

Since the outbreak of the War this bibliographic work has found and met an increased demand; an extensive annotated bibliography on steel sheet and strip issued in three parts has been in particularly heavy request from other parts of Great Britain and from overseas. Encouraged by this demand from a wider area, the City Librarian has prepared a list of recently compiled bibliographies; the subjects at present available include: acid tanks; austenitic steels; auto-fretage process; bending, straightening and reeling of steel; bonus systems; cold drawing of steel; cold heading of steel; cold pressing: colloidal metals; colouring of metals; decarburization of metals by hydrogen; electrolytic pickling and polishing; extrusion of steel; fatigue of metals; fluorspar-froth flotation; ingots: segregation and crystallization; patents on rock drill bits; manufacture of steel tubes; polarography; riveting of steel; rolling mills; spinning of steel; steel manufacture and properties; sulphur and phosphorus determination in iron and steel; tool steels; vertical boring mills; workshop practice and machine tools (books only). Applications for copies of any of the lists should be sent, with 3*d.* to cover postage, to the Central Library, Sheffield, 1.

The Lister Institute of Preventive Medicine

THOUGH damaged on two occasions and partly evacuated, the Lister Institute of Preventive Medicine has spent an active year, as shown by its annual report. As usual, the work has covered a wide field, including studies on antigens, phosphorylation in osteoid tissue, fat metabolism, and mucolytic enzymes. The Division of Nutrition, working at Cambridge and East Malling, has continued its vitamin studies. The Cambridge group has in particular investigated the nutritive value of different portions of the wheat grain and has been instrumental in recommending the use of 85 per cent extraction flour with added calcium for bread-making; the national wheatmeal flour is of this extraction, but the decision to add calcium to it has not yet been taken. The nutritive value of yeast has also been investigated, and this work is of particular importance since it is easy to grow yeast on certain waste materials, thereby providing a human food rich in first-class protein and vitamins of the B group. Dr. Zilva, at East Malling, has continued his work on vitamin C.

The Henry Lester Institute of Medical Research

The Henry Lester Institute of Medical Research, Shanghai, has also recently issued its annual report, and this shows that all activities have had to be restricted owing to the war in China. Studies on nutrition occupy a large part of the report, and Prof. Earle, who has recently been visiting Great Britain, states that "it is remarkable how many clinical signs and symptoms among Chinese patients can now be explained in terms of vitamin and mineral deficiency". Apart from many cases of two classical deficiency diseases—beriberi and pellagra—it has recently been found that ariboflavinosis is very

common among the Chinese: more than a hundred cases were investigated during the latter part of the year. Deficiency of riboflavin is the latest recruit to human deficiency diseases, and has been shown by Sebrell to be surprisingly common in the United States. The condition, which includes eye and mouth lesions, undoubtedly occurs also in Great Britain.

Winter Wheat Seed

THE Council of the National Institute of Agricultural Botany, Cambridge, has decided to offer for sale about a hundred quarters of Steadfast, a winter wheat bred by Prof. F. L. Engledow, of the Cambridge University Plant Breeding Institute. Hitherto the wheat has been grown in the Institute's trials under the number 198 (20*c*). Orders are invited from members of the Agricultural Seed Trade Association, National Association of Corn and Agricultural Merchants, National Association of British and Irish Millers, and other established dealers in seed corn. Steadfast is the outcome of a cross between Little Joss and Victor, and as regards general habit, growth and type of ear is intermediate between the parent varieties. It possesses the excellent tillering properties of Little Joss, and ripens at the same time, and requires the same seed rate. The straw is shorter and its resistance to lodging is superior to that of Little Joss, but it has the same resilience and excellent thatching and feeding properties of that variety. As regards milling quality, Steadfast approximates the bread-making value of the 'softer' English wheats; it does not attain the exceptional quality of Yeoman or Holdfast. It is particularly suited to light and medium soils, but also thrives on the Black Fen, where its resistance to yellow rust will be specially valuable.

A Film Studio Electrical Installation

MR. F. V. HAUSER, chief engineer of two studio groups at Denham (Uxbridge, Middlesex) and Pinewood (Iver, Bucks), comprising twelve stages with a plant capacity of 7,000 kw., recently gave an illustrated lecture about studios to the Association of Supervising Electrical Engineers in London. Confining his detailed description to the Pinewood installation, Mr. Hauser said that the maximum electric demand for studio photographic purposes approximated to 2,000 kw. As D.C. at low voltage is necessary for arc lighting, five electric diesel generators totalling 2,360 kw. have been installed with three-wire distribution at 230/115 v. for studio lighting and at 230 v. only for all other purposes. To reduce noise and vibration, the engine foundations were formed of single island rafts of concrete 2 ft. thick, set 9 ft. below floor level and covered with a 2.5 inch sandwich of 'Coresil' cork on which rested a common concrete block 7 ft. deep, the whole weighing 1,000 tons. The insulating air space around the foundation is 9 in. wide.

