

treated with tannic acid jelly containing one part in 5,000 of merthiolate. Impairment of liver function was least in the group treated with gentian violet and silver nitrate, although the burns in this group were much larger. In a large series of children treated with silver nitrate, there was no case of the acute toxæmia which may occur after tannic acid treatment. Impairment of liver function was commonest and most severe in the group treated with tannic acid. The authors think that this agrees with clinical experience. They suggest that the merthiolate in the tannic acid jelly used may have been partly responsible for the impairment of liver function.

Seven cases with injuries covering 5 per cent of the body surface were treated with sulphacetamide paste, and these occupied an intermediate position between the groups treated with tannic acid and gentian violet-silver nitrate. The authors point out that sulphonamide drugs may be rapidly absorbed from superficial burns and may also cause liver damage; they should be used with care. Their general conclusion is that there is now sufficient clinical and experimental evidence to justify the abandonment of tannic acid as a local application for burns. R. H. Franklin (*The Practitioner*, 62, 167; 1944) also discusses the use of tannic acid and agrees that it is being largely abandoned now. Rae and Wilkinson think that coagulation treatment may save life in the early stages of very extensive superficial burns and that, from the point of view of toxic absorption, silver nitrate is probably a safe coagulant. In an annotation, *The Lancet* (March 11, 1944, p. 344) refers to other experimental work on the toxicity of tannic acid which has been done on dogs, rats and mice, and says: "There seems little doubt now about the experimental facts concerning the toxicity of tannic acid". The *British Medical Journal* (April 1) agrees and adds that, although mortality from burns has diminished since tannic acid was introduced in 1925, there is no evidence that it has "any advantage in this respect over other methods".

Classification of Diseases and Injuries

ASKED by the Ministry of Health to advise on a system for collecting and recording statistics of patients admitted to hospital, the Medical Research Council appointed a Committee on Hospital Morbidity Statistics, which has now issued "A Provisional Classification of Diseases and Injuries for Use in Compiling Morbidity Statistics" (Med. Res. Council, Special Report Series, No. 248. H.M. Stationery Office, 1944. 3s. net). The classification here recommended has been adopted by the Ministry of Health for the classification of all Emergency Medical Service records, and the Ministry of Pensions is also using it. It will also be used in the Regional Bureaux of Health and Sickness records which the Nuffield Provincial Hospitals Trust is establishing in some areas. It is comparable with the International List of Causes of Death and the Diagnosis Code of the United States Public Health Service, the code numbers of both of which are included. It is also comparable with the Diagnosis Codes of the Royal Navy, Army and R.A.F. Medical Services. The coding system has been planned for use with mechanical sorting, but may be used equally well with manual filing. It is not suggested that it should replace the Standard Nomenclature of Disease of the American Medical Association.

The Committee has issued this provisional scheme as a Special Report so that it may be available for

as wide a trial as possible. Dr. Percy Stocks, in a brief historical introduction, reminds us that every deceased person was either a sick or an injured person and, if his illness is classified during life, it will usually be the same as the cause of death defined in the Registrar-General's Manual. But the bulk of illnesses do not lead to death, so that a classification of diseases and injuries must give greater attention to minor and disabling conditions than a classification of causes of death needs to do. It is recognized that the diagnoses of some diseases, even when they are made by experts, may not agree, so that only tentative groupings are made in some sections. In some groups (for example, heart disease) the classification has been framed with the object of getting information necessary for a better classification. The Committee hopes, indeed, that any errors, omissions or inconsistencies observed will be reported, so that they may be incorporated in a future revised edition.

Value of Human Milk

BRADFORD-HILL has pointed out in his "Principles of Medical Statistics" that bottle-fed babies are 'selected', in that some factor has determined whether or not the mother feeds her baby. Deductions as to the relative values of breast- and bottle-feeding, based on comparisons of growth and health of groups of babies fed by one or other method, are vitiated by this selection. Mr. Eric Wood points out, in an article in the *Medical Press and Circular* of February 9, that no controlled experiment has been made in which the two groups have been comparable at the start, in heredity, environment and physical conditions. Nor is this possible; for readiness to agree to give up breast-feeding would, in itself, make the 'bottle' group a selected one. In default of this possibility, Mr. Wood points out the need for much more information on the following points. (1) The effects of the mother's environment, food, etc., on the ability to suckle and on the quality and quantity of the milk. We now realize that the easy assumption that the mother is sacrificed to the baby does not hold without qualification. (2) The response of babies to their food. Is the flying start of the breast-baby due to the composition of the colostrum? Babies are not, like lambs, dependent on the colostrum for a supply of antibodies from their mothers; antibodies (the antibody to the *Rh* factor, for example) pass through the human placenta. Both flying start and ability to suckle may both be evidence of a superior reproductive capacity. (3) The advantages, if any, of breast-fed babies that persist into later life. Mr. Wood points out that this information would be given only by long-term investigations based "on co-ordinated planning, a long time in advance, by some suitable 'ad hoc' committee or other body". Actually, very valuable work into the composition of human milk has been carried out, for two years, at the National Institute for Research in Dairying, supported by the Medical Research Council; and more extensive investigations, on the lines suggested, had been planned and work on them had started at the beginning of this year.

