NOTES

ON

SOME GERMAN UNIVERSITIES.

By WALTER K. SIBLEY, M.B., B.C.CAMB.,

II.—THE UNIVERSITY OF BERLIN.

(Continued.)

Koch's Bacteriological Course.—*Non-Pathogenic Organisms.*—*Pathogenic Organisms.*—*Anthrax; Tuberculosis.*—*Disinfection.*—*Typhoid.*

THE practical bacteriological course for medical men is given about four times a year, and each course lasts a month, the work being daily from 9 to 5. The courses, which are under the direction of the chief assistants, are attended by medical men from all over the world, about twenty taking part in each course; at a recent one there were nineteen attending, seven nations being represented. Upon commencing in the morning the assistant gives a short lecture for twenty minutes or half an hour on the work for the day, describing the methods of procedure, together with important points in the life-history, methods of cultivation, and staining of one or more micro-organisms. He also gives demonstrations on the apparatus required to be used, after which each one works through the proposed methods individually, the demonstrators remaining nearly the whole day to give assistance to those in need of it.

It is quite out of place in a short paper like this to describe or even mention all the micro-organisms examined or preparations put up, therefore a few points of particular interest only will be mentioned. The series may be started with the non-pathogenic organisms, such as examples from the moulds; yeasts, the white, black, and rose; from the cocci, the prodigiousus; the yellow and orange sarcinæ; and from the bacilli, the subtilis or hay bacillus. Having prepared potatoes and gelatine in the recognised ways, cultures were made of all. Passing from these to the micro-organisms of milk—namely, the lactic acid bacillus, *oidium lactis*, and the bacilli of blue milk, we were then shown the organisms in the atmosphere, and the methods of isolating and cultivating them; next those found in the dust of floors and roads, noticing especially the root-forming bacillus, at the same time learning how to make a pure culture of one form from a mixture containing many species; passing then to the bacilli of water, especially noticing the fluorescens, and the red and violet bacilli. Having studied for a few days the ordinary forms of micro-organisms, and learnt the various methods of cultivating them in gelatine placed in test tubes, either as streak or stab cultures, and also rolled round the sides of test tubes; also in gelatine on large square glass plates and on microscopic slides, and again in shallow pots or jars; in broth as a drop hanging to the under side of a cover slip placed on an excavated slide, the edges of concavity being surrounded with vaseline, and so rendered airtight; also on potato and bread; and the various methods for preparing and staining all of them for microscopical examination, we passed at once to the parasitic organisms, the greater number of which accompany specific diseases. The first of these we examined was anthrax; we proved how this bacillus grows at the ordinary room temperature, but never in acid mediums. It does not spore in the animal body, nor under a temperature of 16° C. or over 37° C.; it does not spore in gelatine, but on potato, or when grown in broth. When grown on gelatine it liquefies that substance very rapidly; growing artificially, it forms long interlacing filaments. When inoculated, it causes splenic fever and rapid death in guinea-pigs, mice, and man; so also in amphibia, as frogs, when these are kept warm. Finally it was demonstrated that animals fed on the bacilli without spores received no harm.

We then learnt the various and more complicated methods of staining, as those of Gram, Weigert, and Ziehl, and studied the bacillus of tuberculosis discovered by Koch in 1882, being shown how much greater propensity this bacillus has of retaining the colouring matter of the aniline dyes than any other known bacillus and so retaining the colour after subjection to dilute acids, etc. We also found out how difficult this bacillus is to cultivate, as it grows only on agar-agar when glycerine is added and on serum,

and only between the temperatures of 30° and 42° C., and then very slowly. The characteristic point about the method of growth of tubercle on agar-agar is that it grows and extends over the fluid at the bottom of the test tube and then up the glass on the opposite side, thus differing from any other known bacillus culture; spore formation of this bacillus has never been actually demonstrated. Leaving these we worked through the bacilli of septicæmia in mice, which in appearance much resemble those of tuberculosis, being found both in the connective tissues and in the white blood corpuscles, and those of chicken cholera, common to all domesticated birds, also mice and rabbits, guinea-pigs being apparently insusceptible.

