

NEWS AND VIEWS

American Mathematicians and the U.S.S.R.

THE Soviet Embassy in Washington has recently received for transmission to Soviet mathematicians a statement of solidarity signed by a number of their most distinguished American colleagues. The document carries signatures of ninety-three mathematicians of forty-seven American universities and colleges. Prof. Marston Morse, president of the American Mathematical Society, is a signatory, as also are eight past presidents of the Society. Fourteen are members of the National Academy of Sciences. Among the signatories are several well-known German mathematicians who now reside in the United States and who know from personal experience the destruction Hitler has wrought in German culture. These include Profs. E. Artin, R. Courant, W. Mayer, H. A. Rademacher and O. Szasz.

The statement reads as follows: "We . . . send our greetings and express our heartfelt sympathy to our colleagues of the Soviet Union in their struggle against Hitler fascism. What the future of mathematics would be in a Hitler-dominated world we know from the unprecedented destruction of mathematics in Germany after the advent of Hitler. We are deeply impressed by the heroic stand of the Soviet peoples and know that the mathematicians of the Soviet Union are doing their part in this supreme effort. The bonds between mathematicians in the United States and the Soviet Union are particularly strong since during the past two decades the center of world mathematics has steadily shifted to these two countries. We know many of you personally and more of you through your scientific writings. We know that you are fighting alongside your fellow-countrymen in their brave struggle against the invading tyrant and we assure you that we here are doing everything in our power to aid all peoples struggling against fascism. With best wishes for a successful fight against the evil forces of fascism, we remain, fraternally, your colleagues in the United States."

Commonwealth Grant to Australian Universities

UNDER the Australian federal system, public education is a function of the State Governments, and the six universities look to these bodies for financial support. Five years ago, however, the Commonwealth Government undertook a share of this responsibility by providing £30,000 a year to meet costs of research in the natural sciences and in economics, and of training young graduates in research technique. The funds are administered by the Council for Scientific and Industrial Research in consultation with the Vice-Chancellors' Conference. The Commonwealth has now announced its intention to raise its contribution to £40,000 a year, commencing in 1942, on condition that at least £9,000 a year be devoted to social science studies bearing on problems of post-war reconstruction.

American Anthropology

ANTHROPOLOGICAL Papers, Numbers 13-18, have been recently published by the Smithsonian Institution (Bureau of American Ethnology, Bulletin 128). These include "The Mining of Gems and Ornamental Stones by American Indians", "Iroquois Suicide", "Tonawanda Longhouse Ceremonies", "The Quichua-speaking Indians of the Province of Imbabura", "Art Processes in Birchbark of the River Desert Algonquin" and "Archæological Reconnaissance of Southern Utah". The last of these, by J. H. Steward, will appeal especially to archaeologists interested in the ancient history of the New World. The article is based on the surveys of Judd (1926) and Steward (1933 and 1936), and deals with a culture apparently based on that of the Basket-maker Pueblo peoples of the San Juan River basin. A large number of sites were visited and are described, and the material culture found in them is catalogued and illustrated. Painted pottery, naturally, occurred as well as flint implements. It is a pity, however, that these latter are so inadequately figured—mere outlines of the tools being all that is given. An interesting series of rock-drawings was also discovered, showing conventionalized figures of animals and human beings, as well as signs of various kinds, including the spiral.

Indian Jute Production

A BROCHURE containing much valuable statistical material on the jute trade and industry, including estimates which are not available elsewhere, has been issued by the Indian Central Jute Committee, Calcutta, under the title "World Consumption of Jute" 1938-39 and 1939-40 (Economic Research Bulletin No. 1, R.1, 1s. 6d.). The estimates of the total consumption of jute in the world given in this bulletin for the period 1933-34 to 1939-40 indicate that consumption reached its peak in 1936-37 with an aggregate consumption of about 123 lakhs of bales, but world consumption in 1938-39 fell to 107 lakhs of bales, and only rose again to 109 lakhs of bales in 1939-40, in spite of the hectic buying at the beginning of the War. Independent estimates of the yield of the jute crop are also included for the 1938-39 and 1939-40 seasons.

The War has seriously affected the export of raw jute, but this was more than compensated by the rise in the export of jute manufactures, the countries within the British Empire considerably increasing their consumption of Indian jute manufactures, although there was a substantial reduction in the normal commercial demand for jute goods. The consumption of raw jute by the Indian mills fell in 1938-39 but increased considerably in 1939-40, and the total stock of raw jute for the Indian mills was 20 lakhs of bales at the end of 1939-40, or about 9 lakhs of bales less than the stock at the end of 1937-38. The total yield of the jute crop in the 1938-39 season was a little more than 80 lakhs of bales, which was less than the world total demand

for the year by 17 lakhs of bales. The yield of the crop in 1939-40 was more than 109 lakhs of bales and the jute crop of 1940-41 is expected to give a record yield of 125 lakhs of bales. The consumption of raw jute this season is likely to be abnormally low, and a considerable quantity of jute is expected to be left over from the crop of 1941. The bulletin embodies the results of investigations carried out by the Economic Research Sub-Section of the Committee.

