was the value of breathing machines for acute emergencies such as drowning, poisoning, and electric shock. There was a risk that they might do more harm than good if people interrupted the well-tried manual methods of artificial respiration to fiddle about with unfamiliar apparatus.

On the proposal of Professor G. R. MURRAY a vote of thanks was accorded to Professor Witts.

BUCCAL CANCER

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland on January 13, with Mr. R. ATKINSON STONEY in the chair, Dr. OLIVER CHANCE and Mr. F. J. MORRIN presented a report on carcinoma in the buccal cavity, based on a series of cases treated in St. Anne's Hospital.

Dr. Chance pointed out that buccal cancer was relatively uncommon, roughly 200 cases being seen each year in Eire. From 1930 to 1936 he had kept notes of 539 cases, the bulk of which were very advanced when first seen. He analysed this series from the point of view of topography, age, sex, duration of symptoms, and presence or absence of enlarged glands; predisposing causes were discussed. In treating the primary growth, radiation therapy, usually by the implantation of radium needles, was preferred. Surgery was indicated in a limited number of cases. The treatment of the glandular field was regarded as primarily a surgical problem, and when surgery was out of the question irradiation, particularly with deep *x* rays, had its uses. As intensive irradiation was a form of treatment comparable in its severity with major surgery, considerable responsibility rested on the radiologist. He had to decide whether to push treatment to the limit in the hope of effecting a cure or whether to aim at palliation.

Late Results

Dr. Chance described the methods of keeping notes and of following up cases used at St. Anne's Hospital, and considered the results obtained in the 178 cases which had been treated more than five years. These showed an absolute survival rate of 13.5 per cent., a crude survival rate of 15.7 per cent., and a net survival rate of 18.8 per cent. The results obtained in different sites were compared and the relative results of irradiation and of surgery were discussed. In conclusion Dr. Chance stressed the importance of early diagnosis and early treatment. This was illustrated by the fact that when glands were not palpable 27.3 per cent. of patients survived five years, whereas when they were palpable though operable only 6.45 per cent. survived.

Mr. Morrin said that in the treatment of the primary ulcer he was satisfied that radium therapy had displaced surgery, and that in future the treatment throughout would probably be by radium; at the moment, however, block dissection of the glandular areas gave the best prognosis. He discussed the indications for dissection of the cervical glandular areas. The operation he performed was either a bilateral submaxillary dissection or a unilateral complete dissection from the clavicle to the base of the skull, depending upon whether the upper deep cervical glands were enlarged or not. He described the operation fully and mentioned the immediate results in fifty recent cases.

General Discussion

Mr. R. A. STONEY said that Kocher's submandibular excision simply opened up a large space for infection, though soon after the war he had found that by the use of bipp it was possible to get a more or less primary closure of the neck wound. With regard to modern methods, an important question was the order of treatment. Was it better to irradiate the primary growth first, or should one first remove the cervical glands? Dr. R. R. WOODS argued that the problem of buccal carcinoma was "primarily a problem of secondaries"; it was therefore desirable that both the public and the medical profession should be educated as to the absolute necessity for early treatment. Mr. J. H. COOLICAN also stressed the need for early diagnosis, and said that attendance at radium centres should be made compulsory for all students. In his experience gland dissections produced a very small degree of shock, largely due to the use of intratracheal anaesthesia. Mr. T. A. BOUCHIER-HAYES pointed out that at present students did not often see these cases until an advanced stage; they should be given the opportunity of seeing early cases. Mr. A. E. CLERY said he himself used avertin preceded by scopolamine and combined with local anaesthesia for block dissections of the neck. Dr. J. M. BRADY mentioned the value of contact therapy as compared with interstitial irradiation. Mr. J. C. FLOOD said that the reaction of carcinoma to any treatment depended upon the nature of the growth and its grade of malignancy. He thought it desirable that these growths should be graded before treatment was begun.