To minimize voltage ripple (hum) interfering with sound recording, the generators have graded air gaps, specially shaped pole faces and skewed armature

slots, so avoiding the expense of heavy smoothing choke coils in main feeders and individual arc lamp circuits. The studio switchboards (four 3,000 amp. and three 5,000 amp. panels) and distribution features include bare aluminium ring mains (19,500 ft., weighing nearly 34 tons) supported by 'Sindanyo' racks attached to the roof steelwork, descending in sheet steel conduit to distribution boards at floor level, which are equipped with audible and visible signals for the overhead distribution 'grid' attendants. The object is to keep the floor free from trailing cables and feeding points, lighting equipment being stored overhead in the grid for quick lowering. Master control is exercised within the studio from a mobile desk on castors, plug-connected by a fifty-line multiple cable.

Recent Earthquakes

THE Jesuit Seismological Association at Saint Louis, U.S.A., has determined tentatively the epicentres of the recent earthquakes. From the readings of seismograms from eight stations the earthquake of June 27 at 17h. 11m. 30s. G.M.T. was found to have an epicentre near 16° N., 93° W., which is south-west of La Concordia in southern Mexico. By the Brunner chart the depth of focus was estimated to be 200 km., which is somewhat unusually deep for the fairly frequent normal and intermediate earthquakes in this area. From the readings of seismograms from sixteen stations the earthquake of July 1, at 7h. 50m. 57s. G.M.T., was found to have an epicentre near 34.4° N., 119.5° W. Damage by this earthquake was done in and about Santa Barbara, California, and the agreement is good. From the interpretations of records from ten seismographic stations the epicentre of the earthquake of July 3, at 7h. 11m. 51s. G.M.T., was found to be near 31° S., 68.7° W. This earthquake was felt at Mendoza in the Argentine Republic.

On August 15, a strong earthquake giving a full suite of pulses was recorded at Kew Observatory. The preliminary pulses registered at 6h. 16m. 45s. G.M.T., *S* at 6h. 22m. 42s., *M* at 6h. 29m. 34s. and the earthquake finished recording at 10h. 10m. having lasted nearly four hours. The maximum ground amplitude at Kew was 82μ and from the above tentative interpretation of the record the epicentre has been estimated to have been 4,330 km. distant from Kew.

Disease in New South Wales

ACCORDING to Dr. E. Sydney Morris, director-general of public health of the State of New South Wales, the chief event in the State since 1875 has been the rapid growth of Sydney, so that though the State is about 95 per cent rural the population has become increasingly urban. In 1939 the population was 2,749,134, of whom 1,380,940 lived in the metropolitan area of Sydney. Since 1875 the mortality from tuberculosis in New South Wales has dropped steadily, whereas the cancer mortality has increased at nearly the same rate. In 1875 the tuberculosis mortality was 154 and the cancer mor-

tality 31 per 100,000 population. In 1895 the rates were respectively 109 and 44, in 1935 they were 105 and 39, and in 1939 tuberculosis fell to 37 and cancer rose to 113. The mortality from heart disease has shown an enormous rise in recent years. In 1875 it was 79; it fell to 57 in 1893, and has since risen, at first slowly and then rapidly, to 259 in 1939. As regards infectious diseases, influenza showed a mortality of about 5 until the great epidemic of 1891, when it rose to 87; it dropped to 8 in 1893 and 5 in 1917. In 1919, it rose to 319.3, and in 1920 it fell again to 18. Since then it has shown abrupt rises and falls. In 1899, when the incidence of scarlet fever was the highest on record (48.5 per 10,000 population), the mortality from this disease (2 per 100,000) was the lowest recorded until then. The mortality from measles has shown a great reduction in the height of the peaks since 1915 and a smaller incidence in the intervening troughs.

Population of Sweden

ACCORDING to preliminary estimates of the Central Office of Statistics, the population of Sweden in 1940 was 6,370,964. Comparison with the figure at the end of 1939 shows that the population has increased by about 30,000, corresponding to 4.68 per thousand. The growth of the population was split up as follows: 1,648 in the country, where there are at present 3,990,114 inhabitants, and 27,977 in the towns, where the population is now 2,380,850. Preliminary statistics for births and deaths during the past year show the following figures: 95,457 births and 72,584 deaths, that is, a surplus of births of 22,873, of which 12,927 were in the country. Lastly, there were 6,870 immigrants and 3,186 emigrants, giving a net surplus of 3,684.

Announcements

IT has now been announced that Prof. L. G. M. Baas-Becking, who was placed in custody in a prison in Scheveningen, Holland (*NATURE*, May 17, p. 606), has now been released by the German authorities and has assumed again the directorship of the Botanical Institute of the University of Leyden.

THE Joint Committee for Scientific, Technical and Engineering Supervisory Staffs, of 30 Bedford Row, London, W.C.1, has arranged a meeting and exhibition of technical films chosen to show the applications of scientific and technical advances in industrial processes, to be held at the Portland Hall, Little Tichfield Street, London, on October 11 at 3 p.m.

THE library of the University of Louvain, which was damaged in the War of 1914-18 and rebuilt largely through American generosity, was again destroyed in May 1940. Of the 900,000 books only 15,000 survive, of 800 manuscripts only 15; 3,000 collections of periodicals were completely destroyed by fire, likewise 811 incunabula and 200 valuable engravings, including some by Dürer and Holbein and 22,606 photographs of all known Coptic manuscripts.