Cements for Glass Inserts in Electrical Apparatus

THE fixing of glass or porcelain insulators to metal parts by means of cement in the construction of switch gear and other apparatus has been a practice employed since the early days of electrical apparatus. At one time a mixture of sulphur and ground glass was extensively used for porcelain, the well-known litharge and glycerine cement being employed for the finer classes of work. This latter material is still in extensive use, but much work is also done with cements of the calcium sulphate type. As certain new products of this latter class have been introduced, an investigation has been carried out by the British Electrical and Allied Industries Research Association in order to elicit information bearing on the performance of these materials in practice (Technical Report, Ref. G./T. 131, "Recent Experience with Calcium Sulphate and other Types of Cement for Glass Inserts in Flame-proof Enclosures". By A. P. Paton). A table is given in the report summarizing the information collected on the quantities of cement mixed at a time and used for each article, and the time necessary before the articles could be released from the jigs. The latter varied from a maximum of 48 hours to a minimum of a quarter of an hour. This latter figure was exceptional and referred to meter glasses and windows fixed with Hawkins iron cement. A minimum period of $\frac{1}{3}$ hour was given for flame-proof lighting fittings and cover glasses of housings fixed with C. Fine Keene's cement. The figures, however, varied somewhat and were not closely connected with the type of cement. In one case it was stated that 2½ lb. of gum arabic to a gallon of water was used in making up C. Fine Keene's cement. No difference in strength was found, and the cement adhered more firmly to glass or metal.

In certain conditions, C. Fine Keene's cement may give rise to electrolytic action if used with Bakelite. This cement is essentially an anhydrous calcium sulphate, which is slightly acid, due to the addition of a small percentage of alum. The presence of this potassium salt is considered undesirable when the cement is in contact with insulation of the synthetic resin impregnated type. Alternatives which have now been developed are termed Kaffir Plasters. They consist of calcium sulphate hemi-hydrate and are manufactured by Messrs. Cafferata. The product hydrates almost fully within about two hours, so that 'dry out' is almost impossible. The report states that it is a little unfortunate that the word plaster conveys to the general public the idea of a product which is inferior in strength and performance to a 'cement'. Actually, it is technically accepted in the

gypsum trade that a cement is a high-temperature dead-burnt product, and that, without exception, all hemi-hydrates are designated plasters. The specially prepared hemi-hydrates known as Kaffir Plasters, while chemically similar to plaster-of-Paris, are different in their mechanical and physical properties, and give strength figures many times higher than those of plaster-of-Paris. They harden rapidly, and jigs may be fixed in 2-3 hours.

Health of the Sudan

IN his recently issued report for 1939 Dr. E. D. Pridie, director of the Sudan medical service, maintains that in spite of the occurrence of epidemic diseases, especially cerebrospinal fever, relapsing fever, smallpox and measles, the health of the Sudan in that year was very satisfactory. The epidemic of cerebrospinal fever which broke out in Equatoria and was not suppressed by the end of the year, comprised 2,714 cases with 647 deaths—a fatality-rate of 25 per cent against an expected rate of 60 per cent. The mortality at the onset of the epidemic was 80 per cent, but treatment with drugs of the sulphamide class reduced it to about 10 per cent. There were 1,000 cases of relapsing fever with 92 deaths, and 502 cases of smallpox which originated in French Equatorial Africa. On the other hand, the incidence of typhoid fever and bacillary dysentery was low. Although the range of most of them was limited, practically every endemic tropical infection was present in some part of the Sudan.

Earthquake in Alaska

THE United States Coast and Geodetic Survey, in co-operation with Science Service and the Jesuit Seismological Association, has determined the provisional epicentre of the earthquake of July 30, 1941, which took place at 1 h. 51.5 m. U.T. This was at latitude 60.9° N., 149.2° W. which is very near the railway between Seward and Anchorage, Alaska, and about midway between these two places. It is not known whether or not there was any damage due to the earthquake. Alaska and the Aleutian Islands form part of the circum-Pacific ring of instability, around which earthquakes and tremors are fairly frequent. Recently earthquakes have been very frequent among the Aleutian Islands, and what was probably the most notable earthquake of recent years on the mainland occurred on April 26, 1933, to the north-west of the Kenai Peninsular. (NATURE, May 27, 1933, p. 757.)

University of London

DR. H. L. EASON retired from the office of principal on September 30 and Mr. Harold Cloughton entered upon his duties as acting principal on October 1.

The title of reader in geography in the University has been conferred on Dr. R. E. Dickinson, in respect of the post held by him at University College.

The degree of D.Sc. has been conferred on the