emerges from its present difficulties it seems reasonable to believe that a standard of efficiency of production will have been achieved such as was undreamt of in the prosperous time which formerly prevailed.

Briquette Method of Reafforestation

A SOMEWHAT novel method of sowing tree seeds is alluded to by Prof. Svend Heiberg, of the Department of Sylviculture of the New York State College of Forestry at Syracuse, in a Science Service Bulletin, dated June 29. Prof. Heiberg has been studying forestry methods in Europe, and was interested in a new type of seed-sowing developed in Norway which he terms "planting forests by the brick instead of by the tree". The seed bricks or briquettes are made of good soil and are $1\frac{1}{2}$ in. $\times$ $1\frac{1}{2}$ in. in size. Three or four seeds are placed at one end, near the surface. The briquette is then dipped in paraffin wax, except the side in which the seeds have been placed. The result is an easily transported product, which can be placed in the ground by means of a special tool designed for the purpose. A machine can turn out 16,000 briquettes in a day. Prof. Heiberg suggests that the idle lands of the United States may be reafforested by planting briquettes instead of trees. He has been experimenting with this new system of planting or sowing at the College, but has not yet had time to decide upon its successful possibilities. He realises that the method would only be practicable on bare land free of heavy weed growth. In the absence of any figures of cost and of data of success achieved, it is not possible to compare the cost of the method with ordinary broadcasting or patch sowing; but Prof. Heiberg is probably correct to a point in stating that "In the reafforestation of comparatively clear fields the briquette system will do away with tree nurseries. It has other important advantages. It permits the root system to develop normally and also avoids disturbance of the roots at the time of planting"—though these latter apply to all tree seed-sowing.

Tuberculosis in Cattle

THE eradication of tuberculosis from cattle herds is the subject of a recent article by James Mackintosh (*J. Roy. Agric. Soc.*, vol. 92), who, besides describing the steps already taken in England and other countries to reduce the incidence of this disease, offers some practical recommendations as to how it may be more effectively stamped out. Although eradication by means of vaccines designed to confer immunity is still in the experimental stage, the testing and separating of reactors from non-reactors has met with success in northern European countries and seems to be the most hopeful method for adoption in Great Britain. Greater uniformity is, however, desirable in the application and interpretation of these tests. The measures taken under the Tuberculosis Order, 1925, to destroy all animals suffering from 'open' tuberculosis having failed to attain their object in time to be of real value, amplification of the order is recommended so as to ensure a general systematic inspection of cattle, by means of which tubercle-free beef and dairy herds may be built up, with a possible development in the future of definite 'accredited' areas. In this respect the Milk (Special Designations) Order has been of definite use by providing the only official recognition in Great Britain for herds which have been tested and contain no reactors. The practicability of such a scheme as that issued by the National Veterinary Medical Association is made evident and the cost, if shared by the State, the local authorities, and the farmer, should not be heavy, whereas the benefit to the cattle industry and the community in general would be very considerable.

Cockles of the Thames Estuary

IN the *Southend Standard* for Aug. 4 and 11, Mr. Laurence Wells describes the local cockle industry, and has collected much valuable information ("The Cockle Industry of Leigh." Part I., "Early Use of the Cockle as Food and the Rise of the Industry at Leigh-on-Sea". Part II., "Natural History, Distribution, and Economics"). The natural knowledge of the fisherman is extensive. From experience and from observation he has acquired an intimacy with the ways of the cockle which would put many a naturalist to shame. Spawning time, free-swimming larvæ and the effects of the weather on them, their growing stages, and the strange sounds made by the young under the sand are all known to them. To the different parts of the animal he gives special names. He knows that if conditions are unfavourable the cockles may migrate to more pleasant surroundings. Cockles have been collected at Leigh for more than 150 years. To-day the industry is thriving and affords work for a number of men and women. The sand-banks and flats of the Thames estuary afford a habitat admirably suited to the needs of these bivalves, from Shoeburry Sands for the whole length of the Maplin and Foulness Sands, known collectively as the "Maplins". The Leigh men also work along the Kent side as far as the Whitstable Flats; for 60,000 cwt. of cockles, minus the shells, are demanded from them annually, valued at £11,000. The boats are of a special design and peculiar to Leigh. The cockles are collected with a special rake and are cooked, according to law, in a steam oven, before being sent to market. Apart from the sale of the cockles themselves, there is a thriving industry in by-products from the shells. A complete account of the cockle, both historical and biological, is given in Mr. Wells's interesting article.

