

influence of sex was manifest in several respects. During the fourteen years, 1873-86, 2,021 males died, and 1,663 females; or 13 males to about 10½ females. It must, however, be remembered that in South Australia the men outnumbered the women in the living population. With 2,021 deaths amongst the males actually, had the population of the two sexes been equal, there would have been only 1,838 male deaths. This, however, while it reduced the disparity, did not abolish it, but left a proportion of about 13 male deaths to 12 females. An investigation of the English returns gave an identical result. In 1876, the mortality in the male sex was higher by rather less than the one-thirteenth part. It was plain, then, that in that colony men were more liable to the disease than women, but not more so than they were in the mother country. Sex also influenced the average age of death from the complaint. Thus, amongst males it was 33 years 11 months, and amongst females 29 years 7½ months; or disease occurred 4 years 3½ months earlier in the woman. In England the average age of those who died during the year 1883 of phthisis, as calculated from the Forty-Ninth Annual Report, p. 140, was for males 36 years 3½ months, and for females 30 years 11 months; so that, in South Australia, males died nearly 2½ years younger than at home, and females nearly a year and a half earlier. This fact, at first sight, seemed disadvantageous to the colony; but it was only seemingly so, inasmuch as the living population of England were, on an average, four years or more older than that in the colony. As regards the influence of age, the maximum mortality was reached between 25 and 30; from that point the mortality fell, through each succeeding 5 years, down to extreme old age, for even this was not exempt from phthisis. The deaths from phthisis among females reached their maximum at an earlier age than among males; this was probably owing to their more rapid attainment of maturity. The liability of women gradually increased up to 20 years of age, remained the same till they were 30, and after that period gradually, continuously, and somewhat rapidly diminished. Why was there this marked dissimilarity between the two sexes in their liability to consumption during the latter half of life? Was it the strain and drain of the reproductive process in its varied forms of menstruation, gestation, and lactation, which sowed the seeds of the disease in early mature female life, and gradually ceasing, earlier or later in different women, gave them, after about 40 years of age, a special immunity while, on the other hand, in the case of men, there was no such severe tax upon the constitution, and therefore no such sudden rise of the death-rate?

## REVIEWS AND NOTICES.

**PUBLIC HEALTH REPORTS.** By JOHN SIMON, C.B., F.R.S., etc. Edited by EDWARD SEATON, M.D.Lond., F.R.C.P., etc. Two vols., 8vo., pp. 554 and 618, with two portraits. Vol. II. London: The Sanitary Institute and J. and A. Churchill. 1887.

THE second volume of the *Public Health Reports* of Sir J. SIMON includes those addressed by him to the Presidents of the Privy Council and Local Government Board between the year 1859 and his retirement from office in 1876. With less of the historical character they will be found of even more practical value those which preceded them, and their usefulness increases with the greater efficiency of the inspectorate, the inauguration of scientific research, and the improvement of the Public Health Acts.

Continuing his inquiries into the distribution of disease, he points out the existence of diarrhoeal districts in which the mortality from this disease alone reaches the enormous rates of from 300 to 663 (!) per 100,000 of the population, though in other extensive areas it does not exceed ten to thirty, and in some is practically unknown in the epidemic form. From the reports of Dr. Greenhow he finds that the causes of this excessive waste of life are invariably the tainting of the air with organic, mostly excremental, emanations, the drinking of polluted water, and, among infants, improper feeding, consequent on the employment of the mothers in factories or field labour. Infant mortality from all causes varied in different localities from 1,300 to 9,000, and a like inequality was exhibited in the proportion of deaths from pulmonary diseases and from phthisis, the former among men only ranging from 220 to 1,440, and the latter among men and women from 229 to 558. From the data supplied by Dr. Greenhow he lays down the general dictum that "in proportion as the male and female populations are severally attracted to indoor branches of industry, in such proportion, other things being equal, their respective death-rates by lung diseases are increased," and proceeds to pass in

