

proceeding on the production of a simplified objective noise meter so as to facilitate its production in greater numbers. Detailed results of the tests, which were carried out by the National Physical Laboratory, are given in the report.

Recent Acquisitions at the Natural History Museum

THE Museum has received as a permanent loan from His Majesty the King a fine series of elephant tusks. The series comprises the record pair of Indian tusks, three pairs and a single large tusk of the African species, and an ornamented tusk of the Malayan elephant. The Indian tusks, which are figured in Rowland Ward's "Records of Big Game", are of exceptional size for Indian ivory, measuring 8 ft. 9 in. and 8 ft. 6½ in. in length and weighing 161 lb. and 160 lb. respectively. Good Indian tusks rarely exceed 6-7 ft. in length or weigh more than 80-100 lb. The Trustees of the American Museum of Natural History, New York, have handed over to the National collection the type specimens of fifteen races of British and Irish birds, described by the late Dr. E. Hartert and Mr. H. F. Witherby. These types formed part of the famous Rothschild collection which was purchased by the American Museum in 1932. Through the generosity of Mr. E. C. Stuart Baker, the Museum has received the largest collection of birds' eggs ever presented to the British Museum. This great collection consists of approximately 50,000 eggs belonging to some 1,960 different species of birds found in the Indian Empire. Very many of these eggs were not previously represented in the national collection and in a considerable number of cases Baker's specimens are the only ones known. A collection of more than 6,000 invertebrates, chiefly Brachiopoda and Trilobita, including 40 new species, as well as type and figured specimens, collected by Mr. B. B. Bancroft with great exactness as to horizon and locality, from the Ordovician of the Welsh Borderland and the Lake District, has been purchased for the Department of Geology. The Mineral Department has received from the Director of the Geological Survey of Nigeria as a donation a piece, besides several fragments, of the meteoric stone which fell near Udei station, Benue river, Nigeria, in 1927. The meteorite is of unusual interest because it belongs to the rare pallasite group of stony-irons containing olivine.

THE Department of Botany has received from Mr. C. J. Brooks his fern herbarium, containing about 2,650 specimens. Mr. Brooks was employed as a chemist in the gold-mining industry in Sarawak and later in Sumatra, where he collected insects and ferns. He discovered many new species in the mountains of Borneo and Sumatra, including Gunong Dempo. He also visited Celebes and Amboina. In the latter island he made a very complete collection and ascended the volcano Salahoetoe. Mr. Brooks's plants were mostly worked out by Capt. C. R. W. K. van Alderwerelt van Rosenburgh at Buitenzorg, and many are types or paratypes not otherwise represented in Europe. He was also in touch with Prof.

E. B. Copeland and the late Prince Roland Bonaparte, and obtained some specimens by exchange. Especially notable are a set of Schlechter's New Guinea ferns and some from Papua collected by the Rev. Copland King. His herbarium is the most valuable acquisition that the fern collections have had for many years, the more so as it comes from a region which was previously somewhat scantily represented. The Oxford University Exploration Club has presented the botanical collections made by Mr. H. G. Vevers on the recent expedition to Greenland. This comprises more than five hundred numbers. Dr. G. N. Humphreys of the Mount Everest (1936) Expedition has sent to the Museum a collection of 88 flowering plants which he made at the higher camps used by that Expedition. Considering the conditions under which Dr. Humphreys worked, the plants are very well collected and dried, and he appears to have obtained a good representation of the alpine flora. The Department has particularly fine collections from Nepal, and Dr. Humphreys' specimens will add further to the importance of this Himalayan material. A number of the species represented reach the altitudinal limit of flowering-plant vegetation, and it is particularly valuable to have the precise altitude at which each specimen was collected.

Colonial Territories and Economic Opportunity

THE Advisory Committee of the National Executive of the Labour Party has prepared a pamphlet on "The Demand for Colonial Territories and Equality of Economic Opportunity" in which the position of the three 'dissatisfied' Powers—Germany, Italy and Japan—is examined (Labour Party, Transport House, Smith Square, London, S.W.1. 4d.). In analysing access to raw materials, the division of the world, recently adopted by the *Economist*, into the British Empire, the French Empire, the Dutch Empire, the U.S.A., the U.S.S.R., and the rest of the world, is used. The general conclusion is reached that colonies are of some, but not of great, economic importance. Only in the case of rubber are the colonial possessions of a Great Power of dominant importance. It is held that the abolition of discrimination rather than the exchange of territories should be the objective. To this end, the Labour Party should advocate the bringing of Colonial possessions, such as those of Britain in Africa, under the mandates system—approximately of the present B Class of mandates. The pamphlet is full of information and deserves close study.