Electric Power and Village Industries

THE 'Sofina' (Société Financière de Transports et d'Entreprises Industrielles) controls a large number of industrial undertakings in all parts of the world. In its third annual report, interesting data are given of the rapid increase in the rate of the substitution of small electric motors in place of hand power in certain districts in France. In the St. Etienne district, for example, the small workshops have increased more than fifty times during the last seven years. The number of looms in 1925 was 214, but it has now increased to more than 11,000. In the Roanne district, the number of family weaving workshops has trebled in nine years. Home workshops for machining cycle parts have increased greatly all over France. It is pointed out that this substitution has enabled the

family workshop to compete against the large factory. In the Jura department, communal workshops have placed four hundred electric lathes at the disposal of the woodworkers. This utilisation of electric power by cottages has an effect in keeping the country dwellers from drifting to the larger cities, and thus mitigates some of the social problems which many nations are finding so difficult at the present time. In Great Britain, the transmission system—the grid—will soon supply cheap electric power to several country districts. In these districts it will be possible to establish suitable village industries on a commercial basis. In time this should have the effect of easing the economic crisis. Probably training schools for craftsmanship will have to be established. If electric power is sufficiently cheap, small electric motors should enable the weaving industries to flourish in villages.

Studies of Geophysical Methods, 1928 and 1929

THE Geological Survey of the Canadian Department of Mines has published, as *Memoir* 165 (Ottawa, pp. 225; 1931, 45 cents), a valuable account, under the above title, of an impartial investigation of various methods of geophysical prospecting. Electrical methods were applied in 1928 to the Abana mines property, Quebec, by generous permission of the owning company, and three electrical prospecting companies accepted an invitation from the Geological Survey to demonstrate their methods on this comparatively suitable deposit; the work was done at their own expense, under the observation of officers, both physical and geological, of the Survey. The geological, electric, and magnetic surveys showed that the physical conditions existing in the Abana mineral deposits are complex, but that, nevertheless, the magnetic and electric methods of prospecting, when used intelligently, are feasible and productive of valuable results. The work in any new area must still be to a large extent an original research, requiring the use of highly trained and skilled men. Further work on the Abana property, and elsewhere, was done in 1929, partly in co-operation with the U.S. Bureau of Mines and (in gravity work) with the Dominion Observatory of Canada. At the Errington Mine, Ontario, an area was met "for the first time" where, in the present state of our knowledge, geophysical methods were of small avail, and where the diamond drill under the direction of geologists and mining engineers was the sole guide to further discovery.

Actinometric Bibliography

THE Association of Meteorology of the International Union for Geodesy and Geophysics, at its Stockholm meeting in 1930, gave a subvention for the preparation of a bibliography, or rather a series of short abstracts, of papers on actinometry. These are prepared under the supervision of M. Wehrlé, secretary of the Association, at the French National Meteorological Office, by M. Volochine; where possible, the abstract is provided by the author, and English, French, and German versions of the abstracts are available, at the choice of subscribers. Each abstract is on a single leaflet, of convenient size for binding; the leaflets are well reproduced by lithography from typescript. The normal annual number of leaflets will be 300-400, but the bibliography is to be retrospective, covering the last thirty years; this work, involving about 2000 leaflets, being planned to occupy about two years. The leaflets are to be sent to subscribers in packets of fifty. Subscriptions are invited, though the amount of subscription will not be fixed until the demand for the leaflets is ascertained; it is expected, however, to be about 120 francs per year (for 400 leaflets), and 600 francs for the retrospective bibliography (for 2000 leaflets). Intending subscribers should write to M. Wehrlé, at l'Office Nationale Météorologique, Paris.

Turquoise Mosaic Plaque from Chichen Itza

A MOSAIC plaque of turquoise and jade, it is announced by Science Service, of Washington, D.C., has been discovered under the Castillo mound, in the ruined city of Chichen Itza, Yucatan. This announcement recalls the discovery, also at Chichen Itza, of a similar plaque—one of the most remarkable objects of the art of the ancient Mayas ever found—which was made in 1928 by an expedition sent out by the Carnegie Institution of Washington. This plaque was made of turquoise mosaic on a foundation of wood, which had perished. The services of a museum expert were requisitioned from New York for its removal. The operation of salvage, which necessitated the improvisation of a special technique on the spot, took three months to complete. The plaque was exhibited for the first time at the International Congress of Americanists which met in New York in September 1928. The plaque which has recently been found is described as a mosaic of turquoise and jade, and, like the preceding find, is on a foundation of wood, now decomposed. It lies in a stone box under a number of fragile articles not yet removed. The tomb under the mound appears to be a secondary burial, and turquoise spearheads may indicate that the occupant was a warrior.

Announcements

THE Alexander Pedler Lecture of the British Science Guild will be given this year, under the joint auspices of the Burton-on-Trent Natural History and Archæological Society and the Guild, at Burton-on-Trent on Nov. 4, by Prof. F. T. G. Hobday, principal and dean of the Royal Veterinary College, London. Prof. Hobday's lecture will be entitled "Animals as a National Asset and Responsibility". The Norman Lockyer Lecture of the Guild will be delivered on Nov. 22 by Sir Frank E. Smith, secretary of the Department of Scientific and Industrial Research.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in electrical engineering at the Leicester College of Technology—The Registrar (Sept. 12). A lecturer in physiology for education students at the University of Leeds—The Registrar (Sept. 15). A lecturer in physical chemistry at Auckland University College, University of New Zealand—The Secretary of the Universities Bureau of the British Empire, 88A Gower Street, W.C.1 (Oct. 10). An assistant bacteriologist at the Royal Institute of Public Health—The Secretary, 23 Queen Square, W.C.1.