review the conditions under which the mining industries, textile manufactures, pottery and metal works, straw plaiting, glove and lace making, printing, tailoring, etc., are conducted; defective ventilation, inhalation of dust, insufficient food, long hours of work, and generally depressing influences being the chief factors in producing these diseases. He dwells here and elsewhere at some length on the fearful sacrifice of infant life in manufacturing towns, even where there is no such evidence as Dr. Hunter adduces for suspecting deliberate murder by a process of slow starvation and drugging. Shorter and special reports are devoted to certain trades involving the use of phosphorus, mercury, arsenic and lead; to the cotton famine, and to two questions then almost for the first time attracting public attention, namely, the spread of diphtheria and the consumption of the flesh or milk of animals suffering from disease. As regards the white lead manufacture as at present conducted, we are convinced, from personal observation, that he greatly underestimates the dangers inseparable from the process, and the inefficacy of all conceivable precautions.

The reports on the housing of agricultural labourers and miners, as well as on the temporary accommodation provided for navvies and other classes of roving labourers are of great, and we fear still present, interest, depicting a state of things rarely to be met with now in the worst quarters of our towns. In his opinion the provisions of the poor-law concerning settlement and chargeability have tended, and are still further tending, to the depopulation of rural parishes, and driving the labourers to seek accommodation in the already overcrowded villages, sometimes several miles from their work, while the short leases on which coal pits are often worked prevents the lessee, and the exorbitant ground rents demanded by the mine-owner in his capacity of landowner deters independent operators, from erecting decent dwellings in the neighbourhood of the mines.

In discussing the general question of overcrowding in town or country Sir John makes several suggestions of the highest importance: for example, that the sole test should be the proportion of cubic space to the number of occupants, without regard to age, or to whether they belong to one or more families, since the meaning of the word family is too elastic and difficult of definition; a certain discretion being allowed to the magistrates in cases where a palpable hardship would be inflicted by the rigid enforcement of the law; that all tenement houses in which the rents paid do not exceed six shillings a week should be brought under the operation of the Acts, and that the space required for each inmate should be at least 500 cubic feet.

His report on Hospital Hygiene is a masterly exposition of the principles on which estimates of the relative healthiness of hospitals, and the success attending the treatment within their walls, especially as regards the results of surgical operations, must be based, as well as of the difficulties attending all such comparisons. With merciless logic he exposes the fallacies into which the advocates of hospitals in the country—especially Miss Florence Nightingale—have been betrayed by neglecting the great differences in the class of cases, the modes of admission, the average length of stay of each patient in the hospital, the different methods of calculating the death-rate, and, above all things, "the magnitude of illness" in any institution. He shows the worthlessness of all comparisons hitherto attempted, and that the highest total mortality may be compatible with the highest usefulness of an institution, and even with the greatest success in treatment, ably vindicating the reputation of our splendid metropolitan hospitals.

Another paper equally characteristic of the man is that on the State regulation of prostitution, and the proposed extension of the Contagious Diseases Acts to the civil population. For what Dr. Arnold called "moral earnestness," for a clear and comprehensive grasp of the subject in all its bearings, immediate and remote, we have met nothing approaching it. Eloquently yet dispassionately, calmly yet earnestly, he argues the question, and unhesitatingly decides against any such legislation; and, though deeply sympathising with voluntary efforts for the reclamation and the cure of the unhappy women, he justly refuses to recognise any moral significance in such alleged improvement as consists merely in a less riotous and obtrusive pursuit of their horrid trade, and a more orderly conduct of the haunts of vice.

Among minor reports are those on the outbreaks of typhoid at Tereing, Guildford, etc., and the well-known observations of Dr. Buchanan on the reduction of phthisis in consequence of the drying of the soil by new sewerage works, though it is well to bear in mind that sewers can only act as subsoil drains when they are more or less pervious, and so far defective as sewers; but the essential diversity of functions between drains and sewers, both of which are necessary, was not at that time fully apprehended. Sir John was a firm

believer in the importance of Pettenkofer's researches on the influence of fluctuations of the ground water in the distribution, both in space and time, of cholera, typhoid, and other diseases.

The reports on the cholera epidemic of 1886, on the appearance of yellow fever at St. Nazaire, Swansea, etc., on relapsing fever and cerebro-spinal meningitis, though useful for reference, are chiefly of historical interest; but that on Filth Diseases and their Prevention, taken with the article on Contagion (from Quain's *Dictionary of Medicine*), which, but for the author's retirement, would have appeared in his reports for the year following, is a lucid and comprehensive statement of the principles on which sanitary authorities must act in all that relates to sewerage, drainage, scavenging, house inspection, and water supply on the one hand, and in the prevention and repression of infectious and infective disease on the other.