After these organisms we studied that which to the mind of a medical man is now of great interest and importance, namely, the various processes for disinfection, both thermal and chemical, proving by experiment that many bacilli (anthrax and subtilis) are not destroyed by being raised to a dry heat of 110° C. or by being frozen, but that they are readily destroyed by being subjected to a moist heat. Thus a damp chamber of 100° C. is much more potent than a dry one of 150° C. in its destructive powers, and normal steam at 100° acts much better than steam under pressure at 130°. For chemical means carbolic acid 5 per cent. (1 in 20) and sublimate 0.1 per cent. (1 in 1,000) were used.

Again, it was shown that most organisms die when boiled in water for a few seconds, for instance, typhoid bacilli, and that heating in a moist chamber is a much more powerful destructive agent for these than a dry heat. Filtration, except through Pasteur's filter, does not prevent germs from passing through, and is therefore inefficacious. These various methods were tried, the bacillus and spores of *B. subtilis* being very serviceable; thus threads, dried after being soaked in a broth solution containing the spores, were subjected to moist and dry heat for a varying number of seconds and minutes and then placed in gelatine, and observations made as to which afterwards grew and which did not; and in the same way they were tested with chemical agents.

In staining for the spores of some bacilli (anthrax and subtilis) we appreciated how much more slower these are in giving up the colouring matter than the bacilli themselves, and also how much harder to stain. Thus the preparation on a cover glass or otherwise must be left in the colouring medium (carbolic acid fuchsin being especially serviceable) for an hour or two, and at the same time subjected to heat. After this procedure the colour is readily removed from the bacilli by alcohol, but remains in the spores; the specimen can then be doubly stained by methyl blue, and then we have the bacilli blue and the spores red. Attention was next given to the bacilli of malignant oedema, which are found by injecting a small quantity of garden soil into an animal, the beast rapidly succumbing with general oedema of its tissues, especially in the neighbourhood of the wound; the bacilli are not, however, found in the blood, nor can they be grown in the presence of oxygen, but when all oxygen is excluded they grow in gelatine, producing liquefaction of that substance with evolution of very foul bubbles of gas. After noticing briefly the bacilli of septicæmia of rabbits, which is very similar to chicken cholera, we investigated some of the organisms in connection with certain diseases of the air passages, as *micrococcus tetragenæ*, which is found in diseased lungs and in many healthy people's mouths, and for man is not pathogenic, being often present on the walls of cavities in phthisis; it is, however, very fatal to mice, guinea-pigs, and rabbits, and is found in their blood. They occur like the sarcinæ in fours, but here only in one plane, and each group is encapsuled; they grow at the room temperature on the potato. When artificially cultivated the capsule disappears, so that the capsule is only found in specimens taken from an animal's body. Then we studied the common micrococci of pus from wounds, *staphylococcus aureus* and *albus*, *streptococcus erysipellatis*, and finally the bacilli of green pus.

Staphylococcus occurs in groups, growing at the room temperature on gelatine, agar-agar, serum, or potato. After inoculation into an animal, it is found sparingly in the blood vessels, abundantly in the kidney; if the endothelium from a valve of the heart be removed and the animal then inoculated with a pure culture, ulcerative endocarditis is produced. The spores of this coccus, when dried on thread, continue capable of growth after two years. This coccus is, moreover, found everywhere, in the mouth, vagina, and uterus in healthy subjects, and in all abscesses; it liquefies gelatine.

Streptococcus, occurring in threads is always present in pus, grows very slowly at the room temperature, and does not liquefy

gelatine. In pus it lies free and not in the corpuscles. Streptococcus erysipellatis is practically indistinguishable from the above, and is found principally in the margin of a patch of inflammation lying in the lymph vessels, which are often full of these micrococci.

The bacillus of green pus is not pathogenic, is active, and grows rapidly in gelatine, which it liquefies. In pus usually all three of these organisms are found, but sometimes only one is present; which is the most important is not yet known. In pus about the peritoneum and in internal parts, probably streptococcus plays the most important part. Leaving these, we passed on to study the bacillus of glands, pathogenic in horses, asses, man, guinea-pigs, and field mice (not in other mice), producing generally catarrh of the mucous membranes and nodules in the lungs very like tubercle; the bacilli also closely resemble tubercle bacilli. It does not grow at the room temperature, but on agar-agar or potato in the incubator. In guinea-pigs, three to five weeks after inoculation, nodules, especially in the spleen and liver, are found, together with a general enlargement of the glands. The bacilli are only found in certain stages, occurring in the tissues in groups; after about eight generations of artificial culture, the virulence disappears.

