

Dr. Parsons said that one of the greatest needs of the Poor Law Infirmary in connexion with the treatment of venereal diseases was the provision of facilities for bacteriological examinations and the carrying out of the Wassermann test.

REPORTS OF PROGRESS IN THE PREVENTION OF TUBERCULOSIS BY VARIOUS AGENCIES.

THE efforts made by county and borough councils, and by many voluntary agencies, to cope with the spread of tuberculosis are gradually bearing fruit in the shape of annual reports. After only one year's working it is not to be expected that anything approaching finality of system has been reached, and in many instances it is obvious that many modifications will be necessary before a uniform method can be arrived at. A common ground of agreement, however, is manifest in the general adoption of the tuberculosis dispensary as the organizing centre or clearing-house through which every notified case of tuberculosis should be required to pass before being allotted to the appropriate line of treatment for the individual.

Hertfordshire.

The conditions established in the county of Hertford are detailed in a first annual report by Dr. H. Hyslop Thomson. In that county the work is divided into four sections, each provided with a branch dispensary working in association with the Central County Dispensary, and supplemented by eight visiting stations, whereby all parts of the county are rendered comparatively accessible. A county sanatorium is to be opened, but pending its completion patients are received into certain other institutions at 30s. a week. Domiciliary treatment is aided by grants of necessaries, and sometimes by the provision of outdoor shelters and other adjuncts to open-air life by local nursing committees, with financial aid from the Insurance Committee and County Council. An interesting point appears in the statistical statement with regard to the relative frequency of a tuberculous family history as compared with "contact" liability; 47.6 per cent. of the cases showed some family tendency, whereas only 25.4 per cent. could be classed as "contacts."

Plymouth.

The report of the tuberculosis officer for the borough of Plymouth deals more especially with preventive measures, and contains much interesting information as to the relative amount of accommodation that will have to be provided after careful study of the conditions ruling in Plymouth as compared with some other large towns. A wide extension of sanatorium treatment is advocated, and the still more important question of the segregation of advanced and infective cases is met by a proposal to add largely to the existing isolation hospitals. This problem of isolation of the really dangerous patient is too apt to be shirked by public authorities, but it has to be faced. Until all advanced cases are brought under effective control as regards excretions, it would seem folly to spend large sums in trying to cure a disease which is being continually disseminated by patients in all ranks of society. The steady advance of the system of domiciliary visits by accredited visitors, as advocated and practised at Plymouth, would seem to be the most direct way of reaching the really dangerous factor. The sympathetic helper, who is enabled to supply the extra nourishment so often needed, can at the same time supply the spitting-cup and the knowledge required to prevent the spread of infection in the household.

The close inspection of school children to detect possible indications of tuberculous infection is strongly advocated. The work takes time, but by division of the children into batches and the devotion of half a day at stated intervals, the inspection can be satisfactorily carried out.

The estimated cost of working a tuberculosis dispensary varies considerably, and sums ranging from £1,000 to £1,500 have been mentioned as likely to be required, but at the present stage of the movement all such figures must be regarded as conjectural. Even the proportion of tuberculous cases to population does not appear to follow any uniform scale, and is very variously estimated.

Poplar.

In the crowded borough of Poplar, the work, although nominally carried on at a borough dispensary, is entirely dependent upon voluntary contributions. Subject to no very hard and fast rules, the organization is able to work with a free hand and to deal with each case in accordance with its requirements. After a period of work amongst insured and uninsured alike, the Committee decided to confine its investigations to the cases of uninsured only, on the ground that the means provided by the Insurance Committee for the insured were altogether insufficient. There would appear to be plenty of work to be done, as evidenced by the fact that more than 8,000 visits have been made in the course of the year by patients, while the medical officers have investigated 160 homes. Prevention rather than attempts at cure would seem to be the chief aim, and home visitation by trained nurses and others serve to keep the medical officers informed of the household conditions and to spread information in the family circle. Assistance is given by the London Hospital, which undertakes the care of children needing hospital treatment, and by the borough authorities, who undertake the examination of sputum. Tuberculin has been used in many cases, and the report indicates that some lasting results have been achieved.

SCIENCE NOTES.

