

In addition to the large quantity distributed by the public supply undertakings, even larger quantities were drawn direct from rivers, springs, and wells for agricultural and industrial requirements. Beet sugar factories, many textile works, paper works, and other factories, for example, each used several million gallons of water a day in manufacturing processes. Railway companies and most large works required large quantities for raising steam, and enormous volumes were used in condensers and coolers. The largest electricity generating stations each circulated 400 to 500 million gallons of water a day through condensers. Water for many industrial processes need not be of the same high chemical and bacteriological quality as drinking water. But water of high quality was necessary in the manufacture of foods and beverages, in the treatment of textiles, in raising steam, and in some other processes. The water distributed by many public supply undertakings, though suitable for domestic purposes, was in fact often unsuitable for certain manufacturing processes owing to its hardness or to the presence of substances detrimental to the quality of the products manufactured.

Problems of Pure Water Supply

Though it was generally recognized, Dr. Parker continued, that the purity of the water supplies was a major factor in public health, the average member of the community scarcely realized the problems of water supply and the precautions necessary in protecting gathering grounds and wells and in the treatment of water to ensure that the supplies distributed were absolutely safe for drinking and other domestic purposes. Public interest in the subject seemed to be aroused only at times of emergency, when there was a shortage of water during abnormally dry periods, or when there were outbreaks of water-borne disease such as occurred in 1932 at Malton and Denby Dale in Yorkshire, in 1936 near Sutton in Surrey, and recently in Croydon. Available sources of uncontaminated water, both surface and underground, were gradually being allocated. In some areas water had been withdrawn from underground sources for many years at a rate greater than that at which it had been replaced by natural percolation; there had in consequence been a marked lowering of the level of underground water in these areas. Many of the surface supplies were obtained from the upper reaches of rivers where there was little or no contamination by polluting discharges. Considerable quantities—several hundred million gallons a day—however, were drawn by public supply undertakings from the lower reaches of rivers below points of discharge of sewage and trade effluents of various kinds. These undertakings had to incur great expense and shoulder considerable responsibility in purifying the water before distribution.

With the provision of more houses with modern conveniences, and with developments in industry, there was certain to be an appreciable increase in the next few decades in the quantity of water of good quality required in this country. How this increase in demand was to be met would have to be seriously considered. It could be met provided that determined efforts were made to prevent undue pollution of the resources. Unfortunately many rivers and streams in Britain were badly polluted by sewage and trade effluents. In some areas discharges of waste liquids from factories had so polluted the water supplies most easily accessible to adjacent factories that they were quite unfit for the purposes for which they are required. Pollution not only caused difficulty in the provision of adequate supplies of water of the quality required for domestic, agricultural, and industrial purposes; it also adversely affected the fisheries, the recreations of the people, and general amenities. Dr. Parker then discussed some of the difficulties in preventing or reducing pollution by industrial effluents. With regard to the waste waters from the various branches of the milk industry, the work of the Water Pollution Research Board

had proved that the quantities of polluting matter carried away in the wastes could be greatly reduced by simple and inexpensive modifications in the operations within the factories to reduce losses of milk, whey, buttermilk, and other products and by-products. If adequate drainage trays were installed at all the depots and factories in this country the total saving of milk would be of the order of three million gallons per annum, or £150,000 per annum with milk at an average wholesale price for all purposes of one shilling a gallon. The investigation had also demonstrated on a large scale that the waste waters necessarily discharged could be efficiently purified by biological oxidation by methods similar in principle to those in operation at sewage disposal works.

Local News

ENGLAND AND WALES

Hospital Accommodation in the West Riding

Some time ago the West Riding County Council set up a composite committee to consider the question of hospital accommodation in the county administrative area. This committee visited hospitals in Yorkshire and other parts of England and on the Continent, and has consulted with representatives of the medical and administrative staffs of voluntary hospitals in the West Riding. In the committee's opinion 3,178 additional beds are needed for the county as a whole to provide accommodation on the scale of four general hospital beds per 1,000 of population. To meet the requirements of the several areas new hospital accommodation containing 1,250 beds in general hospitals should be provided, and the county council should co-operate with the governing bodies of hospitals for specialized forms of treatment. The Public Health and Housing Committee of the West Riding County Council, having considered the reports from the special composite committee, has adopted these recommendations, and recommends further that one hospital should be built in South Yorkshire between Doncaster and Barnsley, and another to the north of Leeds and Bradford to serve the north-west of the West Riding. A full account of these and other recommendations, and of proposals for further maternity accommodation, appeared in the *Yorkshire Post* of January 18.

London Manchester Medical Society

The first annual dinner of the London Manchester Medical Society was held at the May Fair Hotel on January 20 under the chairmanship of Mr. H. Pomfret Kilner and was attended by some fifty Manchester medical graduates at present in London. The principal guests were Sir Alfred Webb-Johnson and Professor E. D. Telford, and their health was proposed by Professor L. J. Witts, who brought them both within his own sphere by describing them as surgeons—men of blood and iron. To this toast Sir Alfred Webb-Johnson replied in a reminiscent vein. "The M.R.I." was proposed by Dr. Julius Burnford, who recalled the time when the Manchester Royal Infirmary was situated in Piccadilly and had as a resident surgical officer Professor A. H. Burgess. Professor Telford, in replying to the toast, said that the Infirmary continued to make progress and now had an active plastic surgery unit, which owed its initiation to the good offices of Mr. Kilner, a department of thoracic surgery, and a newly constituted unit for asthma research. An outward and visible sign of the advances which had been made was the "Plaster Palace," which was being reared up, so it was said, in order to accommodate Mr. Harry Platt's records. The toast of the chairman was proposed by Mr. E. B. Osborn, the only layman present.

In a brief reply, Mr. Kilner outlined the objects of this newly formed society, which, he said, owed its successful conception, very properly, to Mr. Albert Davis. Manchester medical graduates who are interested in the society are asked to communicate with Mr. Davis (93, Harley Street, W.1).

Medical Society of Individual Psychology

The annual dinner of the Medical Society of Individual Psychology was held at the Florence Restaurant, London, on January 13. The chair was taken by Dr. H. C. Squires and the principal speakers were Dr. R. D. Gillespie of Guy's Hospital and Dr. Henry Harris. The latter took the place of Professor John MacMurray, who was absent through illness. Dr. Gillespie mentioned the relationship of the general practitioner to the psychiatrist and to psychotherapy, and stressed the importance of the Medical Society of Individual Psychology in that it existed for the purpose of helping general practitioners in the understanding of psychological problems. He went on to describe what appeared to the practitioner to be the diversity of testimony in the different schools of psychotherapy. But underneath this apparent disunity he believed there was the unity of truth. The various schools of thought had passed through states of aggressiveness, but he believed there were now to be observed signs of a *rapprochement*. He thought that the great need of the present time was for a council to make decisions upon the questions of nomenclature. Dr. Henry Harris spoke on the necessity of the general practitioner being sufficiently educated in psychotherapy to enable him to treat the early or minor forms of psychological illness just as he treated the minor forms of physical specialties—for example, ear diseases. If the general practitioner did not treat these minor psychological complaints, who could? It would not affect the consultant's livelihood; indeed, in the end he would benefit by the spread of knowledge. So would the patient and the general practitioner. The latter would come to treat his patient as a whole and not think separately of his body or of his mind. By means of the pamphlets it published from time to time the society had been instrumental in encouraging interest in the provinces and had many provincial doctors as members. Another thing it encouraged was tolerance, as members were not expected personally to profess the Adlerian doctrines. Tolerance should be expected from psychiatrists, who ought to have a wider view of life than others. Dr. Squires, in reply, emphasized the value of the society to the general practitioner. Not only were the meetings addressed by eminent psychiatrists of all schools of thought but the members were encouraged to bring their own difficulties in treating patients for discussion. The members of such a group could be of great help to each other. Dr. Cuthbert Dukes proposed the toast to "The Guests," and a message was sent to the president, Sir Walter Langdon-Brown, who was unable to be present, and to Professor MacMurray.