The moulds are mostly non-pathogenic; when, however, some are grown artificially in an incubator, and the spores separated and injected into the blood vessels of a rabbit, it rapidly dies, and small patches of the fungus are found in the liver and kidneys. These fungi, when removed, will not grow at the ordinary room temperature, but rapidly in the incubator, and especially well on moistened bread which has been sterilised. The pathogenic moulds are *aspergillus flavus* and *fumigatus*, and *mucor corymbifer* and *rhizopodiformis*.

With regard to the intestinal bacilli, that of Emmerich may be taken first; in appearance it is very like that of typhoid, but is not active, and is found in the faeces of some cholera cases. It grows on gelatine, producing a brownish yellow colour around, but forms much thicker processes than those of typhoid; it grows also in potato. When inoculated into an animal in large quantities and deep into the tissues, the beast dies, and the bacilli are found in the organs after death.

Then the cholera or comma bacilli were studied. These are readily destroyed by drying; thus if a drop of broth containing them on a cover glass be dried in the air, they are found all dead in about three hours. Two other bacilli, namely those of Finkler and Deneke, are very similar to the cholera bacilli; these also are very active, and slowly liquefy gelatine when grown in it, the gelatine appearing filled with holes or gas bubbles. The bacilli of typhoid fever are found abundantly in the spleen, lymphatic glands, and intestines of patients dying from the disease. These, like Emmerich's bacillus, are very active, and no spore formation has been demonstrated. Growing on gelatine they do not liquefy it, and have a very characteristic appearance when grown on potato, the surface of the latter appearing covered with a moist pale-brown down. If injected into the veins of animals, in some cases the same appearances are found in the intestine and spleen.

Lastly, we studied the bacilli of pneumonia, commencing with that of Friedländer, which is small and very like tetragenae, possessing a capsule, but this only when grown in the animal body, and not in cultures. It grows at the room and blood temperatures, on agar-agar, potato, or gelatine, forming white colonies. In older cultures it produces a brown coloration of the gelatine, especially when sugar is added, and, later still, the formation of gas bubbles; spores are not found. This bacillus is not always found in pneumonia, and sometimes it is detected in healthy lungs. Then there is the bacillus of Fränkel, which microscopically resembles the former, but grows only at the blood temperature, and only for a few days in artificial soil, and then dies. Spores are often found which, if injected subcutaneously into an animal, cause death in two days. This bacillus is, however, not always to be found in pneumonia, and often both this and Friedländer's are associated in that disease. Fränkel's occurs also in healthy mouths, but not in every individual. Thus the saliva of some people, if injected into a rabbit, causes death, and Fränkel's bacillus abounds on *post-mortem* examination. A bacillus we must not forget to mention for its interesting physical properties is *B. phosphorescens*, which occurs in decomposing meat and fish, also in sea water, the phosphorescence of which it causes; in appearance it is something like the hay bacillus, but is very active. It grows on gelatine, which it liquefies when the weather is warm.

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THE following additional programmes of the work of Sections have been published:—

SECTION OF DERMATOLOGY AND SYPHILOGRAPHY.

(1) Pathogenesis of Pigmentations and Discolorations of the Skin; (2) Diagnosis, Prognosis, and Treatment of Chronic Gonorrhoea in the Male and in the Female; (3) Treatment of Syphilis: (A) Results (a) of excision, (b) of general preventive treatment; (B) Beginning, Duration (chronic, intermittent, or temporary?) and best method of Treating Constitutional Syphilis; (4) Treatment of Inflammatory Diseases of the Skin; (5) The Special Indications of the Different Modes of Applying Mercury in the Treatment of Syphilis; (6) On What Etiological Factors does the Outbreak of Tertiary Forms of Syphilis Depend? (7) The Role of Diathesis, Nervous Causes of Disease, and Pathogenic Parasites in the group of diseases designated as Eczema; (8) The Nature of Medicinal Eruptions; (9) Lupus Erythematosus, its Nature and Treatment. Communications should be addressed to Dr. Lassar, 19, Karlstrasse, Berlin, N.W.