Local News

AUSTRALIA

The Australian Cancer Campaign

The ninth Australian Cancer Conference was held in Sydney last April, and its report has now reached us. It was decided to form a statistical committee to report to the next conference (in New Zealand in 1939) on the bearing of the Registrar-General's data relating to the aetiology of this disease, the definition of occupations in this connexion, and the question of including these occupations in the records of cancer clinics and in the certificates of deaths. The importance of intensifying the work of educating the public was stressed. Professor E. C. Dodds of the Middlesex Hospital, London, who was the guest of the Commonwealth Government, delivered an address on medical research in cancer, which is printed in the report. He said that although advances in the knowledge of the cancer process had come from researches by general pathologists, general biochemists, and physiologists, very few had been originated by persons who set out in the first instance to conduct cancer research, and that the most logical line to pursue now was the development of general research in the basic sciences, such as chemistry, physics, botany, physiology, biochemistry, and pathology, out of which would undoubtedly come the furtherance of the existing lines of cancer research as well as the emergence of new lines of investigation. Dr. Robert Fowler of the Austin Hospital, Victoria, discussed the research value of clinical records, with particular reference to the following up of cancerous patients. He emphasized the importance of securing periodical statistical surveys, especially when several centres were contributing to a central registry, as in the case of the annual Cancer Conference conducted by the Commonwealth Department of Health. Dr. M. J. Holmes, senior medical officer of the Commonwealth Department of Health, gave figures indicating that in Queensland, South Australia, and Tasmania there had been considerable rises in the death rate in 1936 compared with the previous year. The mortality in women exceeded that in men in all States except Queensland and Western Australia, where the death rate for females was far below that for males. The mortality from cancer for the Commonwealth as a whole had risen by 3 per 100,000 for both men and women over the figure for 1935, and the tendency of the curve was still upwards, especially in respect of cancer of the rectum in both sexes and cancer of the breast in women. Cancer cases treated by radium often showed very definite improvement of the local lesions treated, even when death subsequently ensued from metastatic growths. Dr. H. E. Downes of the Department of Health gave a detailed statistical compila-

tion regarding cancer of the uterus, in the course of which he mentioned that 27 per cent. of patients with carcinoma of the uterine body and 10.6 per cent. of those with cervical cancer were childless; only 6.6 per cent. of the latter, however, gave histories of cervical laceration. The best treatment for adenocarcinoma of the uterine body seemed to be radon or radium, and combined surgery and radiology. A similar conclusion seemed to be forthcoming with regard to cervical carcinoma treatment. Radiological methods had greatly improved in recent years. The report shows also what the various States are doing in the way of improving diagnosis and treatment; in a general discussion emphasis was laid on establishing the histological diagnosis of cases of cancer of the uterus before attempting to use the results of treatment comparatively as criteria of the various methods of treatment. In some centres metaplasia might be classed as malignancy, while in others it might be excluded from comparison. The value of the use of mechanical tabulating machines in compiling the data for clinical research was also discussed at length. In a public lecture Professor Dodds pointed out that various diseases which at one time were more terrifying and disastrous than cancer had already been almost entirely eradicated, and that a hopeful view might well be entertained about the achievement of similar success in conquering malignant disease.

ENGLAND AND WALES

Hunterian Society Dinner

The 211th anniversary of the birth of John Hunter was celebrated four days in advance by the Hunterian Society at a dinner at the May Fair Hotel on February 9, with Mr. Andrew McAllister, the president of the society, in the chair. The guests included the President of the Royal College of Surgeons (Mr. Hugh Lett) and of several sister medical societies. After "The Memory of John Hunter" had been toasted in silence, Sir Arthur MacNalty, Chief Medical Officer of the Ministry of Health, reminded the company that the Hunterian Society was founded in 1815 and had an honourable and distinguished record. John Hunter would have desired no better memorial, though possibly, had he been at that dinner, he would have been a little surprised to see ladies present, and might have remarked, as he did to Mrs. Hunter on a celebrated occasion, "I should have been informed of 'this kick-up.'" Hunter knew the value of a medical society. He helped to found more than one, including the Society for the Improvement of Medical and Chirurgical Knowledge, an exclusive body whose membership never exceeded twelve. Sir Arthur MacNalty went on to speak of the links between the private practitioner and State medicine. The history of State medicine afforded ample evidence to refute the allegation that the State sought to drag medical practitioners at its chariot wheels. On the contrary, it was the work of private practitioners, especially in epidemiology and the prevention of disease, which began in Hunter's century, and the influence of the medical profession on public opinion, its representations to the Government on the need for more comprehensive and effective health legislation, and the appreciation of successive Governments of the value and selflessness of the work done by the profession, which had brought about State control in public health. It was not generally realized how largely private practitioners of medicine entered into the public health services. They held posts in the services concerned with public assistance, maternity and child welfare, the schools, and the post office, and 16,000 private practitioners served under the national health insurance system. Yet with all the general practitioner's statutory duties to the State and his work in public health services he remained an individualist. It was desirable that he should do so, and that the opportunity of free choice of doctor and the confidential relationship between doctor and patient should remain undisturbed, as they had done under national health insurance. Mr. McAllister, in reply to the toast of the society's health, said that its roll of membership now contained 375 names—not quite a record, but very satisfactory. In mentioning that the society offered a gold medal for competition by general practitioners throughout the Empire, he said that the most recent award, for an essay on the management of inoperable malignant disease in general practice (for which nine essays had been received, two of them from Australia), had been gained by Dr. J. E. Outhwaite of Leeds, to whom he had pleasure in presenting it. Dr. K. McFadyean proposed the health of the Lord Mayor and Corporation of the City of London, and spoke of the long association of the society with the City of London and the Mansion House in particular. The toast of the guests and kindred societies was proposed by Sir Girling Ball, who revealed that in the early post-war period the Hunterian Society was far from being in a flourishing condition so far as attendances at meetings were concerned, but it had a considerable bank balance and the suggestion for the transfer of this to some other purpose brought forward a crowd of members who had not hitherto put in an appearance, with the result that the society was re-established and became more prosperous than ever. Two responses were made to the toast, by Mr. De la Bere, M.P., and Professor Fletcher Shaw, President of the Royal College of Obstetricians and Gynaecologists, who said it was interesting to remember that the Hunterian Society was founded less than a quarter of a century after Hunter's death, and must have had as its founders many men who had personal connexions with the great surgeon. Tradition was a great factor in the ordering of a profession, and one of the things they were trying to do in his College was to lay the foundations so well that in course of time future generations might think them worthy of being known as traditions.

London's Underground Water Supply

Records of over 1,000 London wells are described in a memoir of the Geological Survey of Great Britain on the water supply of the County of London from underground sources, issued by the Department of Scientific and Industrial Research (H.M. Stationery Office, 6s.). Over 500 of these wells are now disused, though formerly they contributed an important share of London's water. The remainder provide half a gallon of water per head per day out of the 37 gallons which the Metropolitan Water Board distributed to nearly eight million people of London, and in addition 4¼ gallons per head drawn by private owners, mainly for industrial purposes. In brief, 11½ per cent. of London County's water comes from underground sources. The memoir contains many interesting facts on the history of London's water.

In the earliest times water was drawn from the Thames and from the brooks which flowed through the growing town into the river. After 1236 water was supplied to the City in conduits from wells and springs outside the populated area, the first of these being a spring at Tyburn, on the site of what is now known as Stratford Place, Oxford Street Additional supplies were carried in conduits from Paddington in 1471, from Hackney to Aldgate in 1535, and from Hampstead in 1549. In 1582 a pump worked by water-wheels was erected on London Bridge, and forced water from the Thames to the City. The New River System was opened in 1613. At the beginning of the seventeenth century most of the streams through the town had become choked and partly buried, and few of the public wells, such as Holywell and Clerkenwell, remained. About this time the first deep wells were opened, while in the nineteenth century supplies began to be taken from the Thames and its tributaries outside London. These external surface sources now provide the main source of London's water. The early shallow wells

were sunk in the sands and gravel which form terraces rising from the Thames. Rain, or water draining from springs in the adjacent hills—for example, from the Bagshot sands at Hampstead and Highgate—filtered through these gravels until stopped by the impermeable London clay beneath, where the water collected. When the water from the gravels became polluted, wells were sunk through the London clay to what are called the Reading Beds and Thanet Sands. These formations contained water collected from the areas where they come to the surface outside London or derived from the chalk below them. Owing to these beds standing higher at their outcrops than in the remainder of the London Basin, and to the impermeable nature of the London clay, the water in the wells was under considerable pressure, and rose in truly artesian fashion. There are areas where the Reading and Thanet sands still contain water, but to the north they are now dry. To-day the chalk below the sands constitutes the most important water-bearing bed under London. The chalk forms something like an enormous reservoir, but not all its water can be easily removed. As in the sands above, the water level is falling, in several areas rapidly. This has rendered many of the shallower wells useless. The general lowering of the water level below London is due, the memoir states, to the fact that water is being extracted more rapidly than it can be replenished by the extremely slow flow that is alone possible under the existing subterranean conditions. Pumping and the competition for water have become increasingly intense within the inner zone of London. There are now twice as many wells in operation as in 1911. What happens at the outcrop of the chalk is of much less immediate importance, but a considerable number of new wells have been bored in this situation, and are removing large quantities of water which otherwise might travel towards the centre of London. Also land drainage over the surface of the outcrop has been rendered more effective, and the amount of water available for absorption in the underground strata reduced. In addition, extensive building over the areas outside London, where the chalk comes to the surface, has diminished the catchment, thus extending outwards the distance through which the water absorbed must travel to reach the centre of the London Basin. Finally, the amount of rain contributed to the chalk and sands has been seriously decreased during recent periods of drought. Many of the factors which have reduced the level of the water are likely to continue to exert an influence in preventing the recovery of the water levels, and perhaps will further depress them.

The British Hospitals Association and the Cancer Bill

The Minister of Health on February 7 received a deputation from the British Hospitals Association consisting of Sir Harold Pink, Major Woodhouse, Colonel Nathan, M.P., Mr. Arthur Griffiths, Mr. Jewesbury, and Mr. Orde (honorary secretary) to discuss the Cancer Bill, the Committee stage of which was taken in the House of Commons this week. The council of the association had embodied suggestions aimed at securing maximum effect from the Minister's proposals in a memorandum prepared after consultation with representatives of the Royal College of Physicians of London, the Royal College of Surgeons of England, and the British Medical Association. The Minister promised consideration of the points raised, and expressed his appreciation of the obvious desire of the Hospitals Association to help him to achieve the objects with which the Bill has been presented.

Resignation of Professor Golla

The London County Council announces the resignation, as from March 31, of Professor F. L. Golla, director of the central pathological laboratory at Maudsley Hospital and pathologist to the mental health services, on acceptance of another appointment at Bristol. This resignation involves also his vacation of the chair in the pathology of mental diseases of the University of London, tenable at Maudsley Hospital. Professor Golla has held his position at the laboratory since he succeeded the late Sir Frederick Mott. The report announcing his resignation states that the council loses the services of an officer of outstanding scientific merit, whose place it will not be easy to fill. The council is in consultation with the University of London as to the steps to be taken to fill the vacancy.

SCOTLAND

New Edinburgh Professor

The Curators of Patronage of the University of Edinburgh have appointed James Rögnvald Learmonth, who is at present regius professor of surgery in the University of Aberdeen, to be professor of surgery in the University of Edinburgh in succession to the late Sir David Wilkie. Professor Learmonth was born in 1895 in Kirkcudbrightshire, and received his early education at Gatehouse-of-Fleet, where his father was head master. Later he proceeded to Kilmarnock Academy and to Glasgow University, where he graduated M.B., Ch.B., with honours, in 1921. At the same time he gained the Brunton memorial prize as the most distinguished graduate in medicine of that year at Glasgow. In 1924 he was awarded a Rockefeller medical scholarship, and spent a year at the Mayo Clinic, Rochester, Minnesota. Returning to Scotland, he graduated Ch.M. at Glasgow in 1927 and the following year was elected a Fellow of the Royal College of Surgeons of Edinburgh. He again joined the surgical staff of the Mayo Clinic in 1928 as associate neurological surgeon, and was appointed an associate professor of neurologic surgery in the University of Minnesota. In 1932 he succeeded the late Sir John Marnoch as regius professor of surgery in the University of Aberdeen. Professor Learmonth has accomplished much scientific work as a surgeon, particularly in operative surgery of the sympathetic system and of the brain and spinal cord.

Glasgow Royal Infirmary

At the annual meeting of employee contributors to the Glasgow Royal Infirmary Mr. H. A. Kerr, one of the employees' representatives, said that the Glasgow Royal Infirmary never turned anyone away from its doors, but it was grossly overcrowded, the nurses were overworked, and the medical staff had a degree of responsibility which they should not be called upon to undertake. Income had shown an increase of £8,600, the increase in contributions from employees accounting for one-half of this. The total ordinary income had reached the record high figure of £106,000, but the ordinary expenditure had also reached a new high level—namely, £133,000. Mr. John M'Dougall said that the new rehabilitation centre would be ready for occupation by the summer, and would be one of the most up-to-date departments of its kind in the country. A new hospital was to be built in the county of Lanark, and it had been decided to form a co-ordinating committee between this and the voluntary hospitals, a scheme which might be usefully adopted in other counties of Scotland.

Health of Aberdeen School Children

The report by the medical officer of health on the medical inspection and treatment of school children, City of Aberdeen, for 1937–8 records a very distinct growth in the incidence of infectious diseases. Actual cases among school children reached the figure of 2,316, compared with 714 for the previous year; contacts 1,909, compared with 480. Outstanding features were an outbreak of measles, and also of whooping-cough, in the spring of 1938, while cases of dysentery, mostly of the Sonne type, occurred through almost the whole of the school year. Both measles and dysentery were generally of a mild type. Figures for the individual diseases show 983 cases of measles, 454 of scarlet fever, 397 of whooping-cough, 275 of diphtheria, and 133 of dysentery. There had been no cases of dysentery during the previous year. With regard to arrangements for medical treatment of

school children, it is stated that a reorganization of the aural clinic was carried out in the course of the year. Following the transference of the clinic to the out-patient department of the Royal Infirmary at Woolmanhill, the new forms of treatment now available were instituted—namely, zinc ionization for discharging ears, displacement treatment for infection of sinuses together with antral lavage, and diastolization for hypertrophic rhinitis. Results are stated to have been most promising. Chronic discharging ears provided the largest category of cases. The next step envisaged is the investigation of all cases of deafness among school children. For this purpose a gramophone audiometer has already been bought, and it is proposed to test all the various classes in the schools with this instrument.

Correspondence

Coal-gas Poisoning and its Prevention

SIR,—At the Annual Meeting of the British Medical Association at Portsmouth in 1923 I read a paper entitled "Carbon Monoxide a Predisposing Cause of Pulmonary Tuberculosis," which dealt with the inhalation of small quantities of carbon monoxide over a number of years.

Samples of air taken from bedrooms in which there was an escape of coal gas from leaky taps were analysed, and Mr. Wigginton, lecturer in the Department of Fuel Technology at Sheffield University, found 0.02 per cent. of carbon monoxide in a typical sample. In this case the occupier of the bedroom suffered from the symptoms usually produced by chronic poisoning from coal gas—namely, morning headache, anorexia, shortness of breath on exertion, and lassitude.

Coal gas when inhaled in large quantities causes an increasing number of deaths yearly, chiefly suicidal. According to the returns by the Registrar-General for the year 1937 coal gas caused the deaths of 1,961 persons, and of this number 1,757 were cases of suicide. Fifty years ago coal gas was produced chiefly for illumination purposes and contained usually a much smaller percentage of CO than modern gas, which is required for heating stoves, etc. Modern gas may contain as much as 28 per cent. carbon monoxide, and is therefore very deadly in its effects when inhaled. Professor Bone and Dr. Himus (*Coal and its Constituents*—Longmans) have found that whereas nearly all the deleterious impurities have been removed from modern coal gas, there remain some sulphur compounds—carbon disulphide, carbon oxysulphide, and thiophene compounds—and carbon monoxide.

In the future the public will demand a gas free from these impurities. In 1906 Dr. Charles Carpenter, in conjunction with Dr. E. V. Evans and the late Dr. D. Gibb, by using a nickel catalyst at 450° C., successfully effected the decomposition of carbon disulphide into sulphuretted hydrogen and carbon; the former is then easily removed in the usual manner. The South Metropolitan Gas Company have used this process, on a commercial scale, at the very slight cost of a third of a penny per 1,000 cubic feet. Once sulphur is wholly eliminated it would be a comparatively easy matter to convert most of the carbon monoxide present in gas into methane by a nickel-catalytic process, making use of the hydrogen already present in gas, at moderate temperatures and pressures—thus, $CO + 3H_2 = CH_4 + H_2O$. The last outstanding reproach of gas—namely, its poisonous constituent—would thus be removed.—I am, etc.,

Birmingham, Feb. 7. E. B. HAZLETON, M.D., M.Ch.

Lead Poisoning

SIR,—My object in writing is to contradict the statement made by Dr. R. E. Lane (February 11, p. 298) that "three stippled cells per 100 leucocytes are not abnormal." As this strikes directly at the value of the blood-film diagnosis of plumbism the point should be definitely cleared up. The late Professor G. A. Buckmaster specially investigated the matter, and wrote (*Morphology of Normal and Pathological Blood*, 1906, p. 14): "In my own preparations of normal blood, though particularly searched for this special purpose, I have never seen basophil granulations in a red disk." O. C. Gruner (*Biology of the Blood Cells*, 1913, p. 79) said "such cells are not met with in health." Professor Pappenheim (*Clinical Examination of the Blood*, 1914, p. 16) said (Dr. Donaldson's translation): "In every case it is evidence of pathological regeneration." Finally, Dr. C. E. Simon (*Clinical Diagnosis*, ninth edition, p. 24) wrote: "The question whether they [basophilic granules] ever occur in the blood of normal individuals I now reluctantly answer in the affirmative: this, however, is unquestionably very rare." Why should this great American teacher answer reluctantly? Obviously because he was not quite sure of his ground. Within recent years we know that in some manufacturing areas about one or two men per thousand are on the border of plumbism.

Nevertheless, Dr. Lane's statement is true when the blood film is stained by the crude methylene-blue process commonly used by factory surgeons. Such "stains for stippling" are not sufficiently selective for clinical use. He himself admits (*Report on Ethyl Petrol*, 1930, p. 88) that the small and fine granules are of less significance than the large. My contention is that routine stains for blood films show only these larger granules, and unfortunately sometimes miss even these, or stain only the largest, so that few are found. This was probably the case in the blood examinations on July 16 and August 5 (January 28, p. 151), and naturally explains the scarcity of stipple cells and their abrupt disappearance. Yet I accept them as punctate basophilia in an approximately normal blood, and, therefore, as presumptive evidence of lead absorption. But, after all, what is punctate basophilia? It is the earliest sign of pathological regeneration, but not the only one. It depends on cytoplasmic changes, but there are also nuclear changes which result in Cabot rings, etc. Industrialists have adopted punctate basophilia as their index of pathological regeneration, and I do not blame them for sticking to their stain. But they must not impose their standard on the clinician. The unreliable routine stains for blood films forced me to adopt a method (*Journal*, August 9, 1930, p. 213) which I have found reliable for many years, not only for the above changes but for all manner of leucocytes—in short, a general stain.—I am, etc.,

London, W.13, Feb. 11. ROBERT CRAIK, M.D.

Vitamin D in Dietetics

SIR,—As one who has taken a special interest in "fresh" food, and in the origin and nature of vitamins and their undoubted value in practical medicine, perhaps you will allow me to refer to two recent letters on the above subject which have followed the publication in your issue of January 7 (p. 14) of the interesting paper by Miss Jessie Lindsay and Professor V. H. Mottram of King's College. The points to which I desire to draw attention are embodied in the following extracts from the letters:

Central London Throat, Nose, and Ear Hospital. He then worked with Charles Heath until the outbreak of war. Invalided home with malaria, he was appointed an assessor under the Ministry of Pensions, and then acquired a specialist practice in Tunbridge Wells, in which he continued until his death. He was aural surgeon to the Kent and Sussex Hospital, the Kent County Schools in Tunbridge Wells, and consulting aural surgeon to the Edenbridge and Crowborough Cottage Hospitals. Dr. Walker Wood belonged to the British Medical Association for twenty years, and was held in high esteem by his colleagues as a skilful consultant and a good friend. He is survived by his widow.

Medico-Legal

"CONSOLIDATED WORLD RESEARCH" IN THE COUNTY COURT

Many doctors have doubtless received advertisements of an encyclopaedia published by a concern which calls itself "The Consolidated World Research Society," and some of them are known to have parted with money for this publication. Dr. Archibald Penman recently sued the society in the Westminster County Court, claiming the return of £19 10s. paid for the society's encyclopaedia on the ground of fraudulent misrepresentation by a Mr. Hamer, the agent of the society. He said in evidence that he had received a letter from the head office appropriately dated April 1. Mr. Hamer had made an appointment by telephone, and at the interview had given him to understand that the encyclopaedia was a medical one. Mr. Hamer had produced a list of persons, saying that they answered questions in connexion with the research facilities, which the subscriber obtained in addition to the encyclopaedia. Dr. Penman knew two of the names, and he was told that these persons answered research questions, and was shown what was alleged to be an answer given by an eminent consultant. He said the encyclopaedia contained only general knowledge tests for juveniles. The defendants in their reply said that the list was not one of consultants, but of persons who would be willing to give satisfactory references. They produced two lists, and suggested that any person who looked at them would realize that the encyclopaedia was not a medical encyclopaedia, as many of the names were not those of doctors. List A contained many non-medical names, but List B contained only medical and dental names, with one exception—that of a doctor of divinity. The judge, Sir Mordaunt Snagge, said in his judgment that the onus of proof rested on a person who alleged fraud, and proof must be definitely established to the satisfaction of the court. He referred to the principle laid down by Lord Halsbury in Aaron's Reefs, Ltd., *v.* Twiss (1896, A.C. 273):

"If by a number of statements you intentionally give a false impression and induce a person to act upon it, it is none the less false although, if one takes each statement by itself, there may be a difficulty in showing that any specific statement is untrue."

He said that, taking the matter as a whole, he was of opinion that Mr. Hamer made material representations, which were intentionally untrue to his knowledge, for the purpose of inducing Dr. Penman to enter into the contract. He therefore rescinded the contract and ordered repayment to Dr. Penman of his money.

Perhaps this case will serve as a warning to doctors who would not have been deterred by previous remarks which we have made from time to time about this concern. No doubt several have preferred to suffer in silence. Dr. Penman was assisted by the London and Counties Medical Protection Society, and doctors should remember that such assistance is part of the service which medical defence associations give their members.

MEDICAL "PRIVILEGE" REFUSED

At a recent examination before the Bradford magistrates[1] the police charged a 20-year-old woman with using an instrument on herself with intent to procure abortion. They summoned Dr. Violet Glover, who had attended the woman, to give evidence against her. On entering the witness-box Dr. Glover said: "I wish to protest against giving evidence in this case. What I have to tell was communicated to me in confidence by the defendant in my professional capacity as a doctor, and I will refuse to give evidence unless I am forced to do so." The stipendiary magistrate, Dr. F. J. O. Coddington, asked the prosecuting solicitor whether it was necessary for Dr. Glover to give evidence. He allowed her to stand down until the other witnesses had been heard, and then said that if the prosecution insisted on her giving evidence he was bound to order her to do so. He had great sympathy with any doctor or priest who protested against revealing publicly some confession made to him in his professional capacity, and he would be very glad to see the law altered accordingly. The solicitor remarked that it would be a difficult position if every doctor refused to give evidence or had the right to refuse to give evidence, and called Dr. Glover. She gave evidence, and the accused was committed for trial at Leeds Assizes.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

Sir Henry Dale, M.D., F.R.S., Director of the National Institute for Medical Research, has been elected an honorary Fellow of Trinity College.

During the month of January titles of the degrees of M.B., B.Chir. were conferred by diploma on Mrs. E. F. Graham Kerr, J. M. E. Hannaford, and M. Lloyd (Newnham College), and of M.B. on Mrs. D. K. Souper (Newnham College).

At a Congregation on February 3 the following medical degrees were conferred:

M.B., B.CHIR.—B. E. Miles, J. S. Phillpotts, H. St.C. C. Addis, D. O. Walker.

Scholarships for Medical Research

With the object of encouraging original medical research the Court of the Grocers Company will offer one scholarship each year tenable for two years of the value of £300 for the first year and of £450 for the second year. Candidates must be British subjects under 35 years of age. Applications must be made by the middle of April. Forms of application may be obtained from the clerk of the Company, Grocers' Hall, Princes Street, London, E.C.2. Further particulars may be seen at the University Registry, Cambridge.

UNIVERSITY OF LONDON

Three lectures on "The Submicroscopic Morphology of Protoplasm and its Derivatives" will be given by Professor A. Frey-Wyssling of Zürich at University College, Gower Street, W.C., on March 6, 7, and 9, at 5.15 p.m. The lectures, which will be illustrated with lantern slides, are addressed to students of the University and to others interested in the subject. Admission is free, without ticket.

UNIVERSITY OF SHEFFIELD

R. S. Kennedy, M.B., Ch.B., D.P.M., has been appointed Lecturer in Mental Diseases, and Professor J. Rennie has been appointed Representative of the University at the Congress of the Royal Sanitary Institute at Scarborough, July 3 to 8.

A special degree Congregation will be held on March 20 at 12 noon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council was held on February 9 with the President, Mr. Hugh Lett, in the chair.

Dr. Royal Whitman of New York was admitted to the Honorary Fellowship of the College.

It was reported that at the recent Primary Examination for the Fellowship held in Cairo ten out of twenty-seven candidates were approved.

[1] *Times*, February 4.

It was reported that the Lister Memorial Lecture will be delivered by Professor René Leriche of Strasbourg at the College on April 5.

Diplomas

A Diploma of Fellowship was granted to Herbert Cecil Perera Gunewardene of Ceylon and St. Bartholomew's Hospital.

Diplomas of Membership were granted to F. T. Birkinshaw, H. Harris, J. J. H. Lowe, and to the 205 candidates whose names were given in the report of the meeting of the Royal College of Physicians of London in the *Journal* of February 4 (*p.* 249); as were the names of the fifteen candidates who have been granted Diplomas in Public Health; the names of the three candidates who have been granted Diplomas in Tropical Medicine and Hygiene; and the names of the forty-eight candidates who have been granted Diplomas in Anaesthetics, all jointly with the Royal College of Physicians of London.

Diplomas in Medical Radiology were granted, jointly with the Royal College of Physicians of London, to G. A. Amm, M. Israelski, F. H. Kemp, and J. French.

The Council accepted with grateful thanks the offer of the *British Journal of Surgery* to secure for the College Library, by exchange of the journal, those special journals and periodicals dealing with surgery which are necessary for a complete collection of current surgical periodical literature.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

The title of the Milroy Lectures to be given by Dr. Donald Stewart is "Industrial Incapacity and Modern Medicine," and not as printed in this column on February 11 (p. 310).

Medical Notes in Parliament

The House of Commons this week passed the Cancer Bill through committee and also discussed education, unemployment, and other subjects. The Czecho-Slovakia (Financial Assistance) Bill and the Prevention of Frauds (Investments) Bill were advanced.

A Bill to amend the Official Secrets Act, 1920, was introduced in the House of Lords by the Government.

