tuber—about 90 per cent of the whole—can be used as food. It is said that tips yield as well as whole tubers and that their produce is less subject to disease. In 1942, in the U.S.S.R., 250,000 acres were sown with potato tips, and it is anticipated that ten times this area will be thus sown in 1943. This would mean an additional 8 or 9 million tons of potatoes in 1943 without having appreciably reduced the quantity available for food and industry in 1942.

Methods of Clearing Derelict Land

THE clearing and reclamation of derelict land has become an urgent problem on many farms in Britain to-day. In view of the recent developments in the mechanization of British agriculture, the new edition of Bulletin No. 101, "Hedge and Tree-Stump Clearing", by T. Swarbrick, recently published by the Ministry of Agriculture (price 6*d*.), should prove of great help to farmers faced with probably unfamiliar operations. The methods recommended fall into four groups: hand methods, the use of power, chemical agents and explosives. The means selected depends upon a variety of circumstances. Much can be done with timber jacks and monkey winches, especially when isolated trees are the chief problem. If hedges also need removing and no tractor is available, the use of a monkey winch in conjunction with explosives is suggested, for horses can then pull out the small stuff. As regards power methods, the track-laying type of tractor is undoubtedly most suitable for land clearing, but it is essential that full use be made of the dead weight of the tractor, its drawbar pull and the leverage exerted by making a high hitch on the tree and a low hitch on the tractor. Other forms of power such as steam tackle, gyro-tillers and bull-dozers can also do most valuable work, if the size of the job justifies the use of expensive equipment. Explosives, particularly gelignite, offer a simple means of removing tree stumps and hedges; full details are given in the bulletin as to how they should be employed. Farmers requiring further information or help are recommended to get in touch with the machinery sections of the county war agricultural committees, who are in possession of the necessary tractors and employ full-time machinery officers to organize the equipment.

School Science Teaching

THE recent issue of the *School Science Review* (No. 92, Nov. 1942) contains an interesting article, "School Science Teaching after the War", by Mr. E. T. Harris. Mr. Harris points out that science teaching before the War was greatly affected by economic and social conditions which, in some cases, created a hostile attitude. But now, due to its contribution to the war effort, science is valued and appreciated. The changed social conditions likely to prevail after the War should give impetus to the modern movement to stress the applications of science, but the principles should not be omitted. ". . . Science is a social phenomenon, and is only to be understood in relation to the human society in which it has developed and is developing. Its principles and its applications are closely interrelated aspects of the same social phenomenon, and they must be studied in conjunction." In discussing how this principle may be applied in teaching, Mr. Harris cites the introduction of general science and the greater attention which biology is receiving nowