

Government Plans for Reconstruction

WITH the completion of the recent Cabinet changes, it is announced that Sir William Jowitt, who was Solicitor-General, has been appointed Paymaster-General, in succession to Lord Hankey. The duties hitherto performed by the Minister without Portfolio in connexion with the study of post-war reconstruction problems will in future be carried out by the Paymaster-General, who has been charged with general responsibility for organizing and co-ordinating the work on reconstruction problems now being carried out by the various Departments of State. For this purpose he will have at his disposal the special section which has been engaged on this work under the Minister without Portfolio. Arrangements will continue whereby reconstruction questions are considered by a committee of Ministers containing representatives of the political parties. Mr. H. G. Strauss, M.P., has been appointed an additional Parliamentary Secretary at the Ministry of Works and Buildings. In this office, Mr. Strauss will be responsible under the Minister for the planning functions of the Ministry.

The general responsibility hitherto entrusted to the Minister without Portfolio in regard to export surpluses and allied post-war relief will in future be exercised by the President of the Board of Trade. It is also officially announced that Sir Frederick Leith-Ross, chief economic adviser to the Government, will continue to direct the organization concerned with export surpluses and allied post-war relief, which will now be attached to the Board of Trade instead of to the Ministry of Economic Warfare, and he will relinquish his post as Director-General of the Ministry of Economic Warfare.

Scientific Invention at the Service of the Community

MR. P. H. B. LYON, headmaster of Rugby School, was in the chair when Capt. John Langdon-Davies addressed the Rugby branch of the Association of Scientific Workers on March 5 on "Scientific Invention at the Service of the Community". After referring to Prof. J. D. Bernal's book on "The Social Function of Science" as giving a detailed picture of the organization of science and the imperfections consequent upon a system of production for profit, Capt. Langdon-Davies passed on to a consideration of the effects of social phenomena that influence education more than do schools and universities, such as advertising, with its creation of false appetites for 'streamlined' refrigerators. The need is for social planning, including a planned attack by men of science on the most urgent problems, not only of war but also of peace. Capt. Langdon-Davies looks to the development of substitutes for raw materials such as rubber, as a means of wiping out the pools of semi-slave cheap native labour which he regards as one of the prime causes of imperialistic conflict. Only by raising the standards of life of the peoples of Asia and Africa, he contended, can we hope for permanent social security. He pointed out that science exercises an influence on spiritual values, suggesting that the moral theology of the medieval Schoolmen was not unscientific but based on the incorrect science of Aristotelean physiology. He called for a "sense of reverence" from scientific workers. In conclusion, he insisted that scientific method must be applied to politics and economics, demanding, however, that we must preserve our criteria and standards of scientific truth in politics.

Centenary of General Shrapnell

ON March 13, 1842, Lieut.-General Henry Shrapnell, the distinguished artilleryist and inventor, died at his home, Peartree House, Southampton, at the age of eighty, having spent his whole career in the improvement of guns and projectiles. Born at Bradford-on-Avon on June 3, 1761, he entered the Royal Artillery at the age of eighteen and continued to serve until 1825, when he was retired with the rank of major-general. In 1837 he was promoted lieutenant-general. Fused hollow shells had been used since the time of Vauban, but Shrapnell was the first to introduce shells filled with musket bullets and with a bursting charge for firing from long guns. His first demonstration was made at Gibraltar in 1788, but it was not until 1803 that Shrapnell shells were adopted by the Board of Ordnance. In that year Shrapnell carried out a large number of firing experiments at the works of the Carron Company, Falkirk, and the company was given orders for large numbers of this new projectile. Shrapnell shells were used at the Siege of Surinam in 1803, in the Peninsular War and at the Battle of Waterloo. The inventor spent many thousands of pounds of his own money on the experiments; he was given a pension of £1,200 in 1814. At his death Shrapnell was buried in the family vault in the parish church of Bradford-on-Avon, where a tablet erroneously gives the year of his death as 1847.

Uses of Colloidal Graphite Solutions

THE general scarcity of metals lends a special interest to the use of dispersions of colloidal graphite in water for making non-metallic bodies electrically conducting. On glass or similar substances which can be thoroughly cleaned with chromic acid, the graphite dispersion can be applied with a soft brush. Glass elbows and intricately shaped parts of evacuated systems can, by this method, be fitted with conducting shielding. Absorbent surfaces such as wood veneer or rubber tubing are best saturated to a slight depth below the surface with a dilute solution and then coated with the more concentrated form. It is suggested that by this means cabinets or even whole research rooms can be electrically shielded by applying the liquid by brush-painting or air-spraying followed by air-drying. Soft-cloth polishing, by forcing the particles into closer contact, automatically increases electrical conductivity. Leads for connexions or for earthing the screens are sealed into the glass or are fitted externally before applying the liquid. In Great Britain the product is sold as 'Aquadag' by Messrs. E. G. Acheson, of 9 Gayfere Street, London, S.W.1. Details were published in 1936 by B. H. Porter in *NATURE*, 137, 1034, and in the *Review of Scientific Instruments*, 7, 101.

The Hannah Dairy Research Institute

THE activities of the Hannah Dairy Research Institute, Kirkhill, Ayr, described in its twelfth annual report, are, as would be expected, chiefly concerned with the maintenance of the country's milk supply. The problem is approached from two main aspects, namely, the biological and the technical. Under the former category come investigations as to the provision of adequate home-grown feeding-stuffs and the avoidance of disease in the herd. Grass silage has been successfully produced in large quantities on the Institute's farm; but dried grass, though

a first-class product from the feeding point of view, is regarded as probably not economic for the moderate-sized dairy farm. The possibility of improving the protein ration by feeding non-protein nitrogen compounds such as urea, with the idea that it would be converted into protein in the rumen of the animal, is under investigation. No far-reaching results are yet announced, but when roughly one third of the protein of the production ration was supplied in this form, the health, milk yields and body weights of the cows remained unimpaired during the six-week trial period. As regards disease prevention, control measures against mastitis have been extended, and the use of sulphanilamide administered orally has met with marked success. Dried milk products are being studied on the technical side, factors affecting their solubility and keeping quality receiving special attention. It appears that the addition of antioxidants to the precondensed milk before drying considerably increases the keeping quality of the resultant powder.

Earthquake at Santa Barbara, California

FROM *Earthquake Notes* of December, 1941, we learn that a severe earthquake occurred at Santa Barbara, California, at 11.51 p.m. P.S.T. on June 30, 1941. This was followed by a swarm of aftershocks which continued for several days. Shocks of any consequence ceased to occur at about noon on July 3, but three shocks were reported on this date. A preliminary report from the seismological laboratory at Pasadena gives the epicentre location as 34° 20' N., 119° 35' W. This position is about eight miles off shore in a south-easterly direction from Santa Barbara. Damage was estimated at about 150,000 dollars. Maximum intensity was about VII or VIII on the modified Mercalli scale. Accelerograph records of this shock were obtained at Santa Barbara, Long Beach and Vernon. The record obtained at Santa Barbara is being analysed by integration methods and the results are expected later.

"Davitamon-Five" Vitamin Tablets

MESSRS. ORGANON LABORATORIES, LTD., Brettenham House, Lancaster Place, London, W.C.2, have recently put on the market a new preparation of vitamin tablets named "Davitamon-Five". This preparation is intended for those people who wish to ensure that they are ingesting an adequate quantity of essential vitamins. The tablets are intended for the day-to-day prophylaxis and treatment of mild hypovitaminoses; and since a number of research workers have made it clear that specific avitaminotic symptoms are abolished more rapidly when the diet is adequate in the other vitamins, they can also be used to provide a suitable background for an intensive single-vitamin therapy. Each tablet contains: 1,000 I.U. vitamin A; 50 I.U. vitamin B₁; 200 I.U. vitamin C; 200 I.U. vitamin D; 0.5 mgm. PP factor of the B complex. A sample of the tablets can be obtained from the above laboratories.

Science Masters' Association: Annual Meeting

THE forty-first annual meeting of the Science Masters' Association will be held at Rugby School during April 8-10, under the presidency of Mr. P. H. B. Lyon, headmaster of Rugby School. The subject of the presidential address will be "English in the Science Course". Lectures will be delivered

by Prof. M. L. E. Oliphant on "Recent Practical Applications of Nuclear Physics" and by Mr. L. J. F. Brimble on "Human Biology in Education". Prof. L. T. Hogben will deliver the Science and Citizenship Lecture. A discussion on "Science in Post-war Education" will be opened by Mr. E. G. Savage. Further information can be obtained from Mr. W. Askhurst, Grammar School, Stretford, Lancs.

Announcements

PROF. A. W. M. ELLIS, professor of medicine, University of London, has been appointed director of research in industrial medicine by the Medical Research Council.

SIR EDWARD APPLETON, secretary of the Department of Scientific and Industrial Research, will deliver the twenty-sixth Guthrie Lecture of the Physical Society on March 20. He will speak on "Ionospheric Influences on Geomagnetism".

MR. W. T. HALCROW will deliver the thirty-second May Lecture of the Institute of Metals on May 31 at the Institution of Mechanical Engineers. The title of the Lecture will be "Water Power and its Application to the Production of Metals".

MR. S. BAIRSTOW, of the Chemical Research Section, Research Department, of the London Midland and Scottish Railway, has been awarded the Herbert Jackson Prize for 1941, for a paper entitled "The Relation between Calorific Value and the Road Performance of Producer-Gas Vehicles".

AT the request of the Minister of Agriculture, the National Institute of Agricultural Botany has set up a special Seed Production Committee the duty of which will be to take all possible steps to stimulate, co-ordinate and ensure home seed production. The chairman of the Committee is Mr. W. Gavin, agricultural adviser to the Ministry of Agriculture. The executive officer is Mr. Leslie E. Cook, and all communications should be addressed to him at the National Institute of Agricultural Botany, Huntingdon Road, Cambridge.

A COPY of the third (revised) edition of a pamphlet on "The Colorimetric Determination of Oxidation-Reduction Balance" has been received from the British Drug Houses, Ltd., Graham Street, London, N.1. This gives in simple language a summary of the theory of oxidation-reduction processes and potentials, and of oxidation-reduction indicators and their uses in volumetric analysis and in several fields of work, including biochemistry and soil chemistry. Copies of this useful pamphlet can be obtained free of charge on application to the British Drug Houses, Ltd.

THE Lady Tata Memorial Trust is prepared to consider applications from workers in Great Britain for grants or scholarships for the year beginning October 1, 1942, for research on blood diseases, with special reference to leukaemia. Under present conditions it is not possible to deal with new applications from workers overseas. Inquiries must be addressed to the Secretary, Scientific Advisory Committee, Lady Tata Memorial Trust, c/o London School of Hygiene, Keppel Street, London, W.C.1, not later than March 31.