WE are all aware that an x -ray bulb is a very inefficient thing, but a numerical estimate of this inefficiency has not hitherto been forthcoming. Some conclusions on this subject were brought before a meeting of the Roentgen Society on April 7th in a paper by Mr. R. T. Beatty, D.Sc., of Belfast, who has been conducting some investigations upon the amount of energy which is transferred when cathode rays fall upon an anticathode and x rays emerge. Dr. Beatty pointed out that the subject was of interest both from the purely scientific and from the practical point of view, because if it were known completely what energy transformations took place when the cathode-ray impact caused the generation of x rays some further information might become available as to the structure of the atom, and it would be possible also to construct more efficient x -ray bulbs. For cathode rays of slow speeds, the pace of the cathode stream being determined by the voltage of the exciting current, he found that a copper was three times as efficient a radiator as an aluminium anticathode. If, however, the cathode ray were speeded up, a new phenomenon presented itself in the shape of the secondary or fluorescent radiation characteristic of the copper, and at this stage the copper anticathode would be found to give off a still more powerful stream of radiation as compared with the aluminium. By placing screens of a certain thickness of aluminium in the path of the beam from the copper anticathode, all this extra or fluorescent radiation could be cut off, and in that event the curve representing the radiating power of the copper returned to its former value in relation to the aluminium. Thus when all the fluorescent radiation was sifted out, the relative efficiency of the copper to the aluminium was again as three to one. The fluorescent and characteristic effect due to the copper was superposed, and in no way modified the general radiation. This fluorescent radiation was in bulk produced by the cathode rays directly; a small residue, about one-fifth of the total amount, was produced indirectly. Mr. Beatty described in detail the experiments he had made in order to measure the amount of energy transferred at the cathode-ray impact. He directed the ionization into a long ionization cylinder filled with a gas—methyl-iodide—which absorbed x rays very quickly, and by ingenious devices he succeeded in balancing the cathode current against the ionization current. The result proved that, apart from the fluorescent effect, x rays varied as the fourth power of the speed of the cathode rays, and it looked as if the fluorescent radiation from copper also varied in the same relation to the cathode rays of accelerated speed; that is, the speed at and above the critical point at which the fluorescent radiation begins. With a platinum anticathode the proportion of cathode rays which appeared in the form of Roentgen radiation was something like 0.5 per cent. of the cathode energy. For every thousand units of energy in the cathode sheaf, five units emerged as x rays, and with

only five parts in a thousand utilized in the x-ray radiations; the rest must go to produce ions in the metal itself.

LITERARY NOTES.

THE Association of German Medical Men and Scientists has established at its central office, Nürnberg Strasse, 48, Leipzig, a bureau for the collection of information as to meetings of German and Austrian medical and scientific societies. From this bureau particulars as to the place and date of meeting of such societies every year may be procured free of charge.

Among the further volumes in Messrs. Jack's "People's Books" series are the following: *Bacteriology*, by W. E. Carnegie Dickson, M.D.; *Robert Louis Stevenson*, by Rosaline Masson; *Canada*, by Ford Fairford; and *Tolstoy*, by L. Winstanley, M.A.

Mr. Henry Kimpton announces the publication of a work on the *Eye, Nose, Throat, and Ear*, a manual for students and practitioners, by James Forrest, M.B., Ch.B. Edin.; and of the seventh edition of *Consumption: A Curable and Preventable Disease*, by Lawrence F. Flick, M.D., Philadelphia.

The first volume of a series of biographies of men who have enlarged the boundaries of medicine and natural science, published under the auspices of the Italian Society for the critical study of the history of medical and natural sciences, has recently appeared. It is a life of Bartolomeo Eustachi, by G. Bilancioni (Istituto Micrografico Italiano, Florence). The author describes the environment in which the great anatomist worked, and the state of scientific knowledge at the time.

Preparations are being made in Belgium for the celebration of the four-hundredth anniversary of the birth of Andreas Vesalius, who was born at Brussels on the last day of the year 1514. Dr. Tricot-Royer, of Antwerp, delivered a lecture on the great reformer of anatomy at the Sorbonne, under the auspices of the Society called Les Amis de l'Université de Paris, on April 2nd. The lecturer said he hoped, with the support of the Belgian Government, to have a monument to the memory of Vesalius erected on the island of Zante, where he was shipwrecked on his way back from the Holy Land, whither he had gone on a pilgrimage. He is said to have died there of starvation and exposure.