SECTION OF OTOLGY.

A discussion on the relations of Micro-organisms to Diseases of the Middle Ear and their Complications, will be introduced by Drs. Moos and Zaufal; one on Cholesteatoma of the Ear, by Drs. Kuhn and Bezold; one on the following question: Can opening the mastoid process from the external meatus be considered as equal to the more usual method? by Dr. Hessler. 4. One on the After-treatment of the Trephined Mastoid, by Dr. Kretschmann; one on the Indications of Excision of the Malleus and Incus, by Dr. Stacker; one on the Pathological Anatomy of the Labyrinth, by Dr. Steinbrügge; one on the Condition of the Organ of Hearing in Diseases of the Central Nervous System, especially in Tabes Dorsalis, by Dr. Morpurgo; one on Otitis Interna as a Sequel of Hereditary Syphilis, by Dr. Wagenhäuser; one on Statistics of the most important Ear Diseases, by Dr. Bürkner and Jacobson; one on Testing the Hearing and Notation of the Auditory Capacity, by Drs. Magnus and Schwabach; one on the Diagnosis, Prognosis and Treatment of Progressive Deafness in Chronic Non-suppurative Otitis Media, by Drs. McBride and Gradenigo. Communications should be addressed to Professor Lucæ, 9, Lützowplatz, Berlin, W.

SECTION OF FORENSIC MEDICINE.

1. Are gonococci so thoroughly established that the finding of them in the vaginal secretion of a child can with certainty be referred to gonorrhoea in a supposed ravisher? 2. On impotence in the male, and the criteria in which it can be established in court. 3. Can Air drawn into the Lungs by Respiration disappear from them in Dead Bodies, so that the Lungs of Newborn Children may present the Signs found in those who have never breathed? 4. Can the Changes produced in the Anus by Passive Pederasty disappear after discontinuance of the Pederastic Acts, and in how long a time after? The discussion on this subject will be introduced by Professor Liman. 5. Can the Lungs of a Newborn Child that has never breathed present, owing to Schultze's Vibrations, the signs of having done so? 6. When Sepsis is found in a person who has secretly miscarried, can a strong suspicion or certainty be expressed that the Abortion was deliberately induced, or does Sepsis also occur after Spontaneous Abortion? 7. Is there an independent "Moral Insanity," or is that Complex of Symptoms one of the Manifestations of other forms of Mental Disease? 8. Is Mummification of a Corpse confirmatory evidence of Arsenic Poisoning, or is it quite without significance in that respect? 9. The significance of Proofs of Life. 10. On the Influence of the Recent Development of the Doctrine of Infection on Medico-legal Examinations in cases of Death occurring after Bodily Injuries? 11. The Significance of Potomains in Forensic Medicine. 12. What position must the Medical Jurist take up as regards the question of Auto-infection in Fuerepæ? 13. Observations of Medical Jurists on the recognition of the Simulation of Neuroses, especially of Traumatic Origin. 14. Medico-legal Observations on the Occurrence and Significance of Rigor Mortis. Communications should be addressed to Professor Liman, 46A, Königgrätzerstrasse, Berlin, S.W.

SECTION OF MEDICAL GEOGRAPHY AND CLIMATOLOGY (HISTORY AND STATISTICS).

1. Influence of Tropical Climates on Immigrants from Higher Latitudes, the resistance of Immigrants to Diseases prevalent

in the Tropics, and the Possibility of the Acclimatisation of Europeans and North Americans in the Tropics. 2. Influence of Climatic, Telluric, and Social Conditions on the Occurrence and Course of Pulmonary Tuberculosis, with special reference to the Disease in the Torrid Zone. 3. Endemic and Epidemic Spread of Yellow Fever, and the Influence of Climate, Soil, and Trade thereon. 4. Beri-beri from the standpoint of Etiology and Treatment. 5. Leprosy, with special reference to its Transmission by Heredity and Contagion. 6. Malarial Diseases, with special reference to the Geographical Distribution of the Various Forms thereof: Are all forms due to one and the same or to different poisons? Communications should be addressed to Professor A. Hirsch, 113, Potsdamerstrasse, Berlin, W.

SECTION OF DISEASES OF THE TEETH.

1. Bromide of Ethyl as an Anæsthetic in Dental Practice. 2. Causation, Course, and Treatment of Pyorrhœa Alveolaris. 3. The Part Played by Micro-organisms in Caries of the Teeth. 4. Crown and Bridge Work. 5. The Bonwill Method of Articulation in Artificial Dentures. Communications should be addressed to Professor Busch, 8, Alexanderufer, Berlin, N.W.

THE INFECTIOUS DISEASES (PREVENTION) BILL.

DAIRIES AND LAUNDRIES.

THIS useful measure, having been considered in detail by the House of Commons in Committee, has passed safely through its most critical parliamentary stage, and there is therefore now a good prospect of its becoming law during the present session. Several useful amendments were introduced into the Bill in Committee. The clause which empowers a medical officer of health to inspect a dairy beyond his district, when he has reasonable cause to believe that any person in the district is suffering from infectious disease attributable to milk supplied from such dairy, or that the consumption of milk from the dairy is likely to cause infectious disease to persons residing in the district, has been extended to include inspection not only of the dairy, but also of "the animals therein." In view of the growth of our knowledge respecting the transmission of bovine and other diseases to the human subject through the medium of milk, this power of inspecting cattle is important. It is essential that health officers should have power to examine not only the sanitary circumstances in which the cows supplying milk live, but also the health of the cows themselves.

A new clause has been introduced giving power to a local authority who have adopted the Act, or any portion of it, to rescind their resolution. As the Act is not to be applicable throughout the country, but (except in the metropolis, where it is to come into force at once) is to be adopted at the option of each local authority, there is, perhaps, some force in the contention that local authorities should be able to rescind their adoption of the Act. But it is to be hoped that local authorities will not play "fast and loose" with the question, by adopting the Act hurriedly on the occurrence of an epidemic, and discarding it as soon as the danger has passed. Panic should always be avoided. The Act, if it is to be of full benefit, should, if adopted at all, become part of the permanent law of the district, and its powers should be immediately available to meet emergencies as they arise.

There was one suggested amendment, the rejection of which by the Committee we do not deplore, and that is the clause proposed by Mr. H. H. Fowler to extend the provisions of Section 132 of the Public Health Act, 1875, as to recovery of the cost of maintenance of non-pauper patients in a local authority's infectious hospital. It is most important that no obstacle should be placed in the way of making full use of hospitals for infectious diseases. The public should be led to regard such institutions as part of the provision made out of the rates for their general protection against disease, and they should not be discouraged from availing themselves of the advantages of the sanitary hospitals by the fear of consequent individual expense. The experience of corporations that have tried the plan of demanding repayment of expenses in all cases is that it has prevented the very persons who most need isolation when suffering from an infectious fever from resorting to the hospital.

As Dr. Thorne has remarked in his official report on the Use and Influence of Hospitals for Infectious Diseases, "the plan which has come to be adopted in by far the majority of instances is to make no charge to the poorer residents in the district for which the hos-

pital is provided, but to seek repayment, and, if necessary, to enforce it, under Section 132 of the Public Health Act, when it is evident that the measures of isolation have been resorted to, not for the protection of the public, but for the benefit, whether pecuniary or otherwise, of the person sending the patient in."

It is to be hoped that when the Act becomes law its provisions will be largely adopted by local sanitary authorities, who will thereby acquire some very valuable powers for protecting their district against epidemic disease. Mr. Lees Knowles has performed a useful public service by bringing the Bill before Parliament.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

EIGHTH LIST.

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ICARD (S.) *La Femme pendant la période menstruelle.* 1890.

Presented by **DAVID BRODIE, Esq., M.D., Wandsworth.**
THE EDINBURGH MEDICAL JOURNAL. 1866-1879.