Health Campaign Meeting at Oxford

Speaking at Oxford on behalf of the Health Campaign, Mr. Kenneth Lindsay, Parliamentary Secretary to the Board of Education, said it was most satisfactory to know that Oxford was now linked in a most permanent and practical way with research and public health, largely owing to the Nuffield bequests. The Oxford and District Joint Hospital Board, with representation of local authorities and general practitioners and cottage hospitals, was one of the most progressive bodies in the country. As a city Oxford now had good facilities and equipment, and in many ways a good health record. He hoped, therefore, that out of Oxford, by bringing together clinical experience and laboratory knowledge, there might emerge a fresh outlook on the good life. But in contrast our universities, not excluding Oxford, were lamentably behind in physical education. A most interesting report entitled

Student Health had recently been issued by the National Union of Students.¹ After reviewing the meagre provision in our universities, the report suggests that all students should undergo systematic medical examination and that each university should have a director of physical education and also either a provident scheme, as at Oxford, or a compulsory levy for all students. It did not follow because a student had climbed successfully the educational ladder that he was a fit person at the top and could view the prospects with exhilaration. Mr. Lindsay concluded that as long as we spent £183 million a year on treatment of sickness and forfeited £100 million in lost time in industry we should need health campaigns to remind citizens of the ancient platitude that prevention was still better than cure. Mr. Ben Smith, M.P., after quoting the improvement in the vital statistics, pointed out that the country was spending to-day on sickness, its prevention, detection, and cure, upwards of £52,000,000 per annum; and that despite the great effort being made to improve the housing conditions there were still too many slums and far too much overcrowding. The best index to the success of the campaign for a healthier Britain would be to see the cost of detection, prevention, and cure of sickness falling rapidly as the health of the people improved.

INDIA

Child Welfare in Bombay

The number of live births registered in Bombay during 1936 exceeded by 5,971 the number of deaths in that city. This was equivalent to 5.1 per 1,000 population calculated on the census returns of 1931; there has been no such excess of births over deaths since 1866, the year in which birth-recording was instituted. The number of live births exceeded the figure for the previous year by 1,477 and the average of the last ten years by 9,856. The number of infant deaths registered was 8,946, compared with 8,455 in 1935; this represented a rise of 1,348 over the annual average for the decennium 1926-35. The commonest causes of deaths in infants remain diseases of the respiratory system, with infantile debility and premature birth, the last two conditions still being prominent in the first four weeks of life, while respiratory diseases exact their toll during the remaining eleven months of infancy. The campaign for the prevention of infantile mortality is going ahead, and in his report for 1935 as executive health officer of the Bombay Municipality Dr. J. S. Nerurker comments on the great value of the work done by the ten municipal nurses who visit the poorer homes and popularize elementary knowledge of the principles of hygiene and the prevention of disease, advising prospective mothers to take advantage of the maternity homes, and in some cases supplying bedding for their confinement at home and extra milk and bread during the first seven days of the puerperium. Sick persons are also guided by them to the municipal dispensaries. The proportion of births which were wholly unattended was 4.5 per cent. among the cases where inquiries were made, and that of confinements attended by unskilled women 17.9, these figures comparing respectively with 3.2 and 13.2 in 1935. On the other hand the proportion of childbirths attended by qualified midwives other than the municipal midwives rose to 3.3, compared with 2.8 in 1935, and the percentage of children born in hospital showed an increase of 9. The rate of maternal deaths is falling; it is noted that 70.9 per cent. of confinements took place in maternity homes, compared with 69.2 in 1935. The Infant Welfare Society has been actively engaged in home visits and milk distribution. Dr. Nerurker thinks that the daily milk consumption in Bombay (300,000 lb.) is still

¹ 3, Endsleigh Street, London, W.C.1.

inadequate, in view especially of the prevalence of vegetarianism; larger schemes of milk importation have, therefore, to be devised, with particular reference to the needs and purses of the poorer people. There was a notable increase in the number of primary vaccinations, the percentage of known successes being 92.46.

The Pasteur Institute, Coonoor

During the year 1936 the number of patients treated at the Pasteur Institute, Coonoor, Southern India, was 493. No deaths from hydrophobia occurred among those treated; this is the fourth time in the thirty years' history of the Institute that the mortality rate has been *nil*. The Paris fixed virus was in use throughout the year for the preparation of Semple's carbolized sheep vaccine, and was in its 978th passage at the close of the year. No complications following treatment were reported. During the thirty years 1907 to 1936 the total number of patients treated was 36,604, and the number of deaths among them was 390, a mortality figure of 1.06 per cent. The work at the out-patient centres increased during the year under review, supplies of antirabic vaccine for 15,302 courses being issued, the mortality rate being 0.16 per cent. Out of the nine deaths among the incompletely treated, seven patients developed hydrophobia during the treatment; the other two ran away before the course had been completed. All these patients were Asiatics. The total number of deaths was nineteen, nine of whom were incompletely treated and ten completely treated. Two deaths followed jackal bites, one a fox bite; the remaining sixteen were due to dog bites. The shortest incubation period noted in 1936 was eleven days (after a jackal bite) and the longest 257 days (after a dog bite). The treatment given at the out-centres was the same as that at the Institute. Two cases of paralysis were reported during the year, both at out-centres. Thirty-four new treatment centres were opened in the Madras Presidency in 1936. The total number of doses of antirabic vaccine issued by the Institute was 210,147, as compared with 192,269 in the previous year. Major Iyengar, I.M.S., director of the Coonoor Institute, reports that special propaganda work was conducted in connexion with the Mysore Dasara Exhibition, which was attended by 150,000 visitors from all parts of the State of Mysore, and a lecture on the war against rabies was broadcast. The general clinical and bacteriological work of the Institute also increased in 1936, and postgraduate training was given.

Typhoid Fever in Calcutta

Week-end messages from Calcutta indicate that the recent small outbreak of typhoid fever in that city has now spent itself. It is more than three weeks since the last case was notified to the public health authorities. Most of the patients had been staying at one of the large hotels in Calcutta, and twenty-one Europeans from this hotel were still in hospital on January 23. By what means the infection was spread has not yet been discovered.

Lord Aberdare, chairman of the National Fitness Council, will open on March 2 an exhibition entitled "Health, Sport, and Fitness," which has been organized by the Royal Institute of British Architects at 66, Portland Place, W.1. The exhibition will remain open until March 31, and will then go on a tour of the principal cities and towns of England. It will consist of some 700 photographic enlargements, models, diagrams, and plans, divided into two main sections entitled "Everyday Health" and "Planning Physical Fitness." The first will show how health is secured and improvement can be made by town planning, collective health services, the provision of clean food, and by healthy living and working conditions in home, school, office, and factory. The second section will show how the extensive planning requirements of the Government's national fitness campaign can be best and most economically met.

Correspondence

Radio-active Pads

SIR.—It is being claimed that the use of these pads is authorized as an additional benefit by the Ministry of Health. I have inquired of the Ministry and am informed that "subject to the production by the member of an Approved Society of the necessary certificate by a medical practitioner with respect to the appliance required, it would be in order for the society to make a payment towards the cost of the hire of the apparatus for use by the member. . . . The claim that the treatment is curing 90 per cent. of cases of rheumatism among railwaymen is based solely on the letters which the society has received from members who have used the apparatus. . . . The power of the society to contribute to the cost of an appliance which has been recommended by a practitioner has been contained in the Additional Benefits Scheme from the beginning, and a statement to that effect by the Department is in no sense a special permission in regard to a particular appliance, and is certainly not an expression of approval as to the medical value of the appliance."

I would point out that the cost of 0.01 mg. of radium at the current price (£4,000 per gramme) is eight shillings; a pad sold for ten guineas with this amount enclosed in it therefore shows a great profit, particularly if the mineral ore be used in place of radium bromide. An electrically heated pad can be bought for about thirty shillings, and is an efficient means of treating rheumatic pain. If an electrically heated pad containing 0.1 mg. of radium be sold for twenty guineas the profit must be immense.

Hewitt, Pillman-Williams, and Russ found no benefit of the clinical conditions other than subjective on treating a series of cases of chronic arthritis with weak doses of radon. There is no trustworthy evidence of any biological action of such. A relatively large dose applied continuously for six days had no effect on the excised beating auricles of the frog's heart, suitably protected from infection and perfused with serum (C. M. Scott, *Sp. Rep. Ser. Med. Res. Counc.*, No. 223, 1937).—I am, etc.,

January 24.

LEONARD HILL.

Treatment of Anterior Poliomyelitis

SIR.—The articles in the *Journal* of January 22 on the treatment of acute poliomyelitis by Mr. Norman M. Harry (p. 164) and Dr. F. H. Mills (p. 168) will be read with great interest by all practitioners, because it is evident from the progressive incidence of poliomyelitis in Britain, even though the cases are of a mild type, that an increasing burden is going to be put on the profession for their treatment. It is therefore most desirable, in order to avoid waste of time and money, that the profession should face the problem with an agreed policy. The British Medical Association, by its reports on fractures and on physical training, has directed public activity and funds in these fields in an admirable manner. It is to be hoped that a similar unanimity will be attained in regard to the treatment of poliomyelitis. This is not easy to achieve, for the distribution of the paralysis and its rate of recovery are so erratic in this disease that almost any measure applied to a case is likely at one time or another to get the credit for a "miraculous cure."

The claims made by Sister Elizabeth Kenny and her pupils, such as Dr. Mills, for the attainment by her technique of nearly perfect end-results in about 90 per cent. or more of cases make her non-operative, "non-splint" methods very attractive, at first sight, both to the laity

tion, and the Dean Orphanage, all educational institutions, and he was for many years a member of the Education Authority of Edinburgh. He had for long been one of the directors of the Royal Blind Asylum, and recently became chairman of the managers of the Thomas Burns Home for Blind Women. He was prominent in the activities of the Church of Scotland, having been for many years one of the leading members of St. Cuthbert's Kirk Session, Edinburgh, and from time to time a member of the General Assembly of the Church of Scotland. He was physically a man of great activity and a keen golfer, curler, and bowler.

Dr. Sym is survived by his widow and by several sons and daughters, of whom one daughter is an M.D. of Edinburgh University and a son is at present a student of medicine. A funeral service was held in St. Cuthbert's Church, Edinburgh, on January 22, which was attended by a large number of professional colleagues and of representatives from the various institutions with which Dr. Sym had been connected.

OTTO LEYTON, M.D., D.Sc., F.R.C.P.

Physician to the London Hospital

We announce with regret the sudden death on January 21 of Dr. Otto Leyton, physician to the London Hospital, who was well known for his clinical studies on diabetes. A letter from him on one aspect of insulin therapy appeared only last week in our correspondence columns.

Otto Fritz Frankau Grünbaum (he changed his name by deed poll to Leyton in 1915) was born on October 20, 1873, the younger son of Joseph Grünbaum, a naturalized British subject. His elder brother Albert, who died in 1921, had been professor of pathology in the University of Leeds. From the City of London School he went to Trinity College, Cambridge, and there gained first-class honours in Part I and Part II of the Natural Sciences Tripos. He continued his medical studies at St. George's Hospital, took the M.A.Cantab. in 1898, the B.Ch. in 1900, and proceeded M.D. in 1904, having in the meanwhile obtained the M.R.C.P. diploma and the D.Sc. degree of the University of London. He had been house-physician at the West London Hospital, and was for a time assistant physician at the Belgrave Hospital for Children and physician to out-patients at the City of London Hospital for Diseases of the Chest. For some years before election to the visiting medical staff of the London Hospital he worked as clinical pathologist at King's College Hospital. In 1909 he became a Fellow of the Royal College of Physicians. At the London Hospital Medical College he was lecturer on therapeutics, and he had examined in pharmacology for the University of London. He was honorary secretary of the Section of Pathology at the Annual Meeting of the British Medical Association in Belfast in 1909, and vice-president of the Section of Pharmacology and Therapeutics and Dietetics at the Aberdeen Meeting just before the outbreak of war in August, 1914. Two years later he published a paper on the examination of the soldier's heart, and a book embodying three lectures on the treatment of diabetes mellitus by alimentary rest, expounding the method known as the "Allen" treatment, of which a full abstract had appeared in the *British Medical Journal*; he also contributed chapters on the internal secreting glands to the fourth and fifth editions of Price's *Textbook of Medicine*.