The number of deaths which might be prevented by reasonable vigilance he estimates at 125,000, and, while in a seventh of the registration districts of England and Wales the deaths of infants in their first year do not exceed 8 to 12 per cent., the "Herodian" mortality of 20 to 30 or more in others brings the average up to 18 out of every 100 born. Directly or indirectly, all these may be referred to one or both of the two causes, filth and contagion. We may remark in passing that he does not entertain the chemical treatment of sewage even as a possible alternative, but distinctly states that agricultural irrigation and intermittent filtration are the only two practical methods of rendering its discharge into rivers permissible consistently with the public health.

He refers from time to time to the auxiliary scientific investigations conducted under the auspices of the Government by Drs. Thudichum, Klein, Sanderson, and Creighton, on the chemistry of the nervous system, on the contagion of various infectious diseases of man and cattle, on tubercle, and on cancer. At that period, however, they had not led to any very decisive results, and subsequent researches have considerably modified many of the somewhat hasty conclusions of Klein; but the brilliant discovery of Koch, with the aid of new methods of culture and procedure, have since crowned with complete success the tentative experiments of Villemin and Sanderson, and in the hands of Volkmann and others have completely revolutionised the surgical treatment of a number of diseases, the tubercular nature of several of which had not previously been recognised.

The work concludes with the thoughtful and eloquent address delivered by Sir John Simon as President of the Public Health Section of the International Medical Congress in 1881, when he took as his subject Experiment as a Basis of Preventive Medicine, an address which those who heard it will not easily forget.

#### FAIRLIE CLARK'S MANUAL OF THE PRACTICE OF SURGERY.

Fourth Edition, Revised, and partly Rewritten. By ANDREW CLARK, F.R.C.S. London: Henry Renshaw. 1887.

This useful little manual has been carefully revised by Mr. ANDREW CLARK, who has made a few alterations in the arrangement of the work, adding several subjects which were omitted from former editions, and bringing up the manual to the experience of the present time. It is essentially a practical little book, and a useful reminder of the various methods of treatment, and cannot pretend to be a student's manual from which to learn surgery and its important collateral sciences successfully, as students are too apt to think. As with all such works, everything is too condensed for clear explanation to the mind which has not already learned the subjects from a fuller text-book and clinical teaching, but for the student preparing for examination or for the practitioner wishing to refresh his memory in the course of his professional work, such a book is often of real value. There is a large collection of formulæ at the end of the book which will prove useful. The illustrations are mostly old ones found in former editions, and are crude and generally inartistic. The type is clear, and the headings and important points well emphasized by the use of different kinds of type.

Even in so small and condensed a work we cannot but think that a fuller account, or at all events a fuller reference to some of the more recent advances in surgery, might have been given. The accounts of litholapaxy, operations for tumours of the bladder, the treatment of diseases of the kidney, the moot points about syphilis, are all very cursorily treated, and brain-surgery as we understand it now is not alluded to. These should, we think, be included in a modern manual of surgery, however small. The work, however, is a considerable improvement upon previous editions, and will probably be as popular as any such small and condensed manual can be, and the reader may trust the information contained in it to be correct, and the advice sound.

#### INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY AT VIENNA.

THE International Health Congress will be opened by the Crown Prince Rudolph, Protector of the Congress, on September 26th, at 11 A.M., in the name of the Emperor. On the evening of the 28th, the Crown Prince Rudolph will, also in the name of the Emperor, receive the members of the Congress in the "Hofburg." The number of members of the Congress is now 1,710, and more than a hundred representatives of the foreign governments are expected to take part in the transactions of the Congress. The programme of entertainments is very varied and extensive. Among numerous other festivities, there will be a festival representation in the opera of the Imperial Court, and excursions to the Kahlenberg, Semmering, Budapest, Abbazia, etc. The reports on the various subjects to be discussed at the Congress are already in the hands of the members.