Presented by **HORACE DOBELL, Esq., M.D., London.**
ANNUAL REPORTS ON DISEASES OF THE CHEST. 2 vols. 1875-1877.
DEMONSTRATIONS OF DISEASES IN THE CHEST. 1855.
ON DIET AND REGIMEN IN SICKNESS AND HEALTH. 7th ed. 1882.
LECTURES ON THE GERMS AND VESTIGES OF DISEASE. 1861.
LOSS OF WEIGHT, BLOOD SPITTING, AND LUNG DISEASE. 2nd ed. 1889.
ON WINTER COUGH. 3rd ed. 1875.

Presented by **C. H. D. DRURY, Esq., M.D., Darlington.**
THE LANCET. 13 vols. 1867-1873. (To complete series.)

Presented by **GEORGE HERSCHELL, Esq., M.D.**
HEALTH TROUBLES OF CITY LIFE. 2nd edition. 1890.

Presented by **Surgeon-Major INCE, M.D., Swanley, Kent.**
INTERNATIONAL MEDICAL CONGRESS, TRANSACTIONS OF THE NINTH SESSION. 5 vols. Washington. 1887.

Presented by **Rev. D. Z. MASSON, M.A., M.D., Edinburgh.**
DUPUYTREN (Baron). *L'Opération de la Pierre.* 1836.
EDINBURGH MEDICAL JOURNAL. 5 vols. (To complete series.)
LIZARS (A.). *Anatomical Plates* (A collection of.)
MONROE (A.). *Description of the Bursa Mucosa of the Human Body.* 1788.
MAINGAULT (M.). *Traité des Diverses Amputations.* 1822.
THOMSON (A. Todd). *(Some Plates on Diseases of the Skin.)* 1840.

Presented by **H. G. MURRAY, Esq., L.K.Q.C.P., Prestwich.**
THE LANCET. 6 vols. (To complete series.) 1876-1878.

Presented by **Dr. MEINERT, Dresden.**
INQUIRY INTO THE INFLUENCE OF THE TEMPERATURE OF THE AIR ON THE DEATH OF INFANTS FROM DIARRHŒAL DISEASES. 1890.

Presented by **OSBORN, Esq., London.**
OSBORN (The late Dr.). *Fothergillian Essay on Bronchitis.* MSS.

Presented by **A. RANSOME, Esq., M.D., Manchester.**
ON STETHOMETRY; ALSO AN APPENDIX ON THE CHEMICAL AND MICROSCOPICAL EXAMINATION OF RESPIRED AIR. 1876.
ON THE RELATION OF THE CHEST MOVEMENTS TO PROGNOSIS IN LUNG DISEASE. 1882.

Presented by **JUKES DE STYRAP, Esq., M.K.Q.C.P., Shrewsbury.**
A CODE OF MEDICAL ETHICS (Italian edition). 1889.
THE YOUNG PRACTITIONER, HIS CODE AND TARIFF. 1890.

Presented by **FREDERICK TAYLOR, Esq.**
THE PRACTICE OF MEDICINE. 1890.

Presented by **H. TERRY, Esq., M.R.C.S., Northampton.**
BRATHWAITE'S RETROSPECT OF MEDICINE. 4 vols. (to complete series).

Presented by **THOMAS WAKEFIELD, Esq., M.A., M.R.C.S., London.**

ABERNETHY (J.). *The Surgical Works of.* 3 vols. 1819.
Observations on Tumours. 1811.

BELL (Charles). *A System of Operative Surgery.* 2 vols. 1809.
A Treatise on Diseases of the Urethra. 1820.

BELL (John). *A Discourse on the Nature and Cure of Wounds.* 1800.
The Principles of Surgery. 3 vols. 1815.

BUDD (George). *The Diseases of the Liver.* 2nd edition. 1852.

CHAPMAN (H. T.). *The treatment of Obstinate Ulcers.* 2nd edition. 1853.

COOPER (Sir Astley). *A Treatise on Dislocations and Fractures.* 7th edition. 1831.

COOPER (Samuel). *First Lines of the Theory and Practice of Surgery.* 7th edition. 1840.

DAVIS (D. D.). *The Principles and Practice of Obstetric Medicine.* 2 vols. 1836.

DAVIS (J. H.). *Difficult Parturition.* 1838.

HALL (Marshall). *Principles of Diagnosis.* 2nd edition. 1834.

HOME (Sir E.). *A Short Treatise on the Formation of Tumours.* 1830.