Teaching Electric Cookery in Switzerland

IN the *Electrical Age* of October, a magazine published by the Electrical Association for Women, an interesting summary is given of Swiss methods of teaching electrical cooking in schools. Swiss manufacturers supply special electric cookers for use in school kitchens. These are made to stand away from the wall so that access can be obtained from all sides. The oven is placed on one side instead of being put under the hot plates as in the ordinary domestic cooker. This facilitates access to it and at

the same time provides standing place for cooking utensils on the top of the oven. The arrangements are such that the pupils can be conveniently divided into four groups. Each group is self-contained and has charge of a cooker with oven, table and washing-up arrangements, and a cupboard for utensils and crockery. The items of equipment are arranged as close together as possible and in the order in which they are required. In order to teach economy, the pupils are required to reckon up the total cost in materials and electrical consumption of all food prepared. A separate meter is usually installed in the circuit supplying each cooker. Although rarely used in schools, descriptions are given of the tilting cauldron and the tilting oven often used in hotels and institutions. The cauldrons, instead of having a tap for withdrawing the contents, are arranged to tilt and pour out the contents over a wide lip. They are mounted on trunnions and worked by a worm gear so that the tipping is done gradually without the risk of spilling. They can be kept clean as easily as a basin, and the heat control is such that even milk cannot boil over.

Agricultural and Horticultural Pests

MUCH recent research into the incidence and over-wintering of the potato blight fungus (*Phytophthora infestans*) has made it necessary for the Ministry of Agriculture to revise its leaflet upon this subject. The new Advisory Leaflet, No. 271, shows that the fungus overwinters upon infected tubers, and there are usually sufficient of these left from previous crops, or thrown out from storage pits, to begin fresh infection in the spring. Control by spraying and dusting is described, and other methods include the removal and destruction of haulm before digging the crop, and the disposal of blighted tubers. Advisory Leaflet No. 273 replaces leaflet No. 195, and deals with American gooseberry mildew (*Sphaerotheca mors-uvii*). The subject-matter has been brought up to date. A short Advisory Leaflet (No. 182) deals with spurrey (*Spergula arvensis*) as an agricultural weed. Spraying with 5 per cent solution of copper sulphate, or 7-10 per cent sulphuric acid, are recommended for control of the weed amongst cereal crops, in addition to the application of lime, and other methods.

Medallions of Manganese Steel

WHEN King Edward, as Prince of Wales, visited the Hecla Works of Hadfields, Ltd., some years ago, he cast a medallion portrait of himself in manganese steel. A similar medallion, 20 inches in diameter, was recently cast showing the head and shoulders of General the Right Hon. J. C. Smuts, P.C., and both are now on view at the Johannesburg Empire Exhibition, of which General Smuts is honorary president. The manganese steel of which these medallions are made is run into the moulds at a temperature of about 1,450° C., but despite this high temperature, and owing to the specially developed moulding sand employed, the definition of the features is remarkable, each detail being reproduced as clearly as in a photograph.

Faraday House Journal

WITH the opening of the Michaelmas term at Faraday House Electrical Engineering College, *Faraday House Journal* makes its reappearance and, in addition to the usual personal, social and collegiate items, the present number contains several short papers of note. The principal, Dr. A. Russell, writing under the title "Unfettered Mathematics in Engineering", continues his articles on capacitance coefficients, and here shows that the capacitance of a system of two external spheres can be expressed in terms of certain spherical condensers, the values of which can readily be found. In a paper "On a Natural System of Absolute Physical Measurement", Sir Ambrose Fleming puts the case for, and gives data relative to, a system based on the rest mass of the nucleus of the hydrogen atom and the wave-lengths and periodic times of certain of its radiations. "Fluorescence under Ultra-Violet Light" by Dr. W. R. C. Coode-Adams and "Perspective" by the Rev. L. Van Vestrout complete this section of the contents and their titles sufficiently indicate the nature of these two papers.

Bureau international des Poids et Mesures

DR. CHARLES-EDOUARD GUILLAUME, director of the Bureau international des Poids et Mesures, is retiring after fifty-three years in the service of metrology. The permanent administrative committee of the International Committee of Weights and Measures, which consists of Prof. V. Volterra of Rome (president), Prof. B. Cabrera of Madrid (secretary), Prof. P. Janet of Paris, Prof. P. Zeeman of Amsterdam, and Dr. C. E. Guillaume, has nominated M. Albert Perard, assistant-director of the Bureau, to succeed Dr. Guillaume. M. Pérard, like his predecessor, has spent all his life at the Bureau; he is best known for his work on the metrology of the interference of light. The Bureau, the oldest of the international scientific organizations, is at the Pavillon de Breteuil, Sèvres, Seine-et-Oise; since the signature of the Convention of the Metre in 1875, it has been under the direction in turn of G. Govi, O. J. Broch, J. R. Benoit and Dr. Guillaume.

New Midwives' Service

A CIRCULAR on the Midwives Act, which has recently become law, has been issued by the Minister of Health (Circular 1569. London: H.M. Stationery Office. 6d. net). The Act marks an important advance in the policy of improving the public health services of Great Britain, and should do much to improve the maternity services, and secure a reduction in the present rate of maternal mortality. The Act aims at providing every prospective mother whose baby will be borne at home with the services of a trained midwife for her confinement and fourteen days thereafter. The new arrangements should also do much to improve the status and prospects of midwives who enter the new service. The Circular, which is addressed to the local authorities administering the Act, contains a memorandum fully explaining the provisions of the Act.