

agreed findings of the report of the Royal Commission on the Geographical Distribution of the Industrial Population are substantially consistent with evidence given before the Commission by the Association and have proved of the utmost value as a basis for national policy. The Council is considering what forms of activity are practicable in present circumstances to use the new opportunities. The formation of groups, in as many towns as possible, which will undertake research and education in the local application of a national planning policy, is desirable. There is a great demand from men in the services and civilian groups for well-informed talks and booklets on future planning. Much also needs to be done to develop sound policy and technical knowledge among members of local authorities and their staffs. The report also directs attention to the change in name of the Association from "The Garden Cities and Town Planning Association", and includes a short statement of town-country planning principles, adopted by the Council in January 1941, acceptance of which by the Government and Parliament is urged.

These suggestions include the establishment of a Ministry, advised by a National Planning Council, to guide future development and re-development, and the future grouping of industry and population, to secure the best use of the land and to conserve the national resources in the general interest. The distinction between town and country should be maintained in all development, and sporadic building in rural areas discouraged. In particular, good food-growing land, places of special landscape beauty, and areas suitable for national parks or coastal reservations should be protected from ordinary building development. Good design and lay-out of buildings and roads as well as sound construction should be an object of policy. In rebuilding urban areas, the density of residential districts should be limited to provide sufficient open space, including reasonable garden space, and wide country belts should be reserved around all cities and towns. New developments required by industrial changes, decentralization from congested areas, or by the growth of towns up to their planned limits should be directed to other towns or to new towns carefully sited and planned. The Ministry charged with national planning should have power to prevent, except under licence, the settlement of new industrial undertakings in overgrown or congested towns and in undeveloped rural areas, and to offer inducements to industry to settle in suitably selected places. The inadequate provisions for compensation and betterment under the Town and Country Planning Act should be replaced by new legislation based on expert consideration before the conclusion of the War.

Soil Mechanics in Brazil

AMONG the papers contributed to the Third Reunion of the Brazilian National Laboratories for Testing Materials was one on soil stabilization, which has since been issued as a booklet by the National Institute of Technology, Rio de Janeiro. The

author, Paulo Sá, outlines existing knowledge in this branch of the science of soil mechanics, in the hope of directing the attention of Brazilian engineers to this new and important science. This would be a commendable aspiration in any country. Too many engineers are unfamiliar with the extent to which the study of foundation and earthwork problems has been developed during the last ten or twenty years, for it is now legitimate to speak of the emergence of a rational science of soil mechanics, based on sound scientific principles and making full use of theory, experiment and practice. Here again, as in most cases of fresh scientific approach to an old problem, research has established a considerable lead on practical application. The Brazilian writer complains that, in his country, soil mechanics specialists are *muito poucos*: in Great Britain also they are all too few. But the subject is not only a matter for the specialist. It should become part of the training of all civil engineers. Emphasis has been laid on the need for greater attention to it in Great Britain in annual reports of the Building Research Board which, in its report for 1938, noted with satisfaction steps taken at several university institutions, following a conference at the Building Research Station, to bring the subject into greater prominence in the curriculum for engineering students.

Electric Heating in the Pottery Industry

THE new pottery factory of Messrs. Josiah Wedgwood and Sons, Ltd., at Barlaston, has been described in articles in the *Electric Review* of April 18 and May 2. For the first time in Great Britain, electrical biscuit and glost firing have been combined in one kiln. In biscuit firing the pottery is subjected to direct radiation from the source of heat instead of being stacked in the kiln in special containers (saggars). Both the biscuit and glost firing are effected in a double tunnel kiln of the conveyor type. The two tunnels—one biscuit and one glost—are side by side, so as to reduce construction costs and effect a measure of heat recuperation. In each tunnel there are a heating-up and a cooling-down section at opposite ends of the firing zone, and the sequence in the case of biscuit firing is opposite to that of glost firing. The overall length of the kiln is 272 ft. and the firing zone is about 100 ft. long. Each tunnel measures about 6 ft. by 4 ft. inside, just a little larger than the trucks which convey the wares through the kiln. The firing zone of each tunnel has a number of sections, the temperatures of which, as recorded by pyrometers on the outside walls and at the centres of the sections, follow a desired curve in each case, with a maximum in the case of biscuit firing of about 1,150° C. 'Kanthal' type or aluminium-iron elements consisting of strip about $\frac{1}{2}$ in. wide wound spirally on a refractory former about 3 ft. long are used. Trucks carrying the pottery run on rails continuously through the kiln end to end as a train, the whole being propelled by a pusher unit, which operates with the end truck at the tunnel entrance. Enamelling firing for colour work demands a temperature of about 850° C., which

is low in comparison with biscuit and glost firing. The enamel firing is also done electrically, but this is not a new development although the kiln used for the purpose is new.

