MEDICAL PARIS OF TO-DAY.

NOTES MADE IN DECEMBER, 1888.

By ERNEST HART.

X.

LABORATORY AND HOSPITAL SERVICE OF PROFESSOR BOUCHARD:
HIS VIEWS AND RESEARCHES.

The Microbe of Glanders; Naphthol β ; Pyocyanic Disease; Urinary Poisons; Urea a Diuretic, and not a Cause of Uræmia; Pathogenesis of Glycosuria and Diabetes Mellitus; Auto-infection in Disease; Treatment of Typhoid Fever with Diminution of Mortality; Other Investigations.

PROFESSOR BOUCHARD holds a prominent position among the physicians of Paris who study medical questions at once from the scientific and clinical points of view. He has for three years occupied the position of President of the Clinical Society of Paris; as Professor of the Faculty of Medicine, he enjoys the control of a special laboratory and the services of a *chef de laboratoire* as well as of a *chef de clinique*. He enjoys the reputation of calm sagacious judgment and original power, and it will illustrate some interesting phases of French clinical work to English readers—to many of whom his name is very well known—if I summarise briefly some of the principal work carried out by him or under his auspices.

The laboratory of M. Bouchard is temporarily established in rooms over the Dupuytren Museum, pending its transfer to the very fine rooms in course of preparation for the Faculty in the new buildings of the Ecole Pratique. His hospital service is at La Lariboisière. Among the subjects of experimental pathology with which M. Bouchard has particularly occupied himself is the experimental study of urinary poisoning and micro-biology. The latter subject he began to investigate already in 1878, when Pasteur's work was much contested and micro-biology was far from being so much the order of the day as it is at present. He investigated then particularly the "microbe of blenorragia," which he cultivated in 1879, and inoculated on animals, without success, in 1879. In 1880 he maintained that acute tonsillitis should be regarded as of infectious origin, and in four cases complicated with nephritis he determined the presence of bacilli in the urine. In 1882 he described the microbe of glanders in concert with MM. Capitan and Charrin. They obtained positive results from inoculation in the ass. Studying the dosage of antiseptics, in single doses or prolonged ingestion, and their toleration by man, he made a series of communications on naphthol β , showing that according to the doses employed the function or the life of microbes may be suppressed. Thus chromogenic microbes may still be developed in antiseptic media, but become incapable of producing their characteristic colouring matter. Antiseptics he described as acting also on the form of microbes. Guimard and Charrin, working in his laboratory, showed in fact that by growing certain microbes in antiseptic solutions they might be observed to be transformed into filaments or spirillæ, and finally to present extremely curious forms of involution.

Another pupil of Professor Bouchard, M. Maxanovitch, studied naphthol α and made experiments on it similar to those of M. Bouchard on naphthol β . Administering naphthol daily to rabbits, he produced permanent cataract. One of these rabbits lived more than a year in the laboratory, and this discovery was utilised by Panas, Dor, and others (who confirmed it) for the purpose of studying the nutrition of the crystalline lens.

M. Charrin has studied here and described with care a new form of septicæmia consecutive to anthrax which differs from other known forms of septicæmia. His studies of pyocyanic disease produced by blue pus showed, among other things, that it was possible by sterilised and filtered cultivations to give immunity against this microbe (an observation which Drs. Roux and Yssen have extended lately to the microbe of diphtheria). He showed also that these soluble products of cultivation of the pyocyanic bacillus were capable of determining in animals phenomena of paralysis, starting from the lower limbs, gradually extending to the whole body and ending in death. With Mr. Ruffer (a former pupil of University College Hospital) he showed also that soluble products secreted by the pyocyanic bacillus may be found in the urine when they are injected into the veins. They pass through the system without losing their noxious or vaccinal properties.

Continuing their studies on the pyocyanic disease, these observers have described the mechanism of fever in the experimental malady. They ascribe it in part to the destruction of the microbes in the animal organism, in part to the soluble products found in the cultivations of the bacilli. They made the interesting observation that the urine of rabbits which had been treated with this pyocyanine contains also a thermogenic substance. In March, 1888, MM. Charrin and Roger described, in confirmation of Malassez and Vignal, a bacillary pseudo-tuberculosis, the lesions of which are absolutely analogous to those of true tuberculosis, and which are produced by a microbe different from that of tuberculosis.

M. Bouchard has announced that in certain infectious diseases the urine contains substances secreted by microbes, which, when inoculated in animals, vaccinate them prophylactically against those microbes. He describes the urine as containing in certain cases special poisons; thus he speaks of the urine of pyocyanic disease as containing a poison which gives rabbits paralytic symptoms quite analogous to those produced by certain cultivations of these microbes, the most striking fact in respect to these pathological conditions being perhaps that the urine of cholera patients was found to produce in the rabbit symptoms similar to those of the human patient, namely, rice-water diarrhoea, great depression of temperature, cyanosis of the ears and muzzle, and cramps.

The toxicity of the normal urine of man is a favourite subject of research with M. Bouchard. He took the urine, injected it into the veins of animals, and determined first that it was toxic. An average of 30 to 40 cubic centimètres of normal urine kills a rabbit of 4 pounds weight. The phenomena of death differ according as the night or morning urine is injected. The first produces death with narcosis, the latter with convulsions. In both cases there is pupillary contraction, which ultimately becomes punctiform.

Investigating the different urinary poisons in alcoholic and watery extracts, he describes a variety of toxic substances. Three of these, soluble in alcohol, he describes as determining coma, diuresis, abundant salivation, such as he found to follow intravenous injection of alcoholic extracts of blood, muscle, and especially liver. The extracts insoluble in alcohol he found to provoke convulsions and rigors.

In this relation M. Bouchard criticises the conclusions of Feltz and Ritter. He concludes, contrary to these authors, that potash does not constitute more than a fortieth part of the toxicity of the urine. He calculates that the quantity of urinary poison eliminated by a healthy man in twenty-four hours represents about enough to be fatal to a being of the weight of 65 pounds; so that a man would eliminate in fifty-two hours a quantity of urinary poison which, if it were retained, would lead to his own death. That, he points out, is just the time at the end of which persons perish who have double obstruction of the two ureters, that is to say, complete anuria. He has dwelt much on the mechanism of infectious diseases and the part played by pathogenic microbes, which, in traversing the kidney, give rise to various changes in it.

Urea he considers as not a toxic substance but a diuretic, which cannot be considered as the cause of the various symptoms of "uræmia." His pathogenic conception of uræmia is as of a complex poisoning, due in unequal proportions to the poisons normally introduced into or physiologically furnished by the organism, and the elimination of which is prevented by the impermeability of the kidneys. As the sources of these poisons he enumerates: the food, and especially mineral substances, the potash of the food, then the biliary secretion, intestinal putrefaction, and the disassimilation of the tissues.

Studying transitory albuminuria consecutive to excitation of the skin, he reports albumen in the urine of the rabbit two or three hours after subcutaneous injection of a cubic demicentimètre of chloroform or ether. When it happens that the chloroformed animal dies rapidly in convulsions, the kidneys are found congested with epithelial lesions. M. Capitan and Dr. Gaume have made some further interesting researches on temporary albuminuria in a state of health, and hepatic changes in connection with kidney disease.

In regard to the liver, M. Bouchard has produced by naphthol injections into the portal vein cirrhosis resembling that of alcoholism. His assistant, M. Roger, in a series of papers, relates that the liver retains most of the poison brought to it through the vena portæ; but only when the glycogenic function is intact. In serious disease of the liver, Bouchard finds that the toxicity of the

urine is greatly increased; an increase frequently coexisting with the inability of the liver to retain the sugar introduced by food, which produces glycosuria. He has produced glycosuria by dividing the sciatic nerve, and by electric excitation the central end of the nerve. Nervous lesions, he reports, act by arresting the general nutrition; sugar is metamorphosed in lesser quantity, it accumulates and provokes glycosuria.

These experiments showed that in twenty-four hours the liver normally gives up 1,850 grammes of sugar, which are consumed by the tissues. Now the tissues can consume 252 grammes in the twenty-four hours, more than the normal limit. The author has, therefore, been led to a new pathogenic theory of diabetes mellitus, as a disease connected with disorder of nutrition diminishing the consumption of sugar which goes on normally in the tissues.

M. Bouchard has several times taken up the investigation of the part played by poisons introduced into the intestinal canal, or arising in it. With our food we take in a variety of toxic substances, some being mineral, such as potash, others organic substances, which become toxic as the result of modifications which they undergo in the digestive tube, under the influence of the fluids poured out in it, or of the microbes which inhabit it. Among the normal products are included peptones, the toxicity of which has been established by direct injection into the venous system. Alongside of the peptones, various alkaloids take rise, which M. Bouchard has been able to separate from faecal matter, and of which he has indicated the principal characters. He has pointed out, also, that these poisons of the digestive tube are constantly absorbed by the vena portæ. A part is arrested and transformed by the liver; the rest is eliminated in the urine. Even in the healthy state, urine contains small quantities of alkaloids; these become very abundant in certain diseases of the digestive tube in which intestinal fermentation occurs. From numerous experiments and clinical observations which it would be too long to relate, M. Bouchard has been led to assign an important part to these intestinal poisons in the production of a certain number of morbid symptoms. Let there be increase of intestinal putrefaction, kidney-changes, or liver-changes, and more or less grave self-poisoning will be seen to arise. I cannot dwell at greater length on the history of these observations; they are discussed in detail in his work on *Les Auto-intoxications dans les Maladies*, but I may say a word on the therapeutic deductions to be drawn. If intestinal putrefaction plays so important a part in pathology, he concludes that it is necessary to endeavour to diminish its intensity. This is attempted by the administration to patients of insoluble antiseptics. The disinfectants, in this view, need to be insoluble in order that they may make the passage from one end of the intestine to the other. Nor must they be poisonous, since they are to be taken in large doses. Naphthol is pointed out as best fulfilling these indications. M. Bouchard employs it in various diseases, and particularly in typhoid fever. Under the influence of this drug he finds that the stools are completely deodorized, meteorism is lessened, the tongue is moist, delirium rare. He adds to this treatment the administration of baths of progressively low temperature. A special bath service is provided in his division of the Hôpital Lariboisière. Under the influence of this treatment he records a notably diminished mortality, not more than 11.7 per cent., while in the other services of the same hospital it oscillates around 20 per cent.

It will be found interesting, I may here say, to compare these views of M. Bouchard with the chemical and physiological conclusions of M. Albert Robin on the subject of auto-infection and elimination of poisons, of which I shall give an account on a later page.

A very detailed and interesting series of experiments (which I cannot find room for mentioning otherwise than in passing) are on "the toxic equivalent" and "therapeutic equivalent" of some fifty-six drugs in relation to body weight. The method adopted was that of intravenous injection, which required another preliminary series of control experiments. Nor can I do more than mention, and then choose, as it were without method, his researches on the mechanism of cerebral hæmorrhage, on secondary degeneration of the medulla, and on encephalitis; his publications on lead and mercurial poisoning, and his long series of papers on that imperfectly understood and ill-classified series of facts which have been massed together as "arthritic" or "herpetic," and which he refers to disorder of nutrition. In his interesting book on *Les Maladies par Ralentissement de Nutrition*, he has substituted a scientific conception for vague ideas. On the whole it will be seen M. Bouchard's *clinique* and laboratory afford a good example of the fertile results which may be drawn by an

able and indefatigable worker from the combination of practical facts with scientific examination of deducible theories, and that they give good opportunities for workers who wish to combine clinical observation with collateral scientific research.

VENTILATION AND HEATING OF SCHOOLS.

Methods of Heating.—Ventilation, Natural and Artificial.—The Superiority of the Latter.—Comparative Cost.—Air Filters.

A SCIENTIFIC report on heating and ventilation of schools has been drawn up by Professor Thomas Carnelly, D.Sc., of Aberdeen, and presents facts as to efficiency and cost of ventilation of great importance to those concerned in school hygiene. The facts are drawn from careful inquiries instituted in 150 different schools, having a total accommodation for 111,000 children, which were personally visited, while information was derived by letter from many other quarters. In some cases experiments were made in mechanical ventilation, for the purpose of measuring the volume of air passing through the schools, the amount of gas consumed by the gas-engine, etc. Experiments were also made as regards the effect of filtering the air. "Of the various methods of heating, the one most extensively used is the system of large hot water pipes (low pressure). Open fires are also a very favourite method; whilst all others are much less common. Thus, of the 311 schools examined in this respect—

- 147 are heated by large low-pressure hot water pipes (chiefly in Birmingham, Bradford, Nottingham, Leeds and Liverpool).
- 82 are heated by open fires (more or less common in most towns. The Edinburgh schools are heated exclusively by open fires).
- 32 are heated partly by open fires and partly by stoves (22 of these are in Leeds and 8 in Leicester).
- 31 are heated by small high pressure hot water pipes (20 of these are in Sheffield).
- 9 have adopted the mechanical system (Dundee and Aberdeen).
- 5 are heated by hot air (Salford only).
- 4 are heated by high pressure steam pipes (Sheffield and Newcastle).
- 1 is heated by low pressure steam pipes (Leicester).

Of the various methods of ventilating, the most common mode of admitting fresh air is by open windows, doors, etc., and also in many cases by Tobin's tubes; whilst the most usual outlet is the chimney of an open fire, or ventilators in the roof."

As to first cost, this varies greatly in different schools. With a system of natural ventilation the prime cost may be 1s. 1d. up to 6s. 7d. per head; in mechanically ventilated schools the first cost appears to be very uniform, varying from 22s. to 27s. per head, but at Ashley Road, Aberdeen, it was only 16s. 6d. per head. This school consists of an oblong three-storey block, 109 feet long by 84 feet wide. There is a long central entrance hall running the whole length of the building, with class-rooms ranged on each side and on the upper flats also at each end. The basement is excavated to a depth of about 7 feet, forming a large fresh air chamber, a part of which contains the heating apparatus, gas engine, and fan. With a building constructed in this manner the arrangement and fixing of the air flues and shafts is much simpler and the expense greatly curtailed.

With open fireplaces the average appears to be for England 60 pupils per fire; in Scotland, 80 per fire. Taking all the facts into consideration, it may be said that the first cost of the several systems as was follows:

Cost of Heating and Ventilating only.		
	Per Head.	Per School of 1,000 Pupils.
Natural	s.	£
Ventilation { Open fires... ..	4	200
{ Small hot water pipes (high pressure) ..	8	400
{ Large " (low pressure) ..	10	500
Mechanical { As applied to schools suitably designed ..	17	850
Ventilation { As applied to ordinary schools ..	20	1,000

As an example, it may be mentioned that the average total cost of accommodation per scholar for buildings and furnishings in all the schools which have been built by the Dundee Board was about £9 5s.; whereas if mechanical ventilation had been applied, the cost, according to the figures given above, would have been about £9 15s. per head.

It may be pointed out as a direct saving, that less lofty rooms are requisite in schools ventilated mechanically, so that, if even a foot of building can properly be dispensed with on the height of each floor of a school, the lessened cost would largely defray the introduction of the system.

As to the total annual cost per head, the difference between the various natural systems is not very great, ranging from 2½d. in

the case of "stoves," to 3d. per head in the case of small high-pressure hot-water pipes, or from 30½ to 50½ lbs. of coal per head, supposing that the cost of coal and the liberality in using it is the same as in Dundee.

The annual cost of mechanical ventilation is distinctly higher than that of any of the natural systems. This, however, is necessarily so; for since more air is driven through the school with the former, more coal will of course be required to warm it to a given temperature.

The comparative annual cost of the "mechanical" and "natural" systems may be stated thus:

	Cost per Heal.	For a School of 1,000 Pupils. d. s. d.
Natural or ordinary system of heating and ventilating	2½	11 9 2
Mechanical systems	7½	31 5 0
Difference		£19 15 10

As to efficiency, analysis of the air of schools shows that with those systems in which the rooms are heated by radiation rather than by conduction, the air is much more highly charged with micro-organisms than with those systems in which the rooms are heated more by conduction than by radiation. Thus in the naturally ventilated schools examined the following results were obtained:

	No. of Micro-organisms per litre of Air.			
	Dundee.	Aberdeen.	Edinburgh.	Newcastle.
Open fires—ordinary grates (here radiation is at a maximum and conduction at a minimum).....	169	87	66	224
Open fires—Manchester grates	...	...	47	...
Large hot-water pipes (low pressure) } Intermediate	96	...	...	...
Small hot-water pipes (high pressure).—Here conduction is at a maximum and radiation at a minimum	85	35	...	190

A table is given showing that, notwithstanding the very great improvement in the purity of the air, the temperature is considerably higher in the mechanically ventilated schools than in those under the ordinary systems. To produce such an improvement in purity by the ordinary methods of opening windows, etc., would reduce the temperature to a very uncomfortable and dangerous degree.

Excess over Outside Air.	Dundee Schools (Carnelly, Haldane, and Anderson).		Aberdeen Schools (Brazier; Thomson).	
	Mechanically Ventilated.	Naturally Ventilated.	Mechanically Ventilated.	Naturally Ventilated.
Temperature	1	0.66	1	0.9
Carbonic acid	1	1.7	1	1.6
Organic matter	1	7.0	...	...
Micro-organisms	1	9.2	1	7.2

Mechanical ventilation reduces the number of micro-organisms in the air, not merely during the time it is in action, but it has been proved to have also a very marked effect after it has been stopped and replaced by natural ventilation, this effect extending over a period of many days at least. Mechanical ventilation also, as shown by Professor Brazier in the Aberdeen schools, keeps the composition of the air more or less constant in the different parts of a room; whereas, with natural ventilation, it is liable to be much less pure at one part than another.

In mechanically ventilated schools, air-filters prove effective in removing much of the solid impurities from the air passing through them, as is shown by the fact that the dirt which had collected thereon after they had been in use for seven weeks was 2½ lbs. This dirt consisted chiefly of soot and dust, and was very black

and filthy-looking.¹ One set of filters will last a year, and require cleaning about twice in that time; 3s. per annum at the most should defray the cost of filtering the air in any school.

The extra cost entailed by mechanical ventilation over and above that of ordinary methods (including both annual expenses and interest on first cost) is about £39 a year in a school for 1,000 children, or 9½d. per head of accommodation. For a school for 1,500 children, the cost would be only three-fourths of the above. Part of the cost could be met quite easily by reducing the customary height of the rooms by one or two feet. This reduction in height would not at all detract from the health or comfort of the children. Thus, a reduction of the usual height of the rooms by one foot would, at 2d. per cubic foot, reduce the first cost of the school by about £70 on a school for 1,000 children, or 1s. 6d. per head. Statistics are further given in the report to show how the ventilation of schools affects the health and education of the children. It appears that in Aberdeen, in the mechanically ventilated schools, the Government grant earned is 21s. 8d. as against 19s. 6d. with natural ventilation. Many important engineering facts are given, and the whole report is full of valuable material most laboriously collected.

IRISH POOR-LAW MEDICAL SERVICE.

WE are requested to publish the following letter which has been forwarded to the Right Hon. A. J. Balfour, M.P., Chief Secretary for Ireland:

Royal College of Surgeons in Ireland,
Dublin, March 2nd, 1889.

RIGHT HON. SIR,—By direction of the Council of the Irish Medical Association and of the Council of the Dublin Branch of the British Medical Association acting conjointly, we, the respective honorary secretaries of those Associations, have the honour to bring under your notice and, through you, that of the Government, the serious grievances which the poor-law medical officers of Ireland suffer, and have so long had to endure, in consequence of the very unsatisfactory state of the law which deals with their superannuation allowances.

Our Councils have had before them a copy of the letter addressed to you on March 24th, 1888, by Dr. Chapman, as honorary secretary of the Irish Medical Association, and they have instructed us respectfully to express their hope that you will be pleased to refer to it, and further to state that they acquiesced as regards its contents.

Our Councils respectfully desire to approach you with regard to this subject, quite as much in the interest of the public as of the poor-law medical officers themselves; and they are prepared to submit to you evidence—either orally, if you desire to receive a deputation, or by further written statements, if such be preferred—to prove that the medical officers of the poor-law service in Ireland have, in a very large number of instances, been refused any retiring allowance whatever, after service of an official lifetime, even though their services were admittedly faithful, zealous, and efficient.

The Act of Parliament which still regulates the superannuation of poor-law medical officers (32 and 33 Vict., cap. 50) was passed on August 2nd, 1869 (nearly twenty years ago!), but it gives merely a discretionary power to boards of guardians to grant to a medical officer a retiring allowance not exceeding two-thirds of his then salary, subject to the consent of the Local Government Board, but with equal power to refuse any superannuation allowance whatever, despite the merits of the case.

Such a system cannot now be worked satisfactorily, or equitably, in Ireland. In some exceptional unions boards of guardians have acted with fairness and consideration, but much more generally their discretion, of late years especially and still, is biased by personal motives, such as religious or political considerations, the favourite of the guardians being generally awarded the full two-thirds of his salary, no matter how short his period of service, while the medical officer of opposite religious or political views, after meritorious services of twenty, thirty, or even upwards of forty years, has more frequently not been awarded any retiring allowance, much less the pension he deserves, and which

¹ The incoming fresh air is filtered by passing through coarse jute cloth stretched on frames across the air-chamber. This is very effective, and the cost a mere trifle. The most suitable jute cloth is known as lightessian. It weighs ½ oz. per yard of 40 inches wide, and costs 2d. per yard. It contains 67 meshes to the square inch, and is composed of threads whose diameter is one-fourth that of the mesh. If the filtering surface be sufficiently large, the amount of friction is quite inappreciable.

was intended by Parliament to be given to him when unfit for further duty.

The Local Government Board for Ireland have found it necessary to check abuses of the former kind, by refusing to sanction awards in excess of the scale which regulates the computation of the amounts of the pensions of civil servants, namely, one-sixtieth part of the salary for each year of service, while it is powerless to interfere with or check abuses of the latter nature.

Medical officers are placed at a greater disadvantage in this matter than other union officers, who have greater and more frequent opportunities of cultivating the personal friendship of individual guardians, and they (the medical officers) consequently suffer to a much more considerable extent; many medical officers have been, and still are, obliged to remain penniless in their old age, or reverse their religious or political views as the only way to obtain a pension.

The co-operation of our Councils has recently been invited by the non-medical union officers, whose present efforts appear to be to endeavour to have a Bill passed by Parliament empowering boards of guardians, still at their discretion, to superannuate union officers—the amount of the retiring allowance to be computed on the value or amount of all salaries, allowances, and emoluments of office, at the civil service rate for the period of service—subject to the sanction of the Local Government Board; with the additional and desirable provision that the superannuation allowances should be payable, not out of the local rates as at present, but out of a general rate to be levied *pro rata* from every union in Ireland.

The Union Officers' Association of Ireland was in alliance with the Irish Medical Association in promoting the Union Officers' Superannuation (Ireland) Bill of April 5th, 1883, introduced as a Government measure, under the auspices of Mr. Herbert Gladstone, M.P., at the instance of the then Chief Secretary, which Bill originally suggested the enactment of that admirable provision; but it appears that the Union Officers' Association of Ireland, fearing it is hopeless to obtain the long expected compulsory measure, now advocates the enactment by Parliament of these provisions.

The Councils of our Associations have, during many years, carefully considered this question, which is as important in the public interest as it is in that of the medical officers, and they are firmly of opinion that any measure which does not embrace the provisions of the Government Bill of April 5th, 1883, would not prove either permanent or satisfactory if passed.

Boards of guardians, consisting of a majority of loyalists, would undoubtedly support it, and the Local Government Board would have power to refuse to sanction any excessive or insufficient award of pension, upon good cause being shown.

Our Councils and the poor-law medical officers are quite willing to submit to the decision of any impartial and unbiassed authority, but they respectfully protest against the present system, under which so few of the medical officers can expect to be fairly and reasonably treated.

Should you desire that a further written statement be forwarded as evidence in support of the claims of the poor-law medical officers of Ireland to the introduction by Government of a measure to afford compulsory superannuation allowances—or should you prefer such evidence to be delivered orally by a deputation consisting of appointed representatives of both our Councils—may we venture to hope that you will be so good as to give due notice of your wish, addressed to Dr. Chapman, 122, Pembroke Road, Dublin, in order that we may be enabled to make the arrangements necessary to comply therewith?

In conclusion, we are directed to express the fervent hope of our Councils that you will be pleased to introduce in the House of Commons this session the Union Officers' Superannuation (Ireland) Bill of April 5th, 1883.—We have the honour to be, Right Honourable Sir, your obedient Servants,

J. H. CHAPMAN,
Hon. Sec. Irish Medical Association.
L. H. ORMSBY,
Hon. Sec. Dublin Branch of British
Medical Association.

BEQUEST.—At the recent annual general meeting of the West of England Sanatorium, Weston-super-Mare, the chairman was enabled to report "that an unknown friend, Mr. Smith, of Cirencester, had left the institution a legacy of £5,000, the interest of which was to be applied to the benefit of Cirencester patients of the institution."

INEBRIATE CRIMINAL RESPONSIBILITY.

A LECTURE on inebriate criminal responsibility was delivered to the Society for the Study of Inebriety, at the rooms of the Medical Society of London, on Tuesday last, by the President, Dr. Norman Kerr. The lecturer reviewed the varying criminal procedure of different countries in criminal cases complicated with inebriety. Germany, Italy, and Switzerland recognised a culpable and inculpable intoxication. America, England, and France did not. Yet in America the confirmed was practically dealt with as a diseased drunkard, and capital punishment was averted by a verdict of "murder of the second degree." In England, Plowden, in the sixteenth century, and Mansfield in the eighteenth century, laid down that drunkenness was no excuse; while Coke went further, and held it to be an aggravation. Since then, the rulings had been somewhat contradictory. All our previous criminal proceedings had been founded on our former ignorance of any pathological state preceding intoxication. But the comparatively recent revelation of modern scientific research, that drunkenness was often the effect of disease, had not been without influence on the administration of justice. There had been a number of acquittals in charges of murder during an attack of delirium tremens, and there was a growing disposition in both judge and jury to accept a delusion of this disease as a valid plea for irresponsibility. A general ruling to this effect would be a desideratum. Many drunkards could not limit their potations. Some were born with a predisposition to intoxication, others with a defective inhibitory power. Such should not be judged by the same standard as those thoroughly sound in body and brain. When drunkenness was but a symptom of insanity, or when permanent insanity was caused by drink, all admitted irresponsibility. But when there was short-lived insanity from alcohol, why should there be responsibility any more than in temporary insanity from any other cause? Dr. Kerr cited two recent judicial utterances as showing the close relation of physiology and pathology to criminal law. Chief-Justice Pallas had ruled that if a person from any physical cause was reduced to such a state that a smaller quantity of alcohol would make him drunk than would do so in health, then he could not be held responsible for his acts, as they were involuntary, and the product of disease. The other deliverance was by Baron Pollock, and recognised the influence of heredity. The learned Baron ruled, in the case of a prisoner accused of murder, with a history of delusions, acute alcoholic disorder, and insane heredity, that, if the insane predisposition was the main factor, though the drinking of a small amount was a contributory cause, the plea of irresponsibility was valid. Dr. Kerr suggested a mixed commission of medical and legal experts, and held that in criminal cases complicated with inebriety there should be an investigation of the health-history and heredity of the accused.

THE ROYAL COLLEGE OF SURGEONS AND ITS MEMBERS:

STEELE AND ELLIS v. SAVORY AND OTHERS.
TAIT v. THE SAME.
STAY OF PROCEEDINGS.

BEFORE Mr. Justice Stirling on Friday, March 8th, an arrangement was made in the two actions now pending against the members of the governing body of the Royal College of Surgeons, in respect of the threats of disciplinary proceedings arising out of the recent meeting of the Members. Mr. B. F. C. Costelloe appeared for the plaintiffs in the action of Steele and Ellis against Savory and others; and Mr. Phipson Beale, Q.C., and Mr. Costelloe appeared for Mr. Lawson Tait in the second action of Tait against Savory and others; Mr. Graham Hastings, Q.C., and Mr. Paget were for the defendants.

As the motions were not reached in the ordinary course, Mr. Phipson Beale, Q.C., mentioned the matter at four o'clock, and inquired if the defendants intended seriously to oppose Mr. Lawson Tait's application, since the meeting of the Council at which it had been proposed to proceed to inflict penalties under the disputed by-law was advertised for March 14th, and that would be before the next motion day in his lordship's court.

Mr. GRAHAM HASTINGS, Q.C., said that he was quite prepared, and that he had authority to say that since the by-law was challenged the defendants did not now propose to take any disciplinary proceedings pending the action. He suggested that what was alleged as a threat of proceedings was rather an invitation to the Members to explain their conduct in convening the meeting.

Mr. Justice STIRLING then said as the whole matter would have to be gone into at the trial of the action, the plaintiffs might now rest satisfied with Mr. Graham Hastings's public statement.

Mr. COSTELLOE, stating that he appeared in the other action, inquired whether Mr. Graham Hastings would repeat the same statement as regards those on whose behalf the action of Steele and Savory was commenced, and mentioned that there were nearly thirty gentlemen now under notice to show cause why penalties should not be inflicted upon them.

Mr. GRAHAM HASTINGS fully agreed that the understanding should apply to all the Members under notice, and it was accordingly ordered that both motions should stand over generally, with liberty to apply to the court if any fresh circumstances arose; the plaintiffs in the action of Steele against Savory to have leave to amend their writ by adding other Members of the College as plaintiffs without a special application.

MEMBERS' ASSOCIATION.

Meeting of the Parliamentary Committee of the Members Association.—Statement of Case for the Draft Bill.—Précis of its Proposed Provisions.—Guarantee Fund.

THE first meeting of the Parliamentary Committee, appointed¹ at the meeting of the Fellows and Members of the Royal College of Surgeons of England, held on February 28th, was held at 42, Queen Anne's Gate, on Wednesday, March 13th; a Subcommittee was appointed to embody the following statement of the case for the Bill to reform the College of Surgeons, about to be presented to Parliament, to frame the same as a Petition to Parliament, and to secure the support of as many medical societies throughout the kingdom as possible.

The matters which have been in question between the Members and Fellows of the College of Surgeons on the one hand, and the Council of the said College on the other, have now arrived at a somewhat acute stage, in which two questions present themselves for consideration. They have certainly a mutual relation, but they are easily and entirely separable. The first point, and that of the least importance, is one which is personally confined to a small number of Members, as to whether they are to be subject to penal discipline by the Council for having technically infringed a by-law of the College, which they on their part regard as illegal and not binding. This question will be decided by the Courts of Justice, and whilst the decision is pending, it is a matter beyond the range of comment.

The second and by far the most pressing, alike in time and importance, is the question as to whether or not the ancient constitution and method of government of the College shall be restored.

The history of the destruction of the rights of the Members and Fellows has been so admirably given by the medical press, that a concise statement may be extracted from the columns of the BRITISH MEDICAL JOURNAL and the *Lancet*, and it is worthy of comment that throughout the discussion there has been absolute unanimity on the part of the medical journals upon this question.

The JOURNAL of November 17th, 1888, says that:—

"Without entering upon legal technicalities, it is beyond doubt that the corporation now known as the Royal College of Surgeons of England has had a continuous life for some five hundred years as one of those powerful craft-guilds or fellowships in which, in earlier times, the principle of self-government was applied to all the skilled employments throughout Europe. It was like other guilds not only in name, but, in fact, a 'fraternity.' Its Members were a self-governing body, bound to mutual help, and having each an equal share in the privileges and the honours of the community. By the very nature of a guild, its affairs were conducted by annual and other meetings, at which all Members were not only permitted, but compelled, to attend, that the common interest might not suffer by default. The 'masters' were elected by these meetings freely. The 'ordinances' were made and altered there by free discussion and open vote, and the officers were sworn to preserve them. The property of the guild was so evidently the property of all the Members, that it was customary to bring in the chest which contained their corporate wealth, and have it physically before the annual moot, that public accounting might be made. The Company of Surgeons was in those days as democratic an institution as the wit of English citizens could devise."

To continue the history from this point, the *Lancet* of December 11th, 1886, gives in detail as follows:—

"In 1797, a Bill to procure the re-establishment of the Corpora-

tion under the name of a College had passed through the House of Commons, and had been twice read in the House of Lords, before the members of the Corporation were aware of its purport. A petition in opposition to the Bill was at once prepared, and presented to the House of Lords. This petition set forth that the Bill had been drawn up without the knowledge or sanction of the Members of the late Company, who had not been convened to consider it.....that the ancient privileges of the Members would be annihilated, and their right of meeting in a General Court would be taken away; and that the Court of Assistants would be able to oblige Members to swear to the observance of such laws as the Court might make, although the Members themselves would have no voice in the making of these laws, and no choice in the appointment of those who should make them. The result was that the Bill was thrown out in the last stage. As bearing upon the present demand of Members of the College for the franchise, it should be stated that one of the reasons which led to the rejection of the Bill by the House of Lords was the determination of its promoters to exclude ordinary Members from any share in the management of the affairs of the College."