Blood Tests in Affiliation Cases

In the House of Lords on February 8 Lord MERTHYR moved the second reading of the Bastardy (Blood Tests) Bill. This Bill was introduced into the House on November 23 last, and was the subject of a leader in the *British Medical Journal* of December 10 (p. 1210). A memorandum on the Bill was published in the *Supplement* of that same issue at page 362.

Lord MERTHYR said that in 1937 4,267 paternity orders were made and Justices had few more anxious or difficult tasks than making or refusing an order in bastardy. Forty years ago nothing was known about any difference in the grouping of human blood, but since then many discoveries had been made. Blood could now be divided into twelve groups or types, each distinct from the other. It had been found that these groups were present in the blood of a human being from before birth until after death. In a very small number of cases the group was not apparent in a child until it was some months of age, but it was apparent sooner or later, and the worst that could occur would be that the test would have to be postponed for a short time. The use of the blood test was limited. By its means they could never show that a man was the father of a child, but they could show, in a certain number of cases—roughly from 10 to 15 per cent.—that the alleged father was not, in fact, the father. It had been found from results all over the world that out of every three accused men who were in fact innocent of being fathers, one could be exonerated by this method. In Germany the test had been employed in the courts in 5,000 cases before 1928, and in at least twelve other countries it was employed legally. In at least two American States it was used legally, and in many others legislation was pending. This Bill would bring these tests to the courts of law in England and Wales.

Clause 1 said that the court may, and at the request of either party shall, order a test to be made of all three parties to the case. If in any case the mother desired a test she should have it. Only in a small proportion of cases would it suffice to test only the father and the child. Therefore it was proposed that the test should uniformly take place in respect of all three. If the mother should refuse, the court might dismiss the application. Clause 3, Subsection 3, enabled a certificate of a pathologist to be accepted as evidence in a court of law. There was a precedent for this in the Food and Drugs Act, 1928, which had justified itself. To-day if a blood test was undertaken it was necessary to call as a witness the pathologist who actually made the test. He might have to travel the length of the land to give evidence lasting about five minutes. Clause 5 dealt with rules which, it was suggested, should be laid down for the conduct of the tests and for the taking of the actual samples. Clause 6 provided that these tests should be made by "approved" registered medical practitioners. A possible amendment might be made to this Bill in committee applying it not only to courts of summary jurisdiction but to all courts.

SOME INVESTIGATIONS OF BLOOD TESTS

Viscount DAWSON OF PENN said there was hardly any subject in medicine which had been so thoroughly studied as this of the qualities of the blood. He explained the theory of the blood groups, and said that tests made by fifty independent observers spread over the civilized world on a total of 8,717 families with 19,089 children had proved two propositions. The first was that neither quality A nor quality B could appear in any child unless that quality was present in one or both of the parents. To that proposition there was no exception whatever. The second proposition was that the combination of AB parents with O children or of O parents with AB children was impossible. In a more recent study 10,092 mothers were taken and 12,943 children. In that second investigation no single exception was found. How often in the scientific world did they get such a definite conclusion supported by numbers of different observers? A theoretical computation was made of the frequency with which a quality that appeared in the parent reappeared in the child under the Mendelian law. The computed results were nearly identical with the actual observations he had just mentioned.

It must be admitted that this test was of limited application. It could only prove the negative. As to the performance of the test, it was the simplest thing done in everyday practice. It was becoming increasingly the practice to take specimens of blood from people who were not well. It merely consisted in pricking with the needle the finger or ear and taking one drop of blood. Any doctor could take that drop as part of his everyday routine. There was no teaching centre or hospital of the first importance in this country without a pathologist who was able to perform the test. He commended the Bill to the support of the House.

Lord Raglan and Lord Atkin supported the Bill.

LORD CHANCELLOR'S DOUBTS

Lord MAUGHAM said the Government would not attempt to prevent the second reading being carried. There were between 6,000 and 7,000 of these cases in the courts throughout the country every year of which 1,000 roughly were dismissed. It was difficult to tell in how many cases there was really such doubt that the test suggested would be of real value. Would the safeguards for which Lord Dawson vouched from his experience always be taken, and was there not a chance that in a certain proportion of cases there would be mistakes made? He (the Lord Chancellor) had the greater reason for thinking that that was not an impossible view inasmuch as the eminent pathologists who had been advising the Home Office had suggested that, when the tests taken by one of the approved persons under the Bill had resulted in the fact that the blood of the alleged father was such that he could not have been the father, then it was suggested that there should be a further sample of the three bloods taken and sent to another institute to obtain an independent check. A mere suggestion of this sort by eminent pathologists was enough to lead one to the conclusion that the first test by the approved person might be of a doubtful character. And if