispensary medical relief has been a source of grievous injustice to certain medical officers, notably in the North Dublin Union, where much time is given to such certification, without fee or reward.

By the tenth clause, it is proposed to materially modify the arrangements for granting superannuation allowance. The Medical Officers' Superannuation (Ireland) Act, like the similar enactment in England, is only permissive; and, as a result, the intention of the legislature to grant superannuation in all suitable cases, has been defeated, either by the parsimony or the injustice of boards of guardians. Many cases of great hardship have come under our notice. The clause as drawn will place the initiative in the hands of the Local Government Board, who, on being memorialised, either by the dispensary medical officer or from other sources of information, will direct such officer to appear before a medical board, specially appointed by the Local Government Board from time to time for the purpose of being examined as to his fitness to retain his appointment; and if, on their report, it be decided that he is incapable of effectually discharging his duty, by reason of advanced age (such age being above sixty), or from infirmity or ill health of mind or body, then the said board shall direct the guardians to pay a superannuation allowance not exceeding two-thirds of the salary and emoluments received by him in respect of his office, such superannuation allowance to be drawn from the same sources as the salary of the said dispensary medical officer.

By clauses 11, 12, 13, and 14, powers are proposed to be taken, enabling the Local Government Board to appoint an officer, whose duty it shall be to examine, from time to time, samples of drugs and pharmaceutical preparations supplied under contract to the various dispensaries; and if, on such examination, they are found to be adulterated, to direct such contracts to be cancelled, and the parties supplying them to be prosecuted, if on his report it be considered by the Local Government Board desirable to institute such procedure.

It will be obvious from the brief sketch we have given, that this Bill as drawn fairly meets all the objections which have been urged against the working of the Medical Charities Act; but, to secure its enactment, it will be necessary for every dispensary medical officer to exert himself,

and to use such influence as he may possess, either with his representative in Parliament, or otherwise, as it may appear to him to be desirable.

#### CIVILISATION AND INSANITY.

IN a paper upon the "Problems of Insanity", recently read before the New York Medico-Legal Society, Dr. G. M. Beard describes insanity as being a barometer of modern civilisation; by this test alone, he says, one may measure the relative advance which any nation of recent times has made, or is making, in the myriad and complex activities that distinguish modern from ancient life. This view is very strongly put by the author; we are told that what not to know, and what not to do, are the problems on the solution of which the arrest of the multiplication of the insane mainly rests; also that the question of the future is not so much one of co-education as of no education; that we should strive to organise ignorance, to make it fashionable to avoid the curriculum of the schools, and to evolve an aristocracy whose pride it shall be that they are non-experts in every direction save that in which they can be made happy and useful. We are said to be in peril of being entombed in the very abundance of the historical, artistic, and literary accumulations of the ages. It is pointed out that civilisation weighs most heavily upon the poor, for it deprives them of most of the pleasures, delights, and healthful influences of barbarism without the compensations that the higher classes enjoy.

In all this there is certainly truth; still the case is evidently overstated. Even if this were not so, however, and we were obliged to choose between all the advantages of civilisation and education, coupled with a certain percentage of insanity on the one hand, and barbarism, ignorance, and freedom from insanity on the other, we should unhesitatingly decide in favour of the former. Even Dr. Beard, however, supplies us with a more hopeful view of the future of civilisation; he believes that the development of the intellect at the expense of the emotions, which is the tendency of the age in all highly civilised regions, is to be one of the preventives of insanity. We are made nervous and kept nervous through our emotions, and kept well and helped to get well by the activity of the intellect. The highest civilisation is purchased at the price of the emotions, and requires intellectual culture. Intellectual work of the higher order is one of the great antidotes of insanity; the increase of insanity is not so much among the most intellectual, as among the least intellectual and highly emotional classes of civilisation. We thus arrive at this seeming paradox. "Although civilisation is the cause of the increase of insanity, the most civilised people are the least likely to be insane." Frequent travels and migrations, hunting, fishing, and other out-door exercises are all helping to solve the problems of insanity. Dr. Beard speaks of these health-giving amusements as "scientific and systematic reversals to barbarism", by which our civilisation is to be saved. We should like to know how the author reconciles his views as to the salutary effects of intellectual culture with those expressed earlier by him, when he says that the wealth of history, art, and literature of previous ages threatens to act as an interminable and overwhelming flood, and to become, like the property of the millionaire, a tyrant to its possessor.

Another of Dr. Beard's theories is, that the intellectual activity of the modern woman is a potent cause of insanity; we are told that undue mental strain in the mother becomes eccentricity in the child, and in successive generations develops into nervous exhaustion, inebriety, insanity; that woman, by following man to the factory, platform, bar, etc., discounts tribute from all her posterity; in fact, that woman is elevated that the race may be enervated. With these views, we are unable to agree. Of course, if a woman's physical health be injured by a faulty system of education and by undue mental strain, the result will be seen in both mental and physical weakness in her offspring; but, provided education be pursued with due regard to the conditions of health, we can only anticipate good results to posterity from the intellectual culture of woman. Dr. Beard's own view, that intellectual training of a high order tends to keep the emotional side of our existence in the background, seems to apply here with great force. Instead,



therefore, of regarding the increasing intellectual activity of woman at the present day as likely to produce an increased percentage of insanity in the future, we believe that in the long run it will have exactly the opposite effect, provided always that the educational systems at present in vogue for young persons of both sexes are adapted more closely to the conditions necessary to the promotion of healthy physical development. That reform is greatly needed in this direction has been recently pointed out by Dr. Hack Tuke in a paper entitled "Intemperance in Study" (*Journal of Mental Science*, January 1880). Attention is drawn to the evil effects of setting long lessons to learn at home, and during hours which are supposed to be devoted to relaxation and healthful exercise. The number of hours actually spent in school does not, as a rule, appear to be excessive in our large public schools; there are exceptions, but this evil, and the teaching of an undue multiplicity of subjects at one time, are most prevalent in private schools. The timetable of school hours affords no true estimate of the amount of work required of the pupils. The system presses most hardly upon those who have only average, or less than average, ability; and upon the industrious, because those who are lazy are not closely and continuously engaged in their work during school hours.

Civilisation, education, and religion are freely and frequently accused of causing insanity and other nervous diseases; that they actually do so, is also unfortunately an undoubted fact; but we believe that these disastrous effects form no necessary part of their results. They are in themselves good, and the evil which they do is due to faulty systems, and to errors which have grown up side by side with them, but which really form no part of them, and may in time be separated from them. Our aim and object should be to thoroughly sift our present systems, retaining what is good in them, and relegating the rest to the realm of the past. Towards the attainment of this end, such papers as those from which we have quoted by Drs. Beard and Tuke are important contributions; much good might be anticipated from the free distribution of information on this subject among the guardians and teachers of the young.

#### FATTY EMBOLISM.

IN 1860, H. Müller (*Würzburger Medic. Zeitschrift*) first observed the phenomenon of fatty embolism in man. While examining the eyes of a young man who had died of contracted kidney, he found that some of the choroidal vessels were filled with fat. This fat, to which he did not attach any importance, was supposed by him to have come from atheromatous patches in the aorta or other vessels.

Similar observations as to the presence of fat in the blood-vessels after death were afterwards made by several observers; but it was regarded as a mere curiosity till the appearance of a paper by Wagner in 1862 (*Archiv für Heilkunde*), in which, from the frequent occurrence of fatty emboli in pyæmic cases, and from the result of experiments on lower animals, the opinion was expressed that they were a common cause of pyæmia. The attention of German observers was now directed to this subject, and numerous monographs on fatty embolism have since that time appeared. Of these may be mentioned that of Bergmann, in 1863, who, directing his attention to the effects produced by the introduction of oil into the circulation, attributed the death which resulted in some cases to paralysis of the heart and œdema of the lungs; of Wagner, in 1865, in which an attempt was made to trace the origin of the fat in forty-eight cases of fatty embolism observed by him, fifteen of these being cases of rapid death after severe injuries of the bones and soft parts; of Busch, in 1866, who demonstrated that, immediately after injury to the medulla of a bone, fatty embolism of the pulmonary capillaries occurred, that the fat entered the circulation through the opened veins, and that it never caused abscesses or inflammatory disturbances—that, in fact, fatty embolism was of little importance, being only dangerous when in very large amount; of Cohnheim, in 1872, who clearly pointed out the existence of two kinds of fatty emboli, a non-irritating form which occurs after subcutaneous injuries, and an irritating form, where the fat is derived from the immediate neighbourhood

of a septic wound; and of Flournoy, in 1878, who showed, among other things, that the conditions necessary for the occurrence of fatty embolism were, sufficiently large openings in the veins, the presence of free fluid fat in the neighbourhood of these open veins, and a sufficient *vis à tergo* (generally an extravasation of blood), and that these conditions most frequently occurred in fractures of bones, less frequently in injuries of the soft parts and after amputations or excisions.

In a recent monograph on this subject (*Untersuchungen über die Fettembolie*) Scriba has discussed the whole question at great length, and has brought forward many valuable facts. In order to obtain a pure fatty embolism, apart from any septic infection, he boils oil before injecting it, and uses various precautions in its introduction into the circulation. He first inquires into the fate of fat injected into the veins, and, with the view of determining this, he introduces the oil into the blood-vessels of frogs, while he at the same time examines with the microscope the circulation in the lungs, tongue, etc. He has also tested the urine of patients who had suffered injuries to their bones. As the result of numerous experiments, he finds that fluid fat when introduced into the circulation is caught in greatest part in the capillaries of the lungs, forming emboli. A smaller portion passes on into the general circulation, and either forms emboli in various organs, or is excreted by the glomeruli of the kidney, and appears in the urine. In man, the emboli in the lungs become detached in about eight days, pass on into the general circulation, and in part form emboli in other organs, in part are excreted by the kidneys, while at the same time the emboli in the various organs become loosened, and may be caught in the lungs. This cycle may be repeated several times. The greatest part of the fat is excreted by the kidneys, only a small portion remaining behind in the body. In support of these views, he finds that, as a rule, after fractures, oil only appears at intervals in the urine. Thus, at first, it is found on the second, third, and fourth days; then it disappears, reappearing again from the tenth to the fourteenth day, and again for a third or fourth time, at intervals of six to ten days.

Fat, however, cannot be looked on as an indifferent substance; not only does it act mechanically, it also probably acts chemically. For it has been found that, when oil is shaken up with blood, the red blood-corpuscles are in great part destroyed, some fragments only of them being found, while hæmoglobin appears in considerable quantities in the fluid. And in like manner, when the urine is examined in cases of fatty embolism, blood-pigment is often found, and, where casts are present, these contain it in a granular form. According to some, fat exercises a directly deleterious effect on the heart; Scriba, however, does not admit this, but, on the contrary, holds that the cardiac disturbances which occur after injection of oil are solely due to the altered conditions of the circulation, from blocking of the pulmonary capillaries.

Scriba has further investigated the changes produced in the lungs by the fatty embola. Oil was injected into the veins, into the medulla of the bones, and into the abdominal cavity of rabbits, and in all instances the pulmonary vessels were found to contain numerous fatty emboli. In performing these experiments, it was observed that rapid injection of the oil is more fatal than a slow injection. When injected into a vein close to the heart, an amount of oil which, introduced under high pressure, would cause immediate death, if injected slowly, produces scarcely recognisable effects. The fatty emboli are bland, and are not, as Wagner supposed, causes of pyæmia or secondary abscesses. The fat does not pass through the walls of the capillaries, but the plug becomes loosened and carried on in the general circulation, as formerly described.

With regard to the quantity of fat required to kill an animal, he comes to the conclusion that varying amounts will be necessary, according to the *vis à tergo* and the distance of the point of entrance of the fat into the circulation from the heart. If the *vis à tergo* be but little or if the distance be great, so that the increased blood-pressure produced by the entrance of the fat is equalised before it reaches the heart, a healthy animal requires a very large quantity of fat to kill it. The shorter the road, and the greater the *vis à tergo*, the less is the

quantity of fat required; but in no case does Scriba think that less than three times the amount of fat present in the femur of the animal would be able to cause death. On examining the animals which died of fatty embolism, it was found that the vessels of the brain were very markedly blocked with fat; while, when these emboli were absent, or only present in small numbers, death did not occur, even although the lungs were full of them. In no case did he find death occur from acute œdema of the lungs. He therefore concludes that, in pure fatty embolism, death occurs only in consequence of extensive embolism of the vessels of the brain and spinal cord, and is due to the arterial anæmia and consequent disturbances of nutrition produced by the emboli.

He gives the following as the characteristic symptoms of fatty embolism; presence of fat in the urine at intervals; transient attacks of dyspnœa; lowering of temperature; temporary slight hæmoptysis, without fever, and generally without dulness or râles; irregular action of the heart; collapse, with marked pallor of the skin and mucous membranes; at first, shallow respiration, at times interrupted by deep sighing inspiration, later Cheyne-Stokes' respiration; spasms of various kinds or paralyses, generally bilateral; diminution of reflex irritability.

Such are some of the chief facts made out by Scriba with regard to the phenomena of fatty embolism. The subject is certainly one of the greatest importance, and calls for further investigation. It is, indeed, strange that, in spite of the interest which it has excited abroad, it should have attracted but little attention in this country.

SMALL-POX last week caused 71, and typhoid fever 33, deaths in Paris.

HER Royal Highness the Princess of Wales has been pleased to consent to lay the foundation-stone for the new Chelsea Hospital for Women, which is about to be built in the Fulham Road.

MR. OSMAN VINCENT'S lecture on *Genu Valgum* at the National Orthopædic Hospital, advertised for the 26th instant, is postponed until June 2nd.

DURING the past six weeks of the current quarter, the death-rate in London has averaged only 20.6 per 1,000, against 24.6 and 25.2 in the corresponding periods of 1878 and 1879.

A MIXED medical and lay commission has been nominated by the President of the French Republic for the purpose of preparing a code of regulations for the organisation of home medical aid in Paris, under public administration.

SEVERAL cases of small-pox have occurred amongst the men of the Hampshire Militia now billeted at Winchester. The needful precautions appear to have been taken; but the absence of a hospital for infectious diseases is unfortunate, in view of the possibility of the disease extending to residents of the town itself.

THE fatality of measles in Plymouth last week showed as great an excess as in the previous week; the 23 deaths from this cause in the borough last week raised the number of fatal cases recorded since the middle of November last to 297. Measles also showed excessive fatality in Leicester and Sunderland.

THE Croydon Board of Health have agreed to take steps in reference to a matter now receiving great attention, viz., the spread of epidemic disease by means of schools. They have taken the preliminary steps towards gaining the concurrence of other Boards of Health and Boards of Guardians, in order that united representations may be made to the new President of the Local Government Board.

By the death of one of the public vaccinators of Portsmouth, and the resignation of the other (an old practitioner aged 84), a long wanted reform, the consolidation of the public vaccination arrangements of the town has been rendered possible. With an energetic vaccinator and

proper and sufficient accommodation, the Portsmouth vaccination station would be one of the best of its kind in the kingdom as regards numbers of children brought for vaccination and adequate selection of lymph.

THERE having been five hundred cases of small-pox in the last few weeks in Antwerp, Diest, Jumetz, and Gilly, M. Crocq, a physician and senator, has pressed the Government to make vaccination compulsory; but the Minister of the Interior said it was too late in the session, the Lower House having already finished its business. All that could be done was to distribute lymph gratuitously.

DR. WILLIAM COLLINGRIDGE, of Mayo Road, Forest Hill, has been elected Medical Officer of Health for the port of London, in the room of the late Dr. Harry Leach. The Court of Common Council reduced the number of candidates to five, and subsequently to two; the final contest lying between Dr. Collingridge and Mr. George Turner of Portsmouth. The former obtained 103 votes, and the latter 62.

THE majority of the graduates of the University of London having decided that they prefer to be represented in Parliament by a gentleman who is not a graduate, Sir William Gull and Sir George Jessel have withdrawn their names from the threatened parliamentary contest, and Sir John Lubbock, the accomplished Vice-Chancellor of the University, remains the sole candidate. He has formally resigned the Vice-Chancellorship as a preliminary to his election.

A BRILLIANT *conversazione* was given, at the South Kensington Museum, on the evening of Friday, the 14th instant, by Mr. John Wood, F.R.S., President of the Metropolitan Counties Branch of the British Medical Association. Each visitor was invited to bring a lady; and the total number of members of the Branch and other guests present amounted to nearly two thousand. During the evening, a selection of music was performed by the band of the Grenadier Guards, under the direction of Mr. Dan Godfrey; and a number of glees, part-songs, and madrigals were sung by a company of vocalists, under the direction of Mr. Edwin Moss of the Foundling Chapel. Recitations were given at ten and eleven o'clock by Miss Ada Ehrenhoff. A collection of work done by the blind was shown; and the visitors had also the opportunity of inspecting the numerous objects of interest in the museum. The evening was spent in a most agreeable manner; and we are sure that we are only expressing the feeling of all who were present, in saying that the generous hospitality of Mr. Wood was most cordially appreciated.

#### MURCHISON MEMORIAL.

DR. POTTER, the Treasurer of the Murchison Memorial Fund, has received a bank-note for £100 from "one who honoured and esteemed Charles Murchison". As it is proposed to close the subscription list almost immediately, we take this opportunity of advising intending donors to forward their subscriptions without delay.

#### CONFERENCE ON PUBLIC HEALTH.

THE conference which has been held annually since 1876 by the Society of Arts, on subjects connected with public health, is announced for the 10th and 11th of June. As in former years, Mr. Stansfeld, M.P., will preside. The programme is arranged in three divisions, the first of which deals with sanitary administration and organisation. The first point taken up under this head refers to the constitution of county boards chargeable with the observation of rivers, the appointment of county health-superintendents, etc.; the second subdivision relates to the formation and regulation of sanitary districts; the third, to the method by which members should be elected on the county boards; and the fourth, to the method of inspection which, it is suggested, the Local Government Board might adopt. The second main division of the programme relates to the amendment of the law: first, the public Health Act, 1875; and second, the Pollution of Rivers Act, 1876. The third main head refers to a proposal for a sanitary inspection and classification of dwellings.



## EDUCATIONAL PRESSURE.

THE discussion on the paper by Mrs. Garrett-Anderson, M.D., will be resumed on Monday evening next, May 24th, in the Hall of the Society of Arts, John Street, Adelphi. The proceedings will commence with a short paper by Miss Frances M. Buss, of the North London Collegiate School; after which the discussion will be re-opened by Dr. Farquharson, M.P. The chair will be taken, at eight o'clock, by Mr. J. H. Gladstone, F.R.S. Copies of Mrs. Garrett-Anderson's paper and the discussion on Monday evening, May 10th, can be had on application at the office of the Association for the Promotion of Social Science.

## HOSPITAL SUNDAY IN LIVERPOOL.

THE Committee of the Hospital Sunday Fund have apportioned their available sum of £9,250 among the various medical charities of Liverpool in the following amounts: Royal Infirmary, £2,775; Royal Southern Hospital, £1,480; Northern Hospital, £1,295; Dispensaries, £740; District Nursing Society, £647 10s.; Ladies' Charity and Lying-in Hospital, £555; Infirmary for Children, £462 10s.; Eye and Ear Infirmary, £555; Homœopathic Dispensary, £185; Stanley Hospital, £185; Hospital for Infectious Diseases, £138 15s.; Consumption Hospital, £92 10s.; St. Paul's Eye and Ear Hospital, £46 5s.; Cancer Hospital, £46 5s.; Dental Hospital, £23 2s. 6d.; St. George's Hospital for Skin-Diseases, £23 2s. 6d.

## THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

WE are informed that Mr. William Adams intends to offer himself as a candidate for one of the four vacancies, which will have to be filled at the forthcoming election into the Council of the Royal College of Surgeons of England. Few British surgeons have connected their names with more numerous and ingenious additions to the science and art of surgery than Mr. Adams. His name will always be connected with subcutaneous surgery, as having, more perhaps than any other surgeon since Stromeyer, contributed to the scientific study of the physiopathology of the subcutaneous operations on the tendons. His studies of pathological rotation of the spine, and of the processes of repair of tendons subcutaneously divided; of the pathological anatomy of vertebral deformities; and of the varieties of talipes, have a permanent place in science. Operations which he designed for the subcutaneous division of the neck of the femur in ankylosis with deformity, marked a new progress in surgery, which has since been followed by other improvements; and his last contribution to the pathological study and successful treatment of contractions of the palm and the fingers is recognised at home and abroad as a solid addition to knowledge and surgical resource in the treatment of a very intractable affection. On a former occasion, Mr. Adams received within ten votes of the number required to place him in the Council; he subsequently declined to be nominated in opposition to the senior claims of his colleague Mr. John Gay. These circumstances, combined with his senior standing and the merit which his contributions to knowledge and operative methods have reflected on British surgery at home and abroad, may be held to give to Mr. Adams a very strong claim to the suffrages of the Fellows on this occasion.

## INFANT MORTALITY AT GREAT YARMOUTH.

THE infantile mortality of Great Yarmouth is always an unsatisfactory feature in the local returns, and, though somewhat less in 1879 than in 1878, nevertheless still continues high. The percentage of deaths of infants under one year of age to the registered births was, in 1879, 13.5, against 19.6 in 1878. To this excessive infantile mortality, Mr. Bately, the health-officer of the district, has devoted much care and attention. He finds that a number of conditions conspire to produce it, but that the principal cause lies in improper feeding and careless nursing. Infants of the tenderest age are often deprived of their natural food, and the most innutritious indigestible messes are resorted to, milk forming no part of the diet. Common foods are, sour milk out of dirty bottles; bread and water; arrowroot, sometimes with milk, but often with water only; corn-flour, starch, and other similar substances containing no real nourishment whatever. The result of

the use of these artificial foods is what might have been expected. Flatulence, pain, diarrhoea, and other disorders arise, and the child becomes weary and fretful. Recourse is then had to Godfrey's cordial and other opiate soothing syrups, which, as Mr. Bately observes, "certainly have the effect of allaying pain and forcing sleep, but only to aggravate the evil and hasten the death of the child". The mothers of Yarmouth have yet to learn how to feed their children, many of them being so ignorant that they have no idea of what is proper, and believe that anything eaten or drunk by an adult may be given to an infant. Mr. Bately says there can be no doubt that the majority of infants dying under one year old are sacrificed to the ignorance of their parents. All this is very sad; and it would be a great work of charity if the ladies of the town would band themselves together, as has been done with much advantage at other places, to visit the poor and give them instruction as to the best methods of feeding and nursing children. The liberal distribution of the National Health Society's "Plain Rules for the Management of Infants" would also be an important aid in this direction. Amongst other causes of the disastrous mortality amongst infants, Mr. Bately refers to the practice of infant life-assurance, which, he thinks ought to be put a stop to by the Government. He says that he has often been surprised at the exceeding soothing influence the "insurance money" has had upon the "distracted feelings" of the "bereaved parents". Another cause is the prevalence of enthetic diseases at Yarmouth, and the consequent large mortality from tabes, marasmus, atrophy, debility, etc., which largely owe their origin to constitutional taint. Mr. Bately says that he firmly believes that the operation of the Contagious Diseases Acts, if applied to the town, would do a great deal, in the course of a few years, towards abating the prevalent scourge. Yarmouth is a sea and fishing port of considerable importance, as well as a military depôt, and thus would no doubt benefit considerably by the operation of these Acts.

## THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE proposal which we sometime since brought forward, and which was made at the College of Physicians on the 13th instant, to admit retired medical officers to the privileges of the library and reading-room, deserves favourable notice, and encourages us to hope that it is an indication of a desire on the part of the College to do something more in various directions towards the practical benefit of the profession. We regard the three courses of lectures given annually as hardly sufficient proof of activity in the promotion of scientific knowledge on the part of so important a body of the profession. They are the legacies of a bygone time, and require to be supplemented by other means. With regard to the library and reading-room, we may express the hope that, at the same time with the extension of the privilege of their use to retired medical officers, some steps may be taken to make them more worthy of the College than at present, and that the reading-room may be furnished with some additions to the morning papers and the medical journals, now forming almost the only attraction to visitors. It was only a few years ago that the Harveian Oration was delivered in Latin; and now that the language in which it is given is familiar and intelligible to everyone, the occasion is regarded with pleasure and interest by a large number of persons both in and out of the profession. We should like to see some further evidence of the public spirit which distinguished the founders of the College.

## SEA-WATER BATHS FOR LONDON.

THE problem of supplying sea-water to the inhabitants of the metropolis appears likely to be practically solved. It is announced, without incurring the outlay proposed by the promoters of a company who unsuccessfully sought powers, during the recent session of Parliament, to lay pipes from Brighton to London, and without any disturbance of the streets and consequent interruption of traffic, the Great Eastern Railway Company undertake to supply sea-water to any part of London within their ordinary delivery at the rate of sixpence for three gallons. The water is brought from Lowestoft, and delivered at any address in airtight cans for the price named; and an additional convenience to the

purchaser is that the cans will, if required, be left until the following day, when the company's vans will call for them, without any extra charge. If the scheme be found to be remunerative, it will probably be adopted also by other railway companies who have sea-side stations; and probably inland provincial towns will ultimately be included in the service. It will, at all events, show whether a demand for sea-water really exists.

#### THE PHARMACEUTICAL SOCIETY.

THE ninth annual dinner of the Pharmaceutical Society of Great Britain was held this week in Willis's Rooms; the President (Mr. G. W. Sandford) taking the chair. About one hundred and twenty members of the society and their friends sat down to table, among those present being Dr. B. W. Richardson, Professor Roscoe, Mr. Schacht (Vice-President), Professor Redwood, Professor Frankland, Mr. Gant (President of the Medical Society), Professor Bentley, Professor Attfield, Dr. Greenhow, Dr. Buchanan, Mr. Ernest Hart, Mr. T. H. Hills, Dr. Paul, Dr. Silver, Dr. Meredyth, Mr. Wyndham Cottle, Mr. Carteighe, Mr. Casson, Mr. F. Mason, and Dr. Godson. The toast of "The Medical Profession", proposed by the Chairman, was responded to by Mr. Gant, President of the Medical Society of London. Dr. B. W. Richardson, in proposing "The Prosperity of the Pharmaceutical Society and the Health of the President", dwelt on the importance of the services that members of this society had rendered to those physicians who were trying to place therapeutics on a true scientific basis. Next, touching on the changes which were being made in the practice of medicine, he said that pharmacy now formed the fourth estate of modern medical science; and expressed a hope that the day was not far off when, by a friendly amalgamation of the Pharmaceutical Society with the last of the great and useful organisations of medicine which most closely coordinated with it, the pharmacist might enter the pale of medicine altogether, become professional in the strictest sense of the word, and feel that each member had an opportunity of rising to the highest positions in a united and common profession. The annual *soirée* of the Society was held at the South Kensington Museum on Wednesday evening last, and was attended by a large number of visitors. Many members of the medical profession availed themselves of the hospitality of the Pharmaceutical Society as an opportunity of visiting the museum in the evening. The new fresco painting by Leighton attracted much attention, as a specimen of art worthy of revival. The whole of the building was open to the visitors. One of the large halls was beautifully illuminated by electric lamps. The band of the Grenadier Guards, under the direction of Mr. Dan Godfrey, performed selections of instrumental music, and glees and madrigals were sung during the evening in the lecture-theatre. Over two thousand visitors were present.

#### VIOLENT DEATHS.

THE deaths referred last quarter in England and Wales to different forms of violence were 4,104, and were 223 less than the number returned in the preceding quarter; they were equal to an annual rate of 0.65 per 1,000, and to 2.8 per cent. of the total deaths, almost corresponding with the average proportion in the ten preceding corresponding quarters. In the mainly agricultural counties of the Eastern division, the death-rate from violence did not exceed 0.41 per 1,000; whereas it was equal to 0.78 in the Metropolitan and North-western, and 0.88 in the Welsh divisions. In the twenty large towns, the deaths from violence were equal to an average annual rate of 0.79 per 1,000; the rates in the several towns ranged from 0.37 and 0.43 in Plymouth and Leicester to 0.98 in Norwich, 1.13 in Birmingham, and 1.25 in Liverpool.

#### DEATHS IN PUBLIC INSTITUTIONS.

In workhouse establishments, hospitals, and public lunatic asylums in England and Wales, 14,479, or 9.9 per cent., of the deaths were registered last quarter; in the corresponding periods of the ten years 1870-79, the proportion of institution deaths was 9.5 per cent. In the twenty

large towns, 7,214, or 15.1 per cent., of the deaths occurred in public institutions; the proportions in the several towns ranged from 4.1 and 6.5 in Plymouth and Nottingham, to 17.5 and 18.5 in London and Manchester. Excluding the twenty large towns, the proportion of institution deaths in the rest of England and Wales did not exceed 7.4 per cent.

#### INQUESTS.

DURING the three months ending March last, 6,934 inquest cases were registered in England and Wales, equal to 4.8 per cent. of the total deaths. The percentage of inquest cases was rather below the average proportion in the first quarter of the ten preceding years. In the twenty large towns, the proportion of inquest cases averaged 5.9 per cent., and ranged from 2.8 and 3.2 in Oldham and Sheffield, to 9.1 and 9.2 in Manchester and Birmingham.

#### GUY'S HOSPITAL.

WE are happy to be able to state that the wards which it was proposed to close at Guy's, for want of funds, will be kept open. This much to be desired consummation is due to the prompt and effectual steps initiated by the medical and surgical staff of the hospital, who, sooner than see the school or hospital so damaged, determined to provide the necessary funds themselves. As a result of the movement so initiated, the treasurer has issued a circular to the staff and governors, in which it is stated that a sum of £2,500, provided by the liberality of the staff and some of the governors, will eke out the splendid income of the hospital for a year. It is, however, more than probable that another similar sum will be required next year, and again the year after that. How is it that this ancient institution, with an income, we believe, of £40,000 a-year, has come to such a pass? It was only a few years ago that sufficient money was saved by the late treasurer, Mr. Turner, to build, open, and maintain in operation, new wards. On the treasurer's circular, it is declared that the agricultural depression is the cause of this unsatisfactory state of things.

#### RECENT CENTENARIANS.

IN the Registrar-General's last quarterly return, the deaths of two alleged centenarians are recorded—one at Tunbridge Wells and one at Hertford—the latter death being that of a female, whose age was said to be 103 years. Since the end of the quarter, a case of undoubted centenarianism has been recorded by Dr. G. M. Bacon of the Cambridge County Asylum, who has taken pains to investigate the matter fully. Dr. Bacon states that, on the 10th ultimo, a man named James Disborough completed his hundredth year. He is in fair health still, and of good memory and understanding, and states that he was born in 1780, and baptised when about a year old. Dr. Bacon has obtained from the Rector of Ashen, Essex, a copy of the entry in the parish register of the baptism on May 20th, 1781. The other evidence is the tradition of the family as to the year of his birth, and his frequent statement that he was twenty in the year 1800, and twenty-nine when he married in 1809. He had seven children, thirty-two grandchildren, and fifty-nine great-grandchildren, and his eldest child is now nearly seventy. Dr. Bacon states that: "On his hundredth anniversary, the four generations assembled in the old man's home, at Bradley, near Newmarket, to celebrate the event; and among several persons who called with a word of kindly congratulation on the occasion was the doctor, whose visit was at first resented by the old man, who considered himself far too well and hearty to require any medical attention."

#### FOWL-CHOLERA.

AT a recent meeting of the Paris Académie de Médecine, M. Pasteur made a fresh communication on this subject, in which he showed that vaccination by mild virus prevents the propagation of the disease. He took eighty young fowls which had not had fowl-cholera, and inoculated twenty of them with highly virulent virus; these twenty died. Of the sixty which remained, he took twenty, and inoculated them with greatly diluted virus; not one of them died. If these inoculated fowls be again inoculated with the strongest virus, they do not all die; six or eight of



them will survive. He then took twenty-untouched fowls, and exposed them to two vaccinations; twelve to fifteen of them resisted the most virulent form of virus. Finally, he inoculated these last twenty fowls three or four times, and found them entirely uninfluenced by the most powerful virus.

#### LOCAL GOVERNMENT IN JAPAN.

THE Japanese are a little ahead of our Local Government Board. Dr. P. Fitzsimmons, writing recently from Yokohama, says that the Japanese Government, which is vigorous in enforcing vaccination, has a farm at Tokio where bovine virus can be obtained. This is precisely the measure which the recent deputation of the Parliamentary Committee of the British Medical Association urged upon Mr. Sclater-Booth, and which has not yet emerged from the shadow of the "best consideration" of the Board.

#### MOURNERS' CLOAKS.

WE are glad to hear that, for sanitary reasons adduced in the Report of the United Synagogue of British Jews, the Council have resolved that the use of mourners' cloaks at funerals be discontinued. It is to be hoped that the palls will shortly also be abolished. We earnestly recommend the general community to follow an example dictated by sound common sense and justified by the teachings of sanitary science.

"Public attention has lately been called to some of the probable means by which contagion is diffused. The Committee are of opinion that the palls and mourners' cloaks afford such a means for spreading infection. These appurtenances are of course used indiscriminately in cases of death from infectious and non-infectious disease, and almost necessarily carry with them from house to house the insidious germs of the most fatal maladies. The mischief which may be propagated by contact with these paraphernalia is incalculable. The Committee recommend the Council to resolve that they be discontinued at or in connection with the funerals of the United Synagogue. The simplicity with which funerals should be conducted has been generally recognised both within and without the community. The solemnity of a funeral can receive no augmentation from the use of a pall, nor can the feelings of the mourners be affected in any degree by the employment of a black cloak. The first was introduced to hide from public view the white deal of which coffins for Jewish use are, in the majority of instances, made; and the latter originated in the desire to cover the garments of poorer mourners, who might feel ashamed to attend the funerals of their relatives, or the synagogue on the Sabbath during the week of mourning, in their usual attire. The Committee believe that, with the spread of intelligence, these reasons have ceased to be operative. Educated public opinion sees nothing disrespectful, but, on the contrary, something commendable, in the absence of decorative appliances which distinguishes a Jewish funeral; and the sympathy and condolence extended to all who mourn must render the use of a black cloak to conceal the mourner's attire superfluous. There may be some in the congregation who will object to relinquishing a custom which time has consecrated to them; but the Committee trust that the Council will take this opportunity of teaching and leading the minds of the congregants in such grave circumstances and considerations as are involved in the possible introduction and spread of contagious diseases in their households."

#### THE GENERAL LYING-IN HOSPITAL.

THE resident house-physician, the two physicians in charge of in-patients, and the physician in charge of the out-patients at the General Lying-in Hospital, York Road, Lambeth, have, it is announced, all resigned, in rapid succession, in consequence of "faulty administration of the hospital and the unsatisfactory organisation of the nursing". Fundamentally, the cause of these resignations is stated to be similar to that at the Pendlebury and Guy's Hospitals—viz., the difficulty which the physicians have found in carrying out their responsible duties, in consequence of undue interference with them in the performance of these. They had desired to carry out a rigidly antiseptic system, and the authority essential to the safety of the patients under such a system has, it is alleged, been denied to them. [The dangers of a lying-in hospital being always imminent and considerable, it is, of course, peculiarly necessary that, in all that relates to the care of their patients and the mode of nursing them, the word of the physician-accoucheur must be law. An inquiry is to be held into all the circumstances; meantime, Drs. Hayes,

Fancourt Barnes, and Moullin appear thus far to have discharged a public duty, at the cost of no small personal annoyance and self-sacrifice. An effort was made to induce Dr. Cory, by a money offer, to accept temporarily the position which his three distinguished professional brethren had, from a sense of duty, declined to continue to hold. With a just sense of what was due to the public and the profession in such a case and with proper delicacy, Dr. Cory informed himself in the first instance by communication with the gentlemen who had retired, of the causes of their resignation, and honourably declined to accept the post and the fee offered for payment.

#### REVACCINATION IN FRANCE.

THE *projet de loi* which Dr. Liouville has introduced into the French Chamber of Deputies, providing for compulsory vaccination (see page 563), appears to be meeting with medical criticism in France. It seems to be regarded as unnecessarily stringent, and certainly in one respect it appears to us to be open to this objection. By Article 3 of the Bill, it is proposed to make revaccination obligatory every ten years, in the course of the tenth, twentieth, thirtieth, fortieth, and fiftieth years. It is difficult to understand on what grounds this repeated performance of the operation is regarded as necessary. Certainly the documents with which Dr. Liouville was supplied at his request by Mr. Ernest Hart, when he was contemplating the introduction of a vaccination Bill into the Chamber, contained nothing that could lead him to the belief that such repetition was necessary or desirable. Of the prophylactic importance of revaccination it is unnecessary to speak; and its compulsory performance has our warmest advocacy. But, if it be properly and successfully done, it is not necessary to perform it more than once in a lifetime, and that when the age of puberty is approached. To attempt to make its performance compulsory every ten years, is to obtain in advance for the Bill a large amount of opposition which it is at once unnecessary and inexpedient to excite. We have the high authority of the late Dr. Seaton, for the dictum that revaccination, once properly and successfully performed, does not appear ever to require repetition. The well-known immunity from small-pox of the once-vaccinated nurses at the Highgate Small-pox Hospital need not here be quoted, as it is too well known to need reproduction. But even were there the least reason for impugning the accuracy of Mr. Marson's statement on this subject, as has of late been unjustifiably attempted to be done, there is enough evidence elsewhere to prove the virtually complete protection which one revaccination gives. Thus, in a report on the late epidemic of small-pox in London, recently presented to the Local Government Board by Dr. J. H. Bridges, we find the following instructive cases. Dr. McCombie, writing from the Deptford Hospital, says: "Since the hospital was reopened in April 1878, no officer or servant has contracted small-pox in the discharge of his duties here. One servant showed symptoms of small-pox a few days after entering the service; but as she was evidently incubating small-pox at the date of entering on duty here, I do not consider that she contracted small-pox in the discharge of her duty in this hospital. I am informed that, during the time the hospital was open in 1877, none of the staff contracted small-pox." Mr. Gayton writes from Homerton, after an experience of seven years, in which more than six thousand patients have been treated for small-pox, that "One only amongst the large number of nurses and others who have been occupied here has contracted the disease. In her case, the operation of revaccination was accidentally neglected." Mr. Bingham writes from Hampstead, after an experience of more than three thousand cases: "One man, a ground labourer, caught small-pox in the early part of the epidemic. By some means, he escaped being revaccinated, and, during a pressure of work, was sent into the laundry to assist in removing soiled clothes. He then contracted small-pox in a modified form, and recovered." The experience of our army and navy, from which small-pox has been virtually stamped out by universal revaccination, might also be quoted; but in this respect Dr. Liouville has an example nearer home. At a time when small-pox was causing three hundred deaths a month in Paris, a recent number of the *Progrès Medical* contained the announcement that, in the military hospitals of

that city, there were fewer than twenty cases of small-pox, the majority of them being of a very slight nature, and none of them being fatal. Our contemporary rightly ascribed this favourable result to the measures taken for the revaccination of the troops. By a decree of the War Minister dated March 8th, 1875, revaccination of every soldier was ordered immediately on his enlistment. Seeing the very favourable results that have followed the enforcement of this rule, both in the French and in the English army, Dr. Liouville might well be content in asking for the compulsory performance of *one* revaccination at the age of puberty. If his principle is to be admitted, there would seem no reason for stopping at fifty years; for M. Toledano recently communicated to the French Société d'Hygiène the results obtained by him from nearly five hundred revaccinations performed at the Hôtel des Invalides, in which he had achieved 68 per cent. of successes in men from 60 to 70 years old, 84 per cent. of successes in those from 70 to 90 years, and had succeeded perfectly in revaccinating a hoary veteran 91 years old!

#### THE MURDERER VELI MEHMED.

OUR own correspondent writes to us, under date, Constantinople, May 7th, 1880:

In continuation of what I wrote to you lately (April 15th) about Veli Mehmed, I now beg to inform you that, last Saturday (May 1st), the medical areopagus sitting on this trial received the French translation of the "dossier judiciaire", or minutes of the evidence taken down at different times relating to the case. My previous letter to you gave, in a few words, the substance of this evidence; but I must here add that that evidence was marked throughout by endeavours to impress the reader with the idea that Veli Mehmed was positively suffering from mental alienation; and, in order to help the imagination to arrive at this conclusion, it went so far as to substitute the word *Deli* (mad) for his first name *Veli* (holy, beloved of God). Veli Mehmed himself has said more than once that he was out of his mind when he fired at the Russian colonel. A circumstance, however, which I omitted to state in my previous letter to you is that Veli Mehmed, in his examinations, always pleaded ignorance of the Turkish language; but, in order to test the truth of this plea, his interpreter would purposely make occasionally erroneous interpretations into Turkish of what had been said by him in the Bosnian language, and in every instance Veli Mehmed corrected these mistakes; thus showing not only his knowledge of Turkish, but also the correct perceptions of his mental faculties. The day before yesterday, the Committee, composed of the five doctors, viz., Servicien, Emin Pasha, Mongeri, Omer Bey, and Mordtmann, appointed to report on the mental condition of Veli Mehmed, presented their report to the huge areopagus of doctors called together to help the court-martial. The report was drawn up by Dr. Mongeri (Superintendent of the Lunatic Asylum of Top-tash, at Scutari), and showed in clear and forcible terms the sanity of Veli Mehmed's mind; but it ended with a most extraordinary appeal, recommending his sentence to the merciful consideration of the Emperor of Russia! Thirty-one doctors were present at this sitting; twenty-two of them (twelve Christians, eight Mussulmans, and two Jews) declared that Veli Mehmed is, and has always been, in the full enjoyment of his mental faculties; five doctors (four Mussulmans, and one Christian) declared him to be insane; two doctors (a Mussulman and a Christian) asked for more time, so as to complete their inquiries and give their opinion; and two doctors (a Mussulman and a Jew) declined to assume any responsibility, or to give any opinion on the case. On such materials, therefore, will the court-martial have to deliver its judgment. In the meanwhile, I hear that M. Onou, the Russian *chargé d'affaires*, has addressed a note to the Porte requesting to be informed by what principles Ottoman subjects are governed in their relations with foreigners; for in the murder committed by Hassan, the Circassian, upon Hussein Avni and Rashid Pashas, he was tried and executed within twenty-four hours after committing the crime; and in the case of the recent murder of the Grand Sheriff of Mecca, his assassin was executed forty-eight hours after the deed; while in the case of this murder of Colonel Kummerau by Veli Mehmed, which occurred on February 29th, the question is still in suspense.

#### FRAUDULENT DIPLOMAS.

AMONGST the latest reports of the issue of fraudulent diplomas by so-called institutions of learning in America is one from Mr. White, United States Minister at Berlin, relating that there had been brought to his office a diploma, handsomely engrossed, on parchment, issued by "the

American University of Philadelphia", and conferring the degree of Doctor of Medicine upon one Christopher Schuetz, living at Leipzig. It appeared that the diploma was offered to Schuetz on condition of payment of a certain sum. It is signed by the "faculty" of the institution, headed by the name of John Buchanan, M.D. Schuetz desired of Mr. White a certificate of genuineness of the diploma, which was refused. The diploma, though evidently new, was dated 1872. Soon after this case, the judicial authorities at Prenzlau forwarded a copy of a diploma issued by the same institution, over the signature of Dr. Buchanan and others, to Paul Christoph Erdmann Volland. The authorities desired information as to the genuineness of the diploma and the standing of the institution, before admitting Volland to practice. Mr. White observes, with great truth, that America has gained an unenviable reputation in Europe for the sale of unmerited diplomas by irregular institutions. The matter is rendered more serious by the fact that the last mentioned diploma was duly certified by Philip A. Cregar, notary public, and by William B. Mann, prothonotary, stating that the "Eclectic Medical College and American University of Philadelphia" is a regularly incorporated institution of good standing.

#### SUICIDE BY DECAPITATION.

THE *Boston Medical and Surgical Journal* for April 29th gives an account of a curious case of suicide by decapitation, which bears a strong general resemblance to a case reported in the *American Practitioner* for August 1876, an abstract of which was given in the BRITISH MEDICAL JOURNAL for September 23rd of that year. In the present case, a young man, who, with his father, worked a small farm, slept with his father in an old barn on the place one Saturday night; and on Sunday morning, the father started to go to their home, which was at a distance, remarking to his son, who had not risen from the hay where he was lying, that he should come back on Monday morning, and that in the meantime he too had better go home to the house. On Monday, when the father returned, about midday, he found his son lying dead on the floor of the barn, with his head completely severed from his body, or attached only by a portion of the skin at the front of the neck. The decapitation had been performed by a rough sort of guillotine, which the self-ordained victim must have spent the whole Sunday in constructing. There was reason for thinking that the deed was consummated between seven and eight o'clock on Monday morning. The young man must have been unconscious, if not dead, from the effects of ether at the moment when the blade descended. The *Boston Herald* gives the following description of the guillotine as constructed.

"This machine was improvised from material found in the barn, and its plan of operation was as follows. Two uprights, three by four joist, twelve feet in length, extended from the floor of the lower storey to the ceiling, to which they were securely spiked. The lower ends of the uprights were mortised in a solid piece of hard wood, about eight by twelve inches in size, and some three and a half feet in length. In the centre of this bed-piece was chiselled out, apparently with a very dull implement, a groove sufficiently deep and wide to admit the entrance of a man's neck. Fitting between the uprights, in an easy sliding position, was a square piece of two-inch plank, to the lower edge of which was securely fastened the blade of a carpenter's ordinary broad axe, sharpened to a keen edge. The bottom of this slider rested upon a lever fifteen inches in length, working upon a pin secured in the left upright, and from the end of which, suspended by a cord three feet in length, was a watering-pot, which had been filled with water. On the top of the slider was a box containing fifty pounds of stone. The bottom of the watering-pot, which was an ordinary twelve or fourteen quart vessel, such as is commonly used on a farm, had been perforated with holes, so that the water might leak out and release the lever, thereby allowing the sliding block with the axe attached to fall. The axe, after being released, had a fall of six and a half feet. In order to render the uprights more firm and prevent any lateral motion, a piece of scantling was mortised in between them at about eighteen inches from the top. At the base of the uprights were two holes, through which was thrust a broom-handle, which effectually imprisoned the neck of the victim and prevented any attempt to remove it. In front of the machine, on the floor, was a small piece of timber, about two feet long, six or seven inches wide, and four inches thick. In the end, next to the bed-piece of the guillotine, was gouged a cavity large enough to hold about two



quarts, and in it was found about a pint of ether. This ether came directly under the nose of the victim, which rested upon the floating lid of a cigar-box. On each side of this, with the ends firmly braced against the bed-piece in order to steady it, was a large box filled with stones and dirt."

#### DEATH OF PROFESSOR MULDER.

THE death of the eminent chemist, Gerard Johannes Mulder, is announced as having taken place at Utrecht on April 18th. Mulder was born at Utrecht on December 27th, 1802, and was therefore in the seventy-eighth year of his age. He graduated as Doctor in Medicine and Doctor in Pharmacy at the University of his native city in 1825, and commenced practice at Amsterdam; but, in the next year, he removed to Rotterdam, where he was appointed lecturer on botany and chemistry in the newly established medical school. In 1841, he was elected professor of chemistry in the University of Utrecht. He was the author of several works on physiological chemistry, the chemistry of urine, food, etc.; but is perhaps best known to the English reader by his researches on the protein compounds.

#### MEDICAL SCIENCE IN CHINA.

THE eleventh annual report of the directors of the hospital for Chinese attached to the American episcopal mission at Shanghai shows, we read, that medical science is making rapid advances among the natives of China. In the outset, the institution was regarded with mistrust and suspicion. On the first day, it was totally unattended; on the second, an old woman plucked up courage, and was prescribed for; and by the end of a week patients began to flock in. Dr. Parker, the physician in charge, now states that on most mornings there is a long line of sedans extending far in every direction. During the year 1878, 20,260 persons, including 103 foreigners, were treated in the refuge, thus demonstrating, in the language of the report, "how widely spread is the impression of the beneficial effects of the hospital". The authorities of the hospital distribute a vast amount of practical charity with very moderate means. The management now announces that it needs more ample buildings to continue its work efficiently, in view of the increasing demands which are made upon its resources. Local subscriptions are already promised in support of the undertaking.

#### THE ACTION OF HYDRATE OF CHLORAL.

DR. H. H. KANE of New York has issued the following questions regarding the action of hydrate of chloral, and invites members of the profession who have had experience in the use of the drug to answer them, and also to give him any information they may possess with reference to the literature of the subject.

1. What is your usual commencing dose? 2. What is the largest amount you have administered at one dose, and the largest amount in twenty-four hours? 3. In what diseases have you used it (by the mouth, rectum, or hypodermically), and with what results? 4. Have you known it to affect the sight? 5. Have you ever seen cutaneous eruptions produced by it? 6. Have you known it to affect the sexual organs? If so, how? 7. Do you know of any instances where death resulted from or was attributed to its use? If so, please give full particulars as to disease for which given; condition of pulse, pupils, respiration, and temperature; manner of death; condition of heart, lungs, and kidneys; general condition, age, temperament, employment, etc. If a necropsy were held, please state the condition there found. 8. Have you seen any peculiar manifestations from chloral, as tetanus, convulsions, or delirium? 9. Do you know of any cases of the chloral habit? If so, please state the amount used, the disease for which the drug was originally administered, the person's temperament, and the present condition of the patient, with reference to the state of body and mind in general, and of the various organs and systems in particular.

Medical practitioners are earnestly requested to answer the above questions fully, especially 7 and 9, in order that the resulting statistics may be as valuable as possible. All communications will be considered strictly confidential, the writer's name not being used when a request to that effect is made. Letters should be addressed to Dr. H. H. Kane, 191, West Tenth Street, New York City.

## SCOTLAND.

SIR ROBERT CHRISTISON has, at the request of the Edinburgh University Conservative Association, consented to be nominated for the Lord Rectorship of the Edinburgh University, vacant in November next.

#### UNIVERSITY OF ABERDEEN.

THE Aberdeen University Court met last week; the Earl of Rosebery, Lord Rector, presided. Professor Charles Niven of Cork was elected Professor of Natural Philosophy. Mr. Fife Jamieson, M.B., was appointed Assistant to Professor Struthers till the end of the year, in place of Dr. Needham, resigned.

#### ROYAL INFIRMARY, EDINBURGH.

FOR the appointment of third assistant-physician (recently established by the managers of the Royal Infirmary, Edinburgh), there are at present five candidates. These are: Dr. Alexander James, Lecturer on Physiology in Surgeons' Hall, and Clinical Medicine Tutor in the extramural School; Dr. Byrom Bramwell, lately of Newcastle-upon-Tyne, and of the Medical School of Durham University, now Lecturer on Practical Medicine, Edinburgh; Dr. Allan Jamieson, Lecturer on Skin-Diseases, Edinburgh; Dr. F. W. Moinet, Lecturer on Materia Medica, Edinburgh; and Dr. Andrew Smart, lately Lecturer on Institutes of Medicine, College of Surgeons, Edinburgh. Opinion is divided as to the claims of the various candidates. The appointment is in the hands of the managers of the Royal Infirmary, and it is intended to proceed to fill it up at the meeting to be held on Monday, May 31st.

#### THE DRAINAGE OF PAISLEY.

IT is satisfactory to note that a motion, in favour of draining the new town of Paisley, was carried by a majority at the last meeting of the Police Commissioners. The town has enjoyed such an unenviable notoriety of late for a high death-rate that it was time some steps should be taken to meet the evil; and, indeed, it was suggested at the meeting in question that the whole town ought to be drained; and that, if the work were not speedily undertaken, the Board of Supervision would step in and order it to be done.

#### PROPOSED AURAL HOSPITAL FOR GLASGOW.

AT an influentially attended meeting of gentlemen interested in the formation of a Glasgow Hospital and Dispensary for Diseases of the Ear, held on the 13th instant, under the presidency of Dr. Andrew Buchanan, President of the Faculty of Physicians and Surgeons, it was agreed to take steps for the foundation of such a hospital. A constitution was adopted, and office-bearers were appointed.

#### HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS FOR APRIL.

ACCORDING to the report of the Registrar-General for April, there were registered, in the eight principal Scotch towns, the deaths of 2,616 persons, of whom 1,338 were males and 1,278 females. This is 149 below the average of the same month during the preceding ten years. The annual mortality of these towns would be, per 1,000 of the population: Greenock, 18; Aberdeen, 20; Glasgow and Edinburgh, 24; Dundee, 27; Leith, 30; Paisley and Perth, 32. Forty-eight per cent. of all the deaths (amounting to 1,253) were of children under five years of age—the lowest death-rate being in Paisley, 35, and the highest being in Edinburgh, 54 per cent. Zymotic diseases caused fully 20 per cent. of the total mortality, measles and whooping-cough having been very fatal in some towns. Whooping-cough caused 6.8 per cent. and measles 6.1 per cent. of all the deaths. Of 42 deaths due to fever, 12 were registered as typhus, 24 as enteric, and 6 as simple continued fever. Diseases of the heart caused 140 deaths, apoplexy 58, paralysis 56, hydrocephalus 69, and premature birth debility 76 deaths. Phthisis pulmonalis caused 318 deaths, equal to 12.2 per cent. of the total; and other inflammatory affections of the respiratory organs caused 606, or 23.2 per cent. of the total deaths. Two males and two females were

over ninety years of age—two of them being, each, ninety-six years of age. During the month, there were 3,870 births registered, of whom 1,953 were males and 1,917 females. The mean barometric pressure was less by 0.059 inch; the mean temperature greater by 0.5°; the mean humidity less by 1; the rain-depth greater by 1.04 inch; and the wind-pressure less by 0.18 lb., than the average of the same month during the preceding twenty-three years. The highest mean temperature was at Glasgow, the lowest at Perth and Aberdeen. The mean temperature for April 1880 was 4.3° above that of April 1879.

#### REGISTRAR-GENERAL'S RETURNS.

FROM the returns of the Registrar-General, for the week ending Saturday, May 8th, it appears that the death-rate in the eight principal towns during the week was 25.4 per 1,000 of estimated population. This rate is 2.9 above that for the corresponding week of last year, and 2.0 above that for the previous week of the present year. The lowest mortality was recorded in Greenock, viz., 16.4 per 1,000; and the highest in Perth, viz., 40.9 per 1,000. The mortality from the seven most familiar zymotic diseases was at the rate of 5.8 per 1,000, being 0.8 above that for last week. Whooping-cough continues to be the most prevalent of these diseases. An increase of deaths from fever occurred in Glasgow, owing to the present epidemic of typhoid; and in Perth diarrhoea was again rather prevalent. Acute diseases of the chest caused 131 deaths, being 13 more than the number recorded for the previous week. The mean temperature was 47.0°, being 1.2° above that of the week immediately preceding.

#### THE OUTBREAK OF TYPHOID FEVER IN GLASGOW.

THE officials of the Sanitary Department and School Board of Glasgow are co-operating to stamp out the typhoid fever which is now epidemic, in the northern district especially, of the town. Between eight hundred and nine hundred boys and girls have been prevented attending the schools, in consequence of the fever being found to be prevalent in their homes. As yet, the authorities have made no statement as to the supposed cause of the outbreak.

#### THE LORD RECTORSHIP OF THE UNIVERSITY OF GLASGOW.

MR. TENNYSON has recently written, declining to allow himself to be nominated for this office, although at first he consented to be brought forward. His grounds for now withdrawing are that he fears, by standing as the nominee of the Conservative Club, he may appear to be a party candidate; and he adds that he would only accept nomination, on a future occasion, if it can be carried out by a body of students bearing no political party name.

## IRELAND.

#### VICE-REGAL MEDICAL APPOINTMENTS.

HIS Excellency the new Lord-Lieutenant of Ireland, Earl Cowper, has appointed Dr. George W. Hatchill, Dr. Thomas Nedley, and Dr. Christopher J. F. Nixon to be his Physicians in Ordinary; and Dr. Edward D. Mapother (President of the Royal College of Surgeons in Ireland), and Dr. Robert McDonnell, F.R.S. (Vice-President of the Royal College of Surgeons, and President of the Dublin Branch of the British Medical Association), as his Surgeons in Ordinary. Mr. Daniel Corbett has been appointed Dentist in Ordinary.

#### TRINITY COLLEGE, DUBLIN.

THE following resolutions have been adopted by the University Council:

1. That the medical scholarships be separated into two—one being for anatomy and physiology, the other for physics, chemistry, botany, and materia medica.
2. That no student be allowed to compete for the medical scholarship in anatomy and physiology after the completion of his third year, nor for the medical scholarships in physics, chemistry, botany, and materia medica after the completion of his second year.
3. That no student shall hold both scholarships together.
4. That sixty per cent. of the marks for the scholarships in physics, chemistry, botany, and materia medica be allotted to physics and chemistry, and forty per cent. to botany and materia medica.
5. That the course in

ophthalmic surgery shall consist of three months' clinical instruction in ophthalmic surgery, and a systematic course of lectures delivered twice a week. [It is added, as a proviso, that there shall not be less than ten full ophthalmic beds in use during the three months' course.]

#### KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE Fellows of this College have lately made several important regulations with a view to secure the *bonâ fide* practical instruction of candidates for their licences. At present, the College requires a nine months' attendance on a clinical hospital which contains wards for the treatment of infectious fevers, said nine months being included in the total period of twenty-seven months' hospital attendance required from candidates for the Licentiatehip in Medicine. With the object, however, of obtaining a more accurate knowledge of fever on the part of students, the following resolution has just been adopted, viz.: "On and after January 1st, 1881, every candidate for the Licence in Medicine of this College shall be required to produce evidence that he has, for not less than three months, studied fever in a recognised clinical hospital, containing fever wards, and recorded, from daily personal observation, at least five cases of fever, to the satisfaction of the attending clinical physician, as attested by his signature." We are glad to hear also, that the large field of instruction at Cork Street Fever Hospital, hitherto lying dormant, is now about to be utilised; as certificates of attendance on that institution will in future be recognised under the new regulation.

#### SOCIETY FOR PROVIDING NURSES FOR THE SICK POOR, BELFAST.

THE annual meeting of this estimable Society was held on last Monday the 17th instant, presided over by the Mayor of Belfast. The chairman, in some introductory remarks, stated that he thought the public would appreciate more the merits of the Society if they knew exactly what its objects were. According to Rule 2, one of the objects was to visit the industrious poor in their own houses, and supply such ministrations as their cases might require. When sickness entered a house, it was necessary to attend to the bodily wants of the sufferer; and the nurses of the Society, who were trained and educated, were not only prepared to give physic for the body, but to instruct the poor in cooking, cleanliness, and frugality. Another rule was to carry out the medical attendant's directions in cases which were not suitable for, and could not be reached by, hospitals. The fourth rule was that the action of the Society should be thoroughly unsectarian, the sick poor to be provided for irrespective of creed; so that the Society has a broad platform, on which persons of all denominations can meet for the mutual object of doing good for the poor. During the twelve months ended 1st March last, 693 sick persons were attended to by the nurses, of whom 143 died and a similar number recovered, while 69 were sufficiently restored to health to enable them to resume work. Of the cases attended, 149 were phthisical, 21 were accident cases, and 77 were burns or wounds of various kinds. Upwards of 340 loans of various articles—such as stretcher-beds, air-cushions, water-beds, easy chairs—were made during the year; and a very large number of articles of clothing, both new and old, were given away. Of the patients attended, 370 were recommended by the dispensary medical officers, who in many instances expressed their gratification with the manner in which their instructions were carried out, and the improvement in the condition of the patients. An additional nurse was employed during the year, but there is ample work for twice the number engaged. The aim of the Society is to save life; to teach the needy whom they are assisting self-reliance and to help themselves; to show what cleanliness and simple sanitary precautions will do to save suffering and promote recovery; and, in many cases, where those who are discharged incurable from the hospitals live often neglected in their own homes, to instruct the relatives how to nurse and care for the sufferers, and to make their condition as tolerable as possible. For objects such as these, there is plenty of scope for the operation of a Society of this kind; and we trust it will receive increased sympathy and support from the community.



## THE ANNUAL MEETING OF THE ASSOCIATION.

In the Section of Medicine, two special topics have been selected for discussion. Dr. Bristowe has kindly consented to open a debate on Hysterical Anæsthesia, and Dr. Andrew Clark to introduce the subject of Asthma.

We are requested to state that any communications which members of the Association may desire to bring before the Section should be forwarded to the Secretaries (Dr. Cheadle, 2, Hyde Park Place, Cumberland Gate, W., and Dr. David B. Lees, 2, Thurloe Houses, South Kensington, W.) The titles of all such papers and notice of intention to join in the debates on the special subjects above-named should be sent in *not later than the 15th of June*. It is necessary also that abstracts of all papers to be read in the Section should be sent to the Secretaries *before the 15th July*.

In the Section of Physiology, there will be two discussions: one on the question, "Is Urea formed in the Liver", to be opened by Professor Gamgee of Owens College, Manchester; and another on "Sleep and Hypnotism", to be opened by Professor W. Preyer of Jena.

## THE ORIGIN OF THE BLOOD-CORPUSCLES.

OF all the scientific monographs produced during the past year, few can rival in interest a paper by Professor Rindfleisch, entitled "Ueber Knochenmark und Blutbildung", and published in a recent number of the *Archiv für Mikroskopische Anatomie*. In this monograph, the red marrow of the cancellous tissue of bone is considered to be the chief source of red blood-corpuscles. We will summarise as follows the arguments by which the author supports this bold theory.

In red marrow are found certain cells, with reddish-yellow homogeneous protoplasm, and distinct nuclei—cells resembling in every respect the nucleated red corpuscles of foetal blood. The spleen bears similar corpuscular structures, and is recognised as a seat of blood-formation. The red marrow, then, has the same function. In different morbid conditions, the blood has been explored, but with any significant results only in anæmia and leukæmia. Smaller and larger forms of nucleated red corpuscles have been detected under these and other circumstances. But what is the connection between them? This question has particularly occupied the author's attention. Firstly, he explored the vascular relations of red marrow. No structure is so difficult to inject; for the periosteal and Haversian arterioles and capillaries, generally empty after death, are easily injected, but the vessels of the marrow are then full of blood. By certain precautions, Rindfleisch succeeded in making satisfactory injections of the marrow in the cancellous tissue of the ribs of guinea-pigs; by these same precautions, too, he found that the red marrow is red through its blood-forming cells, and not through the colouring matter of the blood within or escaping from its vessels.

The afferent arteries of the narrow-meshed capillary plexus of the marrow are slender; they penetrate to the middle of the medullary canal, and end as thin twigs running almost parallel to the axis of the bone, and branching frequently at acute angles, they join the capillaries at a few points near the surface. These arteries hold hardly one-twentieth of the injection necessary to fill the veins and capillaries together. The veins, relatively thick, unite in every medullary cavity into at least one main trunk, which appears beset on all sides by its short secondary venules, the recipients of groups of true capillaries. At distinct points, emissary vessels leave the trunk for the surface of the bone. Hence red marrow has a very complete vascular system, hitherto unrecognised owing to the difficulty of injecting that structure.

Professor Rindfleisch then enters into a disquisition on the variations of blood-pressure, and on the mechanism by which such variations are almost nullified in parts where they would do mischief. He refers, at some length, to the well-known nature of the cerebral circulation. The brain is encased in an unyielding capsule. Pressure from within and from without the cerebral vessels is counteracted by this arrangement; the thin walls of the arteries of the brain show how the duty of resisting pressure is taken from them. Diminution or increase of blood-pressure rather aids the exit of blood from the cranium than induces anæmia or congestion of its contents. Yet the brain is, to a certain extent, amenable to slight accommodations of pressure through another mechanism: the cerebro-spinal fluid. Not so the bone-marrow; for it contains no similar fluid, and is enclosed in an absolutely unyielding capsule. Hence, says Rindfleisch, there is no question of any variations of pressure affecting the blood within the medullary vessels and the medullary structures outside them. The marrow, to carry on its important functions, is thus shielded from a source of disturbance. If blood-pressure increase towards the bones, the blood-current in the medullary vessels cannot distend them, since the bone without makes them unyielding, so it has

simply to go on faster. This happens when there is any improvement in the volume of blood during convalescence; and the result is the more rapid washing away of certain solid blood-elements, which are, under these circumstances, much needed to repair loss.

What influence has this mechanism of the circulation in the marrow on the structure of the walls of its vessels? The thickness of the walls of a vessel bears a direct relation to the amount of pressure it has to resist; this is proved by the vascular changes in hypertrophy of the heart, by the increasing thickness of capillaries towards their arteries and veins, and by the extreme thinness of the walls of the cerebral arteries. After consideration of the above conditions, why should we not demand a minimum of wall for the capillaries of the marrow? Why should they possess any wall at all? Hoyer maintained, in 1869, that the veins of marrow have no walls. Rindfleisch authenticates this assertion. The veins of the red marrow, as well as the greater part of the capillaries, possess no special wall; whilst the arteries possess an extremely delicate membranous coat, completely disappearing at the commencement of the capillary system. A thin cellular tunica adventitia invests the artery at its entrance into the medullary foramen, but is soon lost further on. Nothing remains but a single muscular coat, and a simple epithelial tube within it. The capillaries are sharply divided into an arterial and a venous set. The arterial are given out at acute angles from the ends of their arteries; they are spread regularly, but not abundantly, over the whole marrow. They still possess a membrane, with long rod-shaped nuclei. Towards the venous capillaries these nuclei become longer and thinner, crossing each other and forming a kind of trellis-work, which probably represents not so much a wall as the dissolution of the closed walls of the vessels into the surrounding parenchyma. In torn fragments of medullary tissue, the arterial capillaries may readily be distinguished from the venous by their lesser calibre and straight course, and especially by the presence of a nucleated membrane on the surface of the blue mass of injection which fills their lumen after preparation.

The venous capillaries, having no walls, are difficult to study. Their calibre is twice or three times as great as that of the arterial capillaries. Their surfaces, or rather the limits of the injected medium, possess numerous offsets, which throw out thin straight tertiary branches, running in opposite directions, parallel to the axis of the vessels. Plastered all over the injection, filling these twigs, and projecting into their lumen, are large cells identical with those of the rest of the red marrow—a striking proof of the indefinite limitation of these vessels. The venous capillaries curve considerably as they enter the trunk veins. After the most careful experiments, Rindfleisch came to the conclusion that the veins are widely dilated sinuses, without walls, and running through the midst of the blood-corpuscle-forming medullary tissue. Through this arrangement, the productions of that tissue are readily abstracted and carried into the circulation.