In the course of the discussion, Lord Thurlow, one of England's greatest Chancellors, taking up the cause of the petitioners, said, "They have great cause to complain. Their privileges have been violated; they have been too long trampled under foot, and they have the strongest title in the world to have their complaints heard with patience and attention." What Parliament had refused, the King was easily prevailed upon to grant, and thus in the month of March, 1800, the College of Surgeons was established by a Royal Charter, which sanctioned most of the obnoxious provisions contained in the Bill rejected by the House of Lords.

The agitation against this state of matters began then and there, and has practically continued ever since. Even the establishment of the Fellowship was nothing more than a protest and an effort towards partial reform advocated and carried out by the late Sir Benjamin Brodie, and was directed against the autocratic rule of the Council, which, up to that time (1844) was self-elected.

By this measure an electoral system was created, but it fell short of effecting any great change by reason of the adoption of the system of personal voting, so that the choice of the Council was and has been ever since practically confined to the Fellows resident in London. It is now on this account, and on account of some by-laws of a peculiarly objectionable kind, quite impossible for the provincial Fellow to obtain an adequate share in the management of the affairs of the College, whilst the great body of the College, consisting of 12,000 Members, are wholly unrepresented.

By reason of the large bequest obtained by the College under the will of the late Sir Erasmus Wilson, it became necessary for the Council to obtain extended powers in financial matters, and they applied during the past year to the Queen in Council for a new Charter. The Privy Council was petitioned by the Members and Fellows to insert in this new Charter certain reforms which had been considered at various annual meetings of the College, and approved of by resolutions duly passed. To these proposals for reform the Council of the College would not give their consent, and the Committee of the Privy Council, in reply to the petitioners, pointed out that their functions did not extend to the settlement of contentious matters, and they advised the petitioners to apply to Parliament for the relief prayed for.

A meeting of the Fellows and Members, held on February 28th, 1889, appointed a Committee to prepare a Bill embodying the reforms already discussed at meetings of the College, and approved thereat, and to generally amend the constitution of the College, and to declare and extend and restore the ancient rights and privileges of its Members. The main points of this Bill are as follow:

1. At the next and every succeeding election of members of the Council of the College the persons elected shall hold office for three years only, but shall thereafter be eligible for re-election as provided.
2. The President and Vice-Presidents of the College shall be elected by the body of the College, and shall hold office for one year only, but shall be eligible for re-election provided that the term of office shall not exceed three years consecutively.
3. That Members of the College shall be eligible as candidates for membership of the Council.
4. That Members of the College shall be entitled to meet together within the hall of the College or elsewhere, at all reasonable times, having been duly summoned, for the consideration of

¹ JOURNAL, March 5th, p. 554.

the affairs of the College, and to propose resolutions and to vote thereon at every such general meeting, and to vote at any election of President, Vice-President, or members of the Council of the College, and at every meeting to appoint committees for special purposes, and to adjourn any meeting to another place and time, and that it shall not be deemed to be necessary to obtain the previous permission of the President and Council for the holding of any such meeting or for the proposal of any business thereat.

5. That the election of all examiners for the purposes of the College shall be regulated by by-law.

6. That no extraordinary expenditure shall be made by the Council without the authority of a general meeting.

7. That no by-law shall be binding until it has been sanctioned by a general meeting of the College.

It was further resolved that the following resolution be submitted to the various Branches of the British Medical Association and to the various medical societies throughout the kingdom:

"That this meeting cordially approves of the Bill about to be promoted in Parliament by which it is proposed to restore to the Members of the College of Surgeons a free and unrestricted exercise of their ancient rights and privileges."

A guarantee fund has been started for the purpose of indemnifying the plaintiffs in the case of Steele and others *v.* Savory and others, and also for the purpose of meeting any expenses entailed by the promotion of a Bill in Parliament to reform the constitution of the Royal College of Surgeons of England. The following sums have already been guaranteed:

	£	s.	d.		£	s.	d.
Mr. Lawson Tait ...	100	0	0	Mr. W. A. Ellis ...	10	10	0
Dr. G. Danford Thomas ...	50	0	0	Mr. R. Abud ...	5	5	0
Dr. W. C. Steele ...	20	0	0	Dr. J. W. B. Mason ...	5	5	0
Mr. Richard Davy ...	10	10	0	Dr. C. Royston ...	5	5	0
Dr. R. Collum ...	10	10	0	Mr. Joseph Smith ...	5	5	0

It is hoped that all Members of the College will contribute to this fund according to their means, and send contributions to the honorary treasurer of the fund, Deputy Surgeon-General C. M. Jessop, 98, Sutherland Avenue, W.

PROCEEDINGS OF COUNCIL.

An ordinary Council was held at the College on March 14th. The minutes of the extraordinary meeting on February 21st were read and confirmed.

The further report of the Committee on the Formulæ for New By-laws, dated March 13th, was read. The report having been considered and the formulæ approved, the same was ordained by the Council and signed by the members present. A motion was then carried that the legal advisers of the College be instructed to take the necessary steps for submitting the formulæ without delay to the Home Secretary for sanction and ratification.

A report of the proceedings in connection with the proposed illegal meeting of Fellows and Members was read by the President.

A letter of March 8th was read from Mr. Wilde, reporting the proceedings in the Court of Chancery in reference to the motions for an injunction against the Council.