At a recent meeting of the Anthropological Society of Washington, Dr. Daniel Folkmar presented some results of the first census of European races in the United States. In that census are given for the first time figures relating to the ethnic composition of the "foreign white stock" of the United States in so far as that is indicated by the mother tongue of immigrants. One of the most interesting facts disclosed in the report is the great numerical preponderance which is still held by the mother tongues of north-western Europe, as a whole, notwithstanding the high rank numerically which has been gained by a few individual mother tongues from eastern and southern Europe—especially the Italian, Polish, and Yiddish. These three now stand third, fourth, and fifth in rank. The English and Celtic mother tongues are by all odds the ones most largely represented in the foreign white stock of the United States. The number, 10,037,420, is considerably greater than that of the German mother tongue, which latter contributes more than one-fourth (27.3 per cent.) of the total foreign white stock of the United States, as reported in 1910. Italian, Polish and Yiddish come next in rank, but none of them numbers as much as one-fourth of the German. To these three mother tongues, intermediate in rank but considerable in numbers, may be added the Swedish, French and Norwegian, all belonging to north-western Europe, except a portion of the French. No other mother tongue than the eight thus far enumerated furnishes as much as 2 per cent. of the total of the foreign white stock of the United States, or numbers as much as 1,000,000. The eight major mother-tongue stocks already named account for 87.5 per cent. of the total foreign white stock. Taking as 100 per cent. the total white population of the United States in 1910, numbering 81,731,957, the so-called "native stock" constitutes 60.5 per cent. and the three great linguistic

families of foreign stock from north-western Europe constitute 27.1 per cent., making a total of 87.6 per cent. The elements from southern and eastern Europe constitute, therefore, less than 13 per cent. of the total. Of this the two principal Latin mother tongues—the French and the Italian—contribute less than 5 per cent., and the two principal Slavic mother tongues—the Polish and the Bohemian—and the Hebrew, taken together, contribute also less than 5 per cent., leaving to all the remaining mother tongues another 5 per cent. or less of the total. Of the total foreign white stock of the United States 32,243,382, there are 8,817,271 persons who are of German stock when counted according to mother tongue, but a trifle under 8,500,000 (8,495,142) of German stock when counted by their country of origin, Germany.

In the March number of the *St. Thomas's Hospital Gazette* Dr. John S. Fairbairn gives an interesting account of Smellie and the obstetrics of his time. In the seventeenth century the midwife had practically the sole command of the lying-in room; a surgeon was called in only when extensive mutilations of the child were necessary for delivery. Smellie was born, probably, at Lanark, though the honour has been claimed for Lesmahagow, in 1697. He began to practise there at the age of 23, and nineteen years later he moved to London for the purpose of acquiring greater knowledge. Disappointed with London he went to Paris, to work under Grégoire, who was considered the best teacher of the day. With him, too, Smellie was disappointed. He returned to London and began to practise, as what was then elegantly called a man-midwife, in 1738 or 1739. From his writings it can be gathered that in 1741 he had begun to teach. He used "dummies," which are said by a contemporary writer to have been composed of "real human bones arm'd with fine smooth leather and stuff'd with an agreeable soft substance."

All the parts seem very natural both to look and touch; the Contents of the Abdomen are beautifully contriv'd, the Intestines look very natural, as likewise the Kidneys and large vessels.

The *Uterus Externum* and *Internum* [! a man-midwife might surely be supposed to know something of gender] are made to contract and dilate according to the Difficulty intended for the Delivery. The Children for these Machines are likewise excellently Contriv'd, they having all the Motions of the Joints. Their Craniums are so formed as to give way to any force exerted and are so elastick that the Pressure is no sooner taken off than they return to their natural Equalities.

Smellie was not content to demonstrate on "dummies"; he worked out a scheme by which poor women could be attended in their homes gratuitously by him and his pupils, on whom, in addition to the tuition fees, he levied tribute for the support of the patients. Smellie was highly esteemed as a teacher, but he is said to have been coarse in his person and unpleasing in his manners. He was made the subject of the frank criticism of that rude age, especially on the part of the midwives, who looked upon him as a trespasser on their preserves. Douglas speaks of him as "having monstrous hands, fit only to hold horses by the nose whilst they are shod by the farrier," and describes him as "a raw-boned, large-handed man, no more fit for the business than a ploughman is for a dancing master." The women were, as was to be expected, more spiteful. Smellie had suggested that the man-midwife should wear "a commodious dress—namely, a loose washing nightgown, which he may have in readiness when he is going to deliver," with loose sleeves that could easily be rolled up, adding that "where he is obliged to alter his position a sheet ought to be tucked around him or an apron put on." One of the advantages claimed for this covering was that it enabled the man-midwife to conceal about his person instruments which might frighten the patient. These preparations gave Mrs. Nihell, one of the jealous midwives, the opportunity of gracefully referring to "the delicate fist of a great horse godmother of a he midwife, however softened his figure might be by his pocket nightgown being of flowered calicot or his cap of office tied with pink or silver ribbon." Smellie numbered many of the distinguished men of the time among his friends, notably Richard Mead and Tobias Smollett. He left London in 1759 owing to a breakdown in health, and retired to Lanark, where he spent the last four years of his life writing up the records of his cases. He died in 1763 at the age of 66.