JENNER (Edward). *Variolæ Vaccinæ.* 3rd edition. 1801.

LAENNEC (R. T. H.). *A Treatise on the Diseases of the Chest,* translated by John Forbes. 1829.

LISTON (R.). *Practical Surgery.* 4th edition. 1846.

MERCER (J. C.). *Translation of Larrey's Surgical Memoirs.* 1832.

PAUL (A.). *Diseases of the Lower Bowel.* 6th edition. 1853.

PROUT (Wm.). *On Stomach and Renal Diseases.* 5th edition. 1848.

SCUDAMORE (C.). The Nature and Cure of Gout and Rheumatism. 3rd edition. 1819.
WALSHE (H. W.). The Nature and Treatment of Cancer. 1846.

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DUBLIN JOURNAL OF THE MEDICAL SCIENCES. All before 1879; 1st vol. for 1881; all since June, 1884.
EDINBURGH MEDICAL JOURNAL. Vol. 1; vol. 7 to 11, 1861; vol. 25 and 26; vol. 30, 1884, and upwards.
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GUY'S HOSPITAL REPORTS. Third Series. Vols. 2, 4, 5, 8, 11, 12.
INDIAN MEDICAL JOURNAL. Nos. 2, 3, 7, 8, 9, 11, 21, 22, 35, 50, and since May, 1889.
LANCET (The). 1879 to June, 1888, inclusive.
LONDON MEDICAL RECORD. All since 1885.
MEDICAL SOCIETY OF LONDON (Proceedings). Vols. 5, 6, 7, 9, 10, 11.
MEDICAL TIMES AND GAZETTE. Vols. 1 to 20 before 1850.
MEDICO-CHIRURGICAL TRANSACTIONS. Vols. 1 to 30; vols. 71 and 72.
MIDDLESEX HOSPITAL REPORTS. Before and since 1886.
NEW SYDENHAM SOCIETY PUBLICATIONS. Vols. 1, 8, 9, 14, 17, 24, 27, 29, 34, 39, 40, 44, 48, 56, 60, 64, 69, 70, 77, 81, 83, 85, 87, 88, 89, 90, 91, 93 to 99, 101 to 104, 106, 107, 108, 110, 118, 120 to 125, 127 and 128.
OBSTETRICAL TRANSACTIONS. Vols. 30, 31.
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PATHOLOGICAL TRANSACTIONS. Vols. 1 to 20.
PHILADELPHIA COLLEGE OF PHYSICIANS TRANSACTIONS. Vols. 6, 7, and 10.
RANKING (Dr.). Half-Yearly Abstract of the Medical Sciences since June, 1851.
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UNIVERSITY HOSPITAL REPORTS. All before 1885.
YEARBOOK OF PHARMACY. 1888.
YEARBOOK OF TREATMENT. 1884.

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COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday, the 16th day of April next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary*.

March 12th, 1890.

NOTICE OF QUARTERLY MEETINGS FOR 1890.

ELECTION OF MEMBERS.

MEETINGS of the Council will be held on April 16th, July 16th, and October 15th, 1890. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting, namely, June 25th, and September 4th, 1890.

Any qualified medical practitioner, not disqualified by any law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No member can be elected by a Branch Council unless his name has been inserted in the circular summoning the meeting at which he seeks election.

FRANCIS FOWKE, *General Secretary*.

BRANCH MEETINGS TO BE HELD.

MIDLAND BRANCH: LEICESTERSHIRE DISTRICT.—A meeting of this district will be held at the Dispensary, Loughborough, on Wednesday, April 16th, at 3.30 p.m. The following communications have been promised: Mr. C. J. Bond: The Treatment of Enlarged Bursæ and Gangliæ by Excision. Dr. H. Handford: Some Forms of Cardiac Dilation. Dr. F. W. Bennett: Recent Experiments on Nasal Respiration. Dr. F. M. Pope: Resorcin in the Treatment of Gastric Ulcer. Dr. J. Headley Neale: A case of Malignant Disease: Enormous and Rapid Enlargement of the Liver. Mr. R. Paul: A case of Compound Comminuted Fracture of the Leg. Dinner at the King's Head Hotel at 6 p.m.; tickets 5s. each, exclusive of wine. All members of the profession resident in the district will be welcomed. Notice of specimens or cases to be exhibited to be sent, before April 12th, to the Honorary Secretary, FRANK M. POPE, M.B., Leicester.