Replies to the letter from the Secretary, already published in the JOURNAL, were read from Messrs. R. Gooding, W. W. Westcott, J. C. Smith, Lawson Tait, Danford Thomas, W. G. Dickinson, C. M. Jessop, Jabez Hogg, G. H. Cable, S. Smith, F. H. Forshall, R. Abud, R. Hicks, J. Smith, M. G. Biggs, E. McKellar, J. W. Mason, and W. C. Steele.

It was resolved unanimously that pending the proceedings in the Court of Chancery calling in question the validity of Section xvii of the By-laws, the consideration of the infraction of that section by the conveners of the meeting of Fellows and Members of the College on February 28th, and the penalties consequent thereon be deferred.

A letter of March 6th was read from Dr. Edward Liveing, stating that the Secretary of State for War had approved the nomination by the Royal College of Physicians of Dr. T. Graham Balfour as the representative of that College on the Committee of Inquiry into the pay, status, and conditions of service of medical officers of the army and navy.

A letter of March 8th was read from the Secretary of State for War, thanking the Council for their nomination of Mr. C. Macnamara as their representative on the Committee, and requesting that Mr. Macnamara may be asked to attend to any directions

he may receive from Lord Camperdown as to the meeting of the Committee.

A motion by Mr. MARSHALL, seconded by Sir JAMES PAGET, "That the marble bust of Sir. W. J. Erasmus Wilson, by Mr. Thomas Brock, A.R.A., be placed over the mantelpiece in the east library, and that the ornamental marble niche, designed by Mr. Brock for its reception, be executed forthwith, at the estimated cost of £100," was carried *nem. con.*

The Council declined to purchase a painting, forwarded by Dr. Willington, of Birmingham, for their inspection, and purporting to be "An inimitable portrait of John Hunter, by the eminent artist, Fielding." In the opinion of competent authorities, to whom it was submitted, this is not the case.

INDIA AND THE COLONIES.

THE LADY DUFFERIN FUND.—The third annual report of the Bombay branch of this fund shows the amount of subscriptions received for the year ending November 30th last to have been 43,759 rupees, to which must be added the receipts from the Fancy Fair held last February, and amounting to 40,585 rupees. Subscriptions to district funds amounted to 73,273 rupees. Mr. Hurkissondas Nurrotumdas presented 6,000 rupees to be used for the encouragement of the medical education of the women of Western India, one-half to be allocated to the endowment of the Lady Reay Medical Scholarship, and the remainder to the provision of a Lady Reay gold medal, to be annually awarded to the female student who obtained the highest marks among the lady candidates for the L.M. and S. examination.

THE number of students in the medical faculties of the various German universities in the winter semester 1888-89 is given in the official lists as follows:—Berlin, 1,456; Bonn, 317; Breslau, 388; Erlangen, 297; Freiburg, 309; Giessen, 122; Göttingen, 214; Greifswald, 405; Halle, 310; Heidelberg, 220; Jena, 213; Kiel, 219; Königsberg, 244; Leipzig, 840; Marburg, 209; Munich, 1,188; Rostock, 157; Strassburg, 306; Tübingen, 237; Würzburg, 984. The total number of medical students in the universities of the German empire is thus 8,635 as against 8,255 in the corresponding period of last year.

GYNÆCOLOGY IN SPAIN.—Dr. Candela, Professor in the University of Valencia, recently removed the uterus and ovaries by the supravaginal method for fibromyoma. The tumour was very large, and the patient was under chloroform for three hours. The patient made an excellent recovery. Dr. Gonzalez de Segovia, of the Madrid Maternity, lately performed Cæsarean section in a case of extreme narrowness of the pelvic outlet. The foetus had been dead for at least twenty-four hours, and though the patient rallied well from the operation, she died on the second day after it.

ASSOCIATION OF CERTIFYING SURGEONS.—The following is the list of officers elected to serve for the present year on the newly formed Association of Certifying Surgeons under the Factory Acts. The objects of the Society are to watch over the interests of the surgeons, and of the children and young persons whose health it is their duty to guard. *President:* Francis H. Walmsley. *Vice-Presidents:* J. T. Arlidge, M.D.; C. Johnson; G. M. Stansfeld. *Honorary Treasurer:* J. C. Eames, M.D. *Honorary Secretary:* J. Holmes, M.D. *Committee:* W. J. Allkin; J. M. Barr, M.B.; W. H. Barr; W. E. S. Burnett; R. Clayton; W. P. Counsellor, M.D.; B. Crawshaw; T. Crowther; J. Dale; J. K. Davidson; T. Dean, M.D.; A. F. Dearden; C. W. Evans, M.D.; H. M. Fernie; T. Fort; A. Gellatly, M.B.; W. H. Hughes; G. F. Joynson; T. C. Law; J. Lawson, M.B.; J. Levi, M.D.; S. A. McGowan, M.D.; E. Moore, M.D.; D. J. O'Neil, M.B.; R. Patrick, M.D.; F. M. Pierce, M.D.; W. Stanfield, M.D.; W. Stanwell; R. Settle, M.D.; C. W. Thorp; J. White; F. H. Wood; S. Woodcock, M.D.; J. H. Wraith. The annual subscription has been fixed at 10s. 6d.; but it is thought after the first year a subscription of 5s. will be sufficient for the purposes of the association. It is proposed to hold an annual meeting for the purpose of reading papers and the mutual exchange of opinions; the place of meeting to be fixed each year. Those wishing to join should communicate with the honorary secretary, Dr. Holmes, Ouselhurst, Radcliffe, Lancashire.