Jean Nicolas Corvisart (1755-1821)

IN a recent paper (*Proc. Roy. Soc. Med.*, **34**, 239; 1941) on the life and times of Jean Nicolas Corvisart, after emphasizing the resemblance between the stirring events at the beginning of the nineteenth century and those at the present time, Dr. Halls Dally said that the genius of Laennec had almost eclipsed the glory of his teacher Corvisart, whom several biographers merely regarded as "First Physician to the Emperor Napoleon I". Corvisart, however, had greater claims to medical fame. He rescued the art of percussion invented by Auenbrugger from oblivion, perfected it, and was the father of cardiology. His great work on diseases of the heart and great vessels, which was published in 1806, marks the beginning of the clinical study of cardiology. His numerous distinguished pupils and successors included Bichat, the founder of biology, Bretonneau who discovered diphtheria, Bouillaud who first described the cardiac manifestations of rheumatic fever, Dupuytren who created the school of clinical surgery and Cruveilhier, the celebrated anatomist and pathologist.

Recent Earthquakes

A SEVERE earthquake just before noon G.M.T. on June 26 had its epicentre near the Nicobar Islands in the Bay of Bengal, north-west of Sumatra. It is not yet known how many casualties or how much damage was caused, but only twelve of these British governed islands are inhabited. The amplitudes caused by the earthquake on the seismographs throughout the world were comparable to those caused by the Quetta and Turkish earthquakes.

Earthquakes on the same day were experienced in eastern Morocco causing considerable damage but few casualties.

The U.S. Coast and Geodetic Survey, in co-operation with Science Service and the Jesuit Seismological Association has calculated the provisional epicentres of the earthquakes of April 1, 3 and 7. The first was south of the Alaskan Peninsula near 56°0' N., 153°0' W., at 10h. 41.1m. G.M.T. The second was in Chile near 25° S., 69° W. at 15h. 21m. G.M.T. with a depth of focus near 200 km. The third was in the Caribbean Sea south of Jamaica near 17°6' N., 78°3' W. at 23h. 29.3m. G.M.T. All are in well-known seismic regions.

Institute of Fuel: Students' Medal

To encourage the preparation of papers by students of fuel technology, the Council of the Institute of Fuel has decided to make an annual award of a medal, together with a prize consisting of books and/or instruments to the value of £5, for a paper submitted by a student member of the Institute or by a student less than twenty-five years of age of any university or technical college in the United

Kingdom. The paper must deal with some subject relating to the preparation or utilization of fuel, or allied subjects. Papers must be submitted to the Secretary of the Institute under a *nom de plume*, the name and address of the author being enclosed in a sealed envelope and sent with the paper, and must be received by the Secretary on or before September 1 in any year. Further particulars can be obtained from the Secretary, Institute of Fuel, 30 Bramham Gardens, London, S.W.5.

Announcements

THE Academy of Sciences of the U.S.S.R. has awarded the Pavlov Prize for 1940 to Prof. Maria K. Petrowa, professor at the Pavlov Institute of Physiology.

THE Royal Swedish Academy of Science has elected Sir Thomas Lewis, physician-in-charge of the Department of Clinical Research at University College Hospital, London, a foreign member of the Faculty of Medical Research.

MISS JULIA BELL, honorary Galton research fellow of University College, London, and member of the scientific staff of the Medical Research Council, has been awarded the Weldon Memorial Prize for 1941 of the University of Oxford.

MR. GRIFFITH BREWER has been elected president of the Royal Aeronautical Society for the year October 1941-September 1942; Prof. L. Bairstow, Mr. W. C. Devereux and the Right Hon. J. T. C. Moore-Brabazon have been elected vice-presidents for the same period.

PROF. CARL NEUBERG, formerly professor in biochemistry in Berlin, Amsterdam and Jerusalem, has been appointed professor of biochemistry at the New York University College of Arts and Science.

THE title of honorary reader in organic chemistry in the University of Leeds has been conferred upon Dr. J. W. Baker, lecturer in the Department of Organic Chemistry. Mr. T. G. Bridgwood has been appointed lecturer in electrical engineering.

The Council has agreed, on the recommendation of the Senate, that in general all men students of the University of seventeen and above should be required to become (if not already) members of the Senior Training Corps or the Air Training Squadron, or alternatively to undertake some other form of national service approved for the purpose.

A RESEARCH scholarship of the value of £250 per annum and tenable for two years has been founded by the Wrought Light Alloys Development Association to encourage and facilitate research in the application of light alloys to ship construction. The scholarship will be administered by a committee of the Institution of Naval Architects and it is hoped to make the award in September 1941. Full particulars of entry, which closes on July 31, can be obtained from the Secretary, Institution of Naval Architects, 10 Upper Belgrave Street, London, S.W.1.