

yet known as to the causes of silicosis, etc. The suggestion is made that the incidence of silicosis may in large measure be due to the riding of men on 'spakes'. The essential thing is that up to the end of December 1934 there have been a great many deaths in the country from silicosis, of which more than 50 per cent have occurred in the anthracite area of South Wales. Other subjects treated in the report before us are underground illumination, utilisation of coal by converting coke oven gas into gas with high calorific value, the quantity of firedamp in coal seams as worked, the pressure not having been investigated, spontaneous combustion in coal mines, control of atmospheric conditions in hot and deep mines, whilst investigations connected with the Gresford disaster apparently have occupied a great deal of the time and energies of the Research Laboratory, of which the late Prof. J. S. Haldane was director.

Land Utilisation Survey

THE fifth annual report of the Land Utilisation Survey of Britain has recently been published. It records the number of published sheets as thirty-two, with twenty more sheets scheduled for publication in the near future. The completed survey will comprise 235 sheets. Most of the field work has now been completed, but there are still gaps, notably in East Cornwall, Herefordshire, the West Riding and parts of Wales. It is planned to issue eventually eighty-seven county reports. These will analyse the distribution of each type of utilisation and, where information is available, compare to-day's conditions with those of the past. The utilisation of the land will be correlated with soil conditions. Each county report will be published at one shilling. It may be noted that the relevant maps have been called for by the Commissioner of the Special (Depressed) Areas in order to indicate what land is still available for settlement or development. The cost of publishing a sheet is roughly £100, and various county authorities and universities have made contributions to the sheets of their areas. In other cases the ordering of large numbers of sheets for educational purposes has enabled publication to take place. The director, Dr. Dudley Stamp, appeals for more help of this kind. The headquarters of the Survey is the London School of Economics, where offers of help should be addressed.

Lasting Qualities of Printing Paper

THIRTY-THREE years ago the Carnegie Institution of Washington, after careful inquiry, decided that papers made of rags of the best grade gave the greatest promise of durability, and since then the more important books published by the Institution have been printed upon specially made all-rag paper (Carnegie Inst., Washington, Report of Editor of Division of Publications for year 1934-35, p. 371). Increasing costs of such paper, together with the fact that the supremacy of all-rag paper has been challenged, led to a new investigation, which has just been completed. The value of rag paper is confirmed, for all investigators agreed about its satisfactory

behaviour over long periods, but attention is directed to factors other than quality which affect the lasting property of paper. For example, disintegration is hastened when paper is stored in atmospheres rendered acidic by the presence of sulphur dioxide. It is recommended that permanent records should be stored under controlled atmospheric conditions of 50 per cent relative humidity and 70°-75° F. temperature. It is doubtful if paper made from chemically treated wood fibres would stand as well, but the evidence is not strong enough to induce the Institute to cast aside its rags.

Tests on Wood Boxes and Crates

THE United States Forest Products Laboratory has already undertaken detailed scientific and engineering tests on wood boxes and crates. Fibre-board boxes and other shipping containers are now to be subjected to similar tests, according to Science Service, of Washington, D.C. These latter now constitute business amounting to 165,000,000 dollars in the United States. It is said that these fibre boxes and containers are on a largely empirical basis, and the unavoidable losses are as yet unknown. The investigation will take place in the pulp and paper section of the Laboratory, since fibre box paper is largely made from waste, such as newsprint, in combination with new pulp. The strength tests of the paper will be carried out with the use of highly accurate scientific instruments. These include a Tuckerman optical strain gauge which, under rigidly controlled atmospheric humidity conditions, tells the degree of stiffness in small strips of paper. A tiny mirror, rotating as the paper is stretched, throws a beam of light on a small scale which indicates the amount of stretch. Strength formulæ so derived will be correlated with others obtained from tests on the strength of finished fibre boards, as well as others calculated from tests of completed boxes. A circular rotating drum will be used for tests on completed boxes, both full and empty; the drum when revolved jolts, drops, and slides boxes round in a fashion similar to the treatment they are subjected to in transit by rail, ship or lorry.

Handbook of International Organisations

A RECORD of international organisations is kept by the Section of International Bureaux of the League of Nations, and is published as a half-yearly "Bulletin of Information on the Work of International Organisations", and collected and compressed in a "Handbook of International Organisations", of which the last Supplement is dated 1931. The information contained relates not to work organised by the League but to the voluntary international societies—"organisations internationales privées"—which exist outside the League, many of which are older than the League. They have an independent life of their own, but keep touch with the League. There appear to be certain features common to a number of these organisations and their conferences; for example, several of them feel the need of specialist international

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