WEST SOMERSET BRANCH.—The spring meeting of this Branch will be held at the Railway Hotel, Taunton, on Thursday, April 17th, at 5 p.m. Dinner at 5.30. The subject, as settled by the Council, for discussion after dinner is the Influenza Epidemic. Members having any case or communication to bring before the meeting are requested to send the title thereof as soon as possible to W. M. KELLY, Honorary Secretary, Taunton.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this Branch will be held at Croydon on Thursday, May 8th.—P. T. DUNCAN, M.D., Honorary Secretary, Croydon.

SOUTH WALES AND MONMOUTH BRANCH.—The next meeting will be held at Neath in the third week in April. Members wishing to read papers, etc., are requested to send titles to either of the undersigned by April 7th.—ALFRED SHEEN, M.D., Cardiff, and D. ARTHUR DAVIES, M.B., Swansea, Honorary Secretaries.

SHROPSHIRE AND MID-WALES BRANCH.—The half-yearly meeting will be held at the Salop Infirmary, on Tuesday, April 15th, at 3 p.m. Papers have been promised by Messrs. Stephen Paget (on Cancer of the Breast), Webb, and Dr. Charnley. Members having any communications to make or papers to read will kindly inform the Honorary Secretary as soon as possible.—J. A. BRATTON, Honorary Secretary, Shrewsbury.

SOUTHERN BRANCH.—The next meeting of the South Wilts District will be held at the Bath Arms, Warminster, on Wednesday, April 9th, at 3.45. Papers will be read by Mr. Manning, Mr. Hinton, and Mr. Willcox. Dinner at 5.45; tickets (not to include wine or ale) 5s.; gentlemen intending to be present to give notice to H. G. MANNING, Honorary Secretary, Laverstock, Salisbury.

NORTH WALES BRANCH.—The intermediate meeting will be held at Rhyl, on Tuesday, April 15th, 1890. Members having any papers to read are requested to notify the Honorary Secretary before April 5th.—W. JONES MORRIS, Honorary Secretary, Portmadoc.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held at the Town Hall, Walthamstow, on Thursday, April 17th, at 8.45 p.m. A paper will be read by Dr. Angel Money on Nocturnal Restlessness in Children. Visitors will be welcomed.—J. W. HUNT, Honorary Secretary, 101, Queen's Road, Dalston, N.E.

OXFORD AND DISTRICT BRANCH.—The next meeting of the Branch will be held on Friday, April 25th, at 3.15 p.m. in the Radcliffe Infirmary, Oxford. Gentlemen are requested to send to the Honorary Secretary, W. LEWIS MORGAN, 42, Broad Street, Oxford, notice of any papers to be read, or cases shown, on or before April 14th.

NORTH OF IRELAND BRANCH.—A general meeting of this Branch will be held in the Board Room of the Belfast Royal Hospital on Thursday, April 17th, at 4 p.m. Gentlemen who wish to read papers, show patients, exhibit specimens, etc., will kindly communicate as early as convenient with the Honorary Secretary, JOHN A. BYERS, M.D., Lower Crescent, Belfast.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE fifth meeting of the session was held at the Hackney Town Hall on Thursday, March 20th. The chair was taken by Dr. ADAMS, Vice-President of the District.

Paper.—After the usual formal business, Dr. DE HAVILLAND HALL read a paper on the Causes and Treatment of Anthrax. A discussion followed, in which Drs. ADAMS, WISE, GREENWOOD, SHADWELL, and HUNT took part.

Votes of Thanks.—The usual votes of thanks brought the meeting to a close.

PRESENTATIONS.—Mr. J. J. Weaver, M.R.C.S., L.S.A., has been presented by the nurses of the Southport Infirmary with a handsome marble clock, on the occasion of his severing his connection, as house-surgeon, with the Infirmary.—Mr. W. G. Bower, L.R.C.P., M.R.C.S., has been the recipient of a cut glass claret jug, silver mounted and elegantly chased, from the ladies' branch of the St. John Ambulance Association at Leyland.