Dr. Leyton leaves a widow, and one son and one daughter. The funeral took place at Medmenham, near Marlow, on January 25, and a memorial service was held in the chapel of the London Hospital at the same time.

Many members of the medical profession, particularly those interested in tropical hygiene, will have heard with regret of the death of Major ERNEST EDWARD AUSTEN, D.S.O., late Keeper of Entomology at the British Museum (Natural History). Austen joined the staff of the Museum in 1889 as an assistant in the Department of Zoology, from which the Department of Entomology was separated in 1913. He took part in the first expedition of the Liverpool School of Tropical Medicine to Sierra Leone and served on many committees investigating trypanosomiasis and the tsetse fly. He was a member of the committee of management of the Imperial Institute of Entomology and wrote valuable books and pamphlets on blood-sucking flies. Major Austen served at first during the war as a combatant officer, but was transferred later to the Egyptian Expeditionary Force for special duty on malaria and other insect-borne diseases.

Dr. ROBERT ENWRAIGHT LAUDER, formerly medical officer of health for Southampton, died at his home in Millbrook Road on January 19, at the age of 73. He took the qualifying diplomas of the Edinburgh Royal Colleges in 1886, the D.P.H. in 1890, the F.R.C.S.Ed. in 1893, and the M.D. of Durham University in 1906. After serving as a medical officer for the South African Field Force in the early part of the South African War Dr. Lauder was appointed in 1901 medical officer of health under the county borough of Southampton and the Port Sanitary Authority; he was also medical superintendent of the borough and port fever hospitals, medical officer to the Education Authority, and medical inspector under the Aliens Act. During the great war he was medical officer in charge of the University War Hospital at Southampton, and officer commanding the 7th Sanitary Company, R.A.M.C.(T.). Dr. Lauder joined the British Medical Association in 1903, was chairman of the Southampton Division in 1922, and again from 1928 to 1930, in which year he resigned his appointments in the Public Health Service. He was responsible for twenty-nine consecutive annual reports on the health of the borough and port of Southampton.

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on January 20 the following medical degrees were conferred:

D.M.—A. M. G. Campbell.

B.M.—T. Gadian, C. W. Rayne-Davis, I. B. Pirie, C. M. F. Walters.

UNIVERSITY OF CAMBRIDGE

At a congregation held on January 22 the following medical degrees were conferred:

M.B., B.CHR.—*S. R. F. Whittaker, *J. B. Bunting, *D. O. Wharton, *B. D. Whitworth, J. K. Denham, E. H. L. Wigram, J. Sutcliffe, A. S. Bookless, K. S. Mullard, D. A. P. Anderson, J. L. Griffith, C. F. Barwell, S. C. Truelove, A. L. Fawdry, A. P. Kitchin, J. L. W. Ball, G. A. Burfitt, W. D. Doey, S. W. G. Hargrove, G. J. G. King, L. B. Paling, L. C. de R. Epps, H. S. Kellett, P. H. Lenton, G. E. Adkins, R. T. Johnson, S. A. H. Lesser, G. H. Wooler.

M.B.—F. B. Turner.

* By proxy.

UNIVERSITY OF LONDON

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following candidates have been approved at the examination indicated:

ACADEMIC POSTGRADUATE DIPLOMA IN PUBLIC HEALTH.—*Part I:* S. Amarasinghe, P. H. R. Anderson, S. N. Chelliah, F. C. L. B. B. Crawford, P. A. Crowley, L. D. P. Dharmaratne, C. W. Dixon, R. Y. Dunlop, A. C. Gee, F. W. Gilbert, M. G. Hyder, O. G. Lloyd, A. L. St. A. McClosky, G. A. Macgregor, I. M. Macgregor, M. Markow, J. S. Mianett, F. Noronha, P. X. O'Dwyer, S. S. Pillai, A. I. Ross, A. F. H. Stewart, Emily S. O. Thomson, S. C. Thurai-Rajah, M. Watkins, Helen E. Wight.