To find the component parts of the medullary parenchyma, the vessels must be first thoroughly washed out with a weak solution of chloride of sodium. Then the observer may be sure he has only the parenchyma to deal with. First are seen the reddish-yellow nucleated cells. There is not one hair's difference between them and the nucleated red-corpuscles of foetal blood. In the uterus of a guinea-pig, Rindfleisch found fetuses in remarkably different stages of development at the same time. In the blood of a fetus, five millimètres long, the nucleated were still in great majority over the non-nucleated corpuscles. The resemblance of the nucleated form to cells of red marrow was evident. As to their nuclei, no well-defined nucleoli could be detected, not probably from their being absent, but because their substance passes insensibly into the substance of the nucleus, as in all young rapidly proliferating cells. The nucleus is never in the middle of the red marrow cells. This is their great distinction from the permanently nucleated red corpuscles of the lower vertebrata. In the spleen of a bird, the equivalent of our hæmatoblasts can be found, but always with central nuclei. Of the significance of the non-central position of the nucleus in mammals more will be said presently. This nucleus appears separated from the protoplasm by a dim granular halo.

These nucleated red marrow cells undergo fission, commencing at their nuclei. The more quickly this process proceeds, the smaller will be the resulting red corpuscles. This point must be remembered with what was said above with regard to increased blood-pressure during convalescence, and what will be found below with regard to the appearances of blood at stated intervals in recovery from hæmorrhage. Besides these cells, leucocytes abound in marrow. There are also "great-celled elements", probably altered forms of the marrow-cells just described; and also the well-known giant-cells, which Rindfleisch looks upon as deposits of formative material that has not been wanted. The absence of lymphatic vessels in marrow accounts for this accumulation. All the above cellular elements are considered by the author as organs

of sanguification, and as no part of the permanent parenchyma, which consists of stellate fibres, composed of protoplasm, partly displaced by fat-cells. By a simple process of fatty degeneration, the red marrow becomes yellow.

Through what process, then, are the non-nucleated red blood-corpuscles developed from the nucleated hæmatoblasts of the marrow? Precisely in the same manner as the nucleated cells in the embryo precede the non-nucleated form. Rindfleisch searched specimens of marrow from numerous foetal guinea-pigs. "Many a female guinea-pig," says he, "had to lay down her life without yielding that which was sought for." But at length he found four embryos, in which he could detect the transition of nucleated into non-nucleated blood-cells. He observed the nucleus, surrounded by a little colourless protoplasm, in the act of quitting the cell and leaving behind it a bell-shaped reddish-yellow structure, almost identical in form with a non-nucleated blood-corpuscle. This process must go on with great rapidity when it is necessary to make up for loss of cells from menstruation, anæmia, or debility. The bell-shaped body, being composed of soft, somewhat elastic material, soon assumes a rounded form when set free from its bed in the marrow and rolled along in the circulation, proceeding in one direction; so that it has the pressure of the stream behind it and the pressure of the resistance of the blood in front of it, which determine the biconcave form of the perfect red blood-corpuscles. The nucleus left behind accounts for the free nuclei which may be found in red marrow.

When fresh blood-corpuscles are required to make up for the loss of blood by accident or disease, the blood-pressure, increased by certain influences towards the medullary cavity, necessitates the exit of an extra supply from that cavity as fast as its entrance therein, since the blood is passing through unyielding structures. Red corpuscles are more rapidly formed. Rapid fission of the hæmatoblasts taking place, the corpuscles, under these circumstances, are smaller than normal. After bleeding a guinea-pig, its blood was examined on the third day, and numerous small red corpuscles were found side by side with those of natural dimensions. The number of these small bodies increased till the seventh day, then they diminished; so that, about the fourth week after the bleeding, not one single small corpuscle was to be found. In the blood of women after menorrhagia, similar bodies were detected, ultimately disappearing; and neither in this nor any other form of hæmorrhage could an increase of white corpuscles be discerned. The deduction thus suggested by Professor Rindfleisch is obvious.

That in animals where the red blood-corpuscles are permanently nucleated, these, too, are developed from hæmatoblasts, there can be no doubt. Besides, from examining sections of the spleen of a young dove, proofs have been found of the origin of hæmatoblasts from white blood-corpuscles or leucocytes. The spleen is the chief blood-forming organ in birds; in mammals it plays a great part, being a store of hæmatogenous tissue supplemental to the blood-forming red marrow. Why the cells of the marrow have this tendency to form corpuscles is a question unsolved, but which does not refute Rindfleisch's theory. What has the marrow (says he) in common with the spleen or the blastoderm? Yet the two latter, quite different structures, have long been admitted to aid in the formation of blood. After extirpation of the spleen, vicarious sanguification has been found to be established in the mesenteric glands. In an anæmic child, rachitic and with general sclerosis of the cancellous tissue of the bones—which, of course, implied great changes in the red marrow—the greater part of the lymphatics, and even the cellular tissue in the tubes of the kidney, was discovered to be hæmopoietic. Rindfleisch concludes by admitting that M. Hayem, in 1877, already pointed out the identical nature of certain cells in the blood and in the red marrow. In the small red-corpuscles found in the blood of convalescents, we recognise the French physiologists "*globules nains*," described in the eighty-fourth volume of the *Comptes Rendus*.

**KESWICK.**—In this report, Dr. Ward argues at length that many so-called local diseases of the brain, the respiratory organs, the kidneys, etc., in addition to those of the zymotic class, are intimately connected with sanitary defects; and he gives numerous examples to prove his case. There can, of course, be no doubt that impure air is a potent influence for evil everywhere; but we think that Dr. Ward has gone too far in ascribing to "impure house-atmosphere" all the mischief that he imputes to it. Although works of water-supply and drainage-extension are in progress, the houses generally seem to have very imperfect sanitary arrangements, and it would be well that the authority should address itself earnestly to securing an improvement in this respect. The death-rate for the year 1879 was not high (16.1 per 1,000); but it was 1.8 in excess of that for 1878. Diseases of the respiratory organs and allied affections accounted for the major part of this excess. Zymotic diseases were not prevalent, only two deaths occurring from diphtheria, and two from diarrhoea.

## ASSOCIATION INTELLIGENCE.

### FORTY-EIGHTH ANNUAL MEETING.

#### SPECIAL NOTICE.

##### ACCOMMODATION IN CAMBRIDGE.

MEMBERS of the Association who propose to bring ladies to Cambridge on the occasion of the Annual Meeting in August, and desire to have lodgings engaged for them, are recommended to make early application to the Honorary Reception Secretary, A. P. Humphry, Esq., 56, Corpus Buildings, Cambridge. The prices at which lodgings will be obtainable vary from three shillings to one guinea per day (inclusive of attendance for a bed-room and sitting-room).

*Hotels.*—The following are the principal hotels in Cambridge.

"Bull" (Trumpington Street).—Bed, 3s. 6d.; sitting-room, 6s. to 10s. Attendance, 1s. 6d.; breakfast, from 2s.

"Lion" (Petty Cury).—Bed, 3s. 6d.; sitting-room, 5s. to 7s. 6d. Attendance, 1s. 6d.; breakfast, from 2s. 6d.

"Hoop" (Bridge Street).—Bed, 5s.; sitting-room, 7s. 6d. Attendance, 1s. 6d.; breakfast, from 1s. 6d.

"University Arms" (Regent Street).—Bed, 2s. 6d.; double bed, 3s. 6d.; sitting-room, 5s. Attendance, first day, 1s. 6d.; following days, 1s. Breakfast, with meat, 2s. 6d.; plain, 1s. 6d.

Applications for hotel-accommodation should be addressed direct to the landlords.

#### EAST YORK AND NORTH LINCOLN BRANCH.

THE twenty-fourth annual meeting of this Branch will be held at the Infirmary, Hull, on Wednesday, May 26th, 1880, at 1.30 P.M.; the President, T. M. EVANS, Esq., in the Chair.

The following cases and papers are promised.

1. The President : Opening Address.
2. Mr. R. H. B. Nicholson : Osteotomy in a Case of Double Genital Valgum ; Removal of the Cervix Uteri for Malignant Papilloma.
3. Dr. Frank Nicholson : The Changes Associated with Granular Kidney.
4. Dr. Lunn : Dislocation of Astragalus : Removal with good result.
5. Mr. Craven : Surgical Instruments.
6. Mr. Sherburn : Successful Removal of a large Uterine Fibroid Tumour.
7. Dr. King : Two Cases illustrative of the Treatment of Stricture of the Oesophagus.

The President will be happy to see any of the country members to lunch at his house, 17, Albion Street.

The dinner will be held at the Vittoria Hotel, at 5.30 P.M. : dinner exclusive of wine, 7s. 6d.

Members of the profession are invited to attend both the meeting and dinner.

It would facilitate arrangements if gentlemen who intend to dine would inform the secretary without delay.

E. P. HARDEY, *Honorary Secretary*.

35, Regent Terrace, Anlaby Road, May 18th, 1880.

#### SOUTH-EASTERN BRANCH : EAST KENT DISTRICT.

THE annual meeting will be held at St. Bartholomew's Hospital, Rochester, on Thursday, May 27th, at 1.30 P.M.

WM. KNIGHT TREVES, F.R.C.S., *Hon. Sec.*

Margate, May 14th, 1880.

#### EAST AND WEST KENT DISTRICTS : CONJOINT MEETING.

A CONJOINT meeting of the above districts will be held at St. Bartholomew's Hospital, Rochester, on Thursday, May 27th, at 2 P.M. The chair will be taken by Dr. BOWLES of Folkestone, President of the South-Eastern Branch.

#### SOUTH MIDLAND BRANCH.

THE annual meeting of the above branch will be held in the Board Room of the Northampton General Infirmary, on Thursday, May 27th, at half-past two o'clock, under the Presidency of FRANK BUSZARD, M.D.

The following papers have been kindly promised.

1. D. J. T. Francis, M.D. : A Few Words on Effects of Change of Air on Health.
2. W. Newman, M.D. : Scarlet Fever, in Special Reference to its Sequelæ.