President Jefferson, Statesman-Scientist

THE recent bicentenary celebrations of Thomas Jefferson's birth have directed attention once again to the versatility of this remarkable man, some of whose special scientific interests are the subject of a 'pre-reprint' of 64 pp., with illustrations and maps, from *Chronica Botanica* (8, Nov. 1943), of a study by

Dr. Charles A. Browne, of the Bureau of Agricultural and Industrial Chemistry, U.S. Department of Agriculture, on "Thomas Jefferson and the Scientific Trends of his Time". The famous statesman-scientist—a type not unknown among the countrymen of Franklin, Rumford, and Hoover, and all too rare elsewhere—was, it appears, not greatly attracted by theory and speculation, which, indeed, he occasionally condemned in severe terms; his scientific interests were largely utilitarian, as is evidenced by many passages from his voluminous correspondence; and his outlook thus admirably fitted him to play the part of scientific scout for America during his residence in Paris as Minister to France (1784–89).

It is interesting to note that during these years in Paris, though he was an eye-witness of the chemical revolution effected by Lavoisier, he was sceptical about the new system of chemical nomenclature. Writing to Madison on this matter on July 19, 1788, he concluded: "The attempt, therefore, of Lavoisier to reform the chemical nomenclature, is premature. One single experiment may destroy the whole filiation of his terms, and his string of sulphates, sulphites, and sulphures, may have served no other end, than to have retarded the progress of the science, by a jargon, from the confusion of which, time will be requisite to extricate us. Accordingly, it is not likely to be admitted generally."

Jefferson's "Notes on the State of Virginia", his magnificent labours in bringing science to the service of the young and undeveloped country in the guidance of the destinies of which he was ultimately called to the highest place, his devoted work for agriculture, and his outstanding services to the cause of science in education, are all well summarized in this interesting memoir.

Stars with Large Proper Motions

A. VAN MAANEN has prepared a paper with this title (*Astro. Soc. Pacific*, Leaf. 176; 1943) which deals with the developments in the discoveries of stellar motions, from the time of Tobias Mayer who determined the motions of several stars in 1760, by comparing his own observations with those of Römer made fifty years earlier. A useful table gives the proper motions of thirty stars with the largest proper motions, in all cases exceeding 3" annually. Large proper motion suggests relative proximity to the earth, and for this reason it is not surprising that nineteen of the thirty stars are less than 16.3 light-years distant from the sun, and seven are nearer than 32.6 light-years. A very interesting feature in the table is the luminosity of each star, that of the sun being the unit. Only one star— ω Centauri A—is brighter than the sun, its luminosity being 1.14. The table also shows that stars with the faintest luminosities belong to the most advanced spectral types and so have the lowest temperatures, with the exception of the white dwarfs. The luminosities of the latter are very low, that of Wolf 489 being only 0.00008.

Electrical Aspect of Farm Mechanisms

A PAPER on this subject was read in London recently by Mr. C. A. Cameron-Brown before the Institution of Electrical Engineers in which, for the benefit of those interested but not actively engaged in rural electrification, a picture is drawn of the general developments of electrical participation in farm processes; the paper also offers a clearing house

of ideas for those actively engaged in rural electrification but whose interest is localized. The paper is devoted chiefly to the less common applications, to those which are the subject of controversy, and to those which may appear to have a wider field of application in the future. Emphasis has been placed on trend rather than on facts and figures; thus Mr. Cameron-Brown covers general trends and observations, specific applications of electricity to farming operations such as grinding mills, threshing, crop drying, milk production and certain special applications. The scope of the paper is confined to general farming—arable, dairy and mixed.

Theodor Puschmann (1844–1899)

PROF. THEODOR PUSCHMANN, the eminent medical historian, was born on May 4, 1844, at Lowenberg in Prussian Silesia. He studied medicine successively at Berlin, Marburg, Vienna and Munich, and qualified at Marburg in 1869. He first made a study of psychiatry under von Gudden at Munich and then practised for some years in Cairo. In 1878 he specialized in the history of medicine at Leipzig, and in the following year was appointed extraordinary professor of medical history at Vienna, becoming full professor in 1879 in succession to Prof. R. Seligmann. He died on September 28, 1899. His principal publications were an edition of Alexander of Tralles (1878–79), a "History of Medical Education" (1889) and "Medicine in Vienna during the last 100 Years" (1884). He also wrote the introduction to a great work on the history of medicine which was completed by Prof. Max Neuburger and J. Pagel. His name has been given to a medico-historical institute in Leipzig founded by his wife.

Announcements

THE twenty-third Silvanus Thompson Memorial Lecture of the British Institute of Radiology will be delivered by Prof. Sidney Russ on May 20; he will speak on "The Man Silvanus Thompson".

A WHOLE-DAY conference of the Nutrition Society will be held on May 20, beginning at 10.50 a.m., at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1, on "Budgetary and Dietary Surveys of Families and Individuals, Part 2". Papers will be communicated by Miss E. M. Widdowson and Dr. R. A. McCance ("Dietary Surveys by the Individual Method"); Dr. Gertrude Wagner ("Surveys of Methods Used in Preparing and Cooking Foods"); Dr. G. N. Jenkins, Dr. L. W. Mapson and Miss M. Olliver ("Laboratory Assessment of Nutritive Value of Meals as Eaten"); Miss E. M. Langley ("Food Consumption: Data Obtained from Analyses of Institutional Diets: (a) School Diets"); Dr. M. Pyke ("Food Consumption: Data Obtained from Analyses of Institutional Diets: (b) Industrial Canteens"); Dr. A. Lyall ("Food Consumption: Data Obtained from Analyses of Institutional Diets: (c) Hospital Diets"). The openers of the discussion will be Prof. V. H. Mottram, Mrs. Barbara Callow, Dr. C. P. Stewart and Miss M. C. Broatch.

ERRATUM.—In connexion with the article in NATURE of April 29 on "X-Ray Analysis in Industry", Mr. C. W. Bunn states that the concluding sentence on his paper (p. 534, col. 1) should read "This last effect has been observed in polyethylene, and confirmed by the magnetic properties of single crystals of chain compounds".