Among the papers announced are the following: Dr. A. Gärtner, Professor in the University of Jena: On the Appreciation of the Hygienic Quality of Drinking Water and Household Water considered from the present State of Science. Dr. Ferdinandus Hueppe, Teacher of Hygiene at Wiesbaden: Connection of the Water Supply with the Origin and Spread of Infectious Diseases, and the Consequences to be drawn from this with Reference to Hygiene. Dr. S. König, Director and Professor in the School of Agriculture and Chemistry at Münster: The Present State of the Purification of Sewage and the Utilisation of the Human Excrements, with Special Reference to the Cleanliness of Rivers, etc. Dr. E. Frankland, on the Purification of Sewage and the Utilisation of Human Excrements, with Special Reference to the Prevention of River Pollution, and on the Legislation connected therewith. M. Alfred Durand-Claye, Engineer and Professor of Paris: What Experiences have hitherto been made with the systems Waring and Shone, and what Practical Connection have they, from the Hygienic, Technical and Financial Point of View, with the uniform system of Sewage? Paul Brouardel and Gabriel Pouchet, Paris: On the International Measures to be taken against the Adulteration of Food and Beverage. Dr. Angèle Caro, of Madrid: Measures to be taken against the Adulteration of Food. Dr. Ferrière, of Geneva: Report concerning Switzerland. Dr. A. Hilger, Professor at Erlangen, and Dr. Hamel Roos, of Amsterdam: International Measures to be taken against the Adulteration of Food and Drink. Director P. O. Flood, of Christiania: Suppression of Inebriety. M. H. Goemann Borgesius, of the Hague: Suppression of Drunkenness in the Netherlands. M. A. Laumers, of Bremen: Suppression of Drunkenness. Dr. Florian Kratschmer, of Vienna: Measures to be taken against Secret Remedies. Dr. G. Treille, Professor at the School of Naval Medicine, etc., at Paris: On the Acclimatisation of Europeans in Hot Countries. Dr. Hans Buchner, of Munich: On the Dispositions of the various Human Races respecting the different Infectious Substances. Professor Dr. Hermann Cohn, of Breslau: Medical Supervision of Schools with the Object of Preventing the Spread of Myopia. Dr. Henry Napias, of France: School Hygiene in France. The Teaching of Hygiene, by Professor Dr. Fodor, of Buda-Pesth; Professor Dr. Hyac Kuborn, Seraing-Liége; Dr. Alexandre Layet, of Bordeaux; and Director Dr. Gauster, of Vienna. Mr. Frederick Hayes Whymer, of London: A Sketch of the Law relating to Factories and Workshops in the United Kingdom of Great Britain and Ireland. On the Necessity of Isolation of Hospitals, by Professor Dr. Felix, of Bucharest; Dr. Sörensen, of Copenhagen; and Director Dr. Böhm, of Vienna. The Process of Disinfection, by Professor Dr. Richard, of Paris; Dr. Loeffler, of Berlin; and Professor Dr. Dobrosławin, of St. Petersburg. Drs. W. P. Ruysch and J. M. Mouton (Hague), Dr. Pallin (Paris), and Dr. W. H. Corfield, on National and International Measures for Dealing with Infected Rags. On the Sanitation of Ships, by Dr. Meinhardt Schmidt, of Ritzbüttel (Cuxhaven); Professor D. Bambas, of Athens; Dr. Hans Linhart, officer in the Imperial Royal Navy of Austria; and Professor Dr. Treille, of Paris. International Regulations as to Epidemics, by M. Sonderegger, of St. Gallen; Dr. Pallin, of Paris; and Mr. Shirley F. Murphy, of London. Experiments made in Different Countries on Preventive Inoculations in cases of Anthrax, Erysipelas of Swine, Sheep-pox etc., by Dr. Th. Chamberland, Director of M. Pasteur's Laboratory, Paris; Dr. Lydtn, of Carlsruhe; Professor Hermann Putz, sen., of Halle; Dr. Gustavus Guster, of Zurich; and Professor Dr. Csokor, of Vienna. Professor von Suraschek, of Innsbruck: Influence of the Professions on Morbidity and Mortality. Regimentsarzt Dr. Paul Mydracz: On the Bodily Defects of the Recruits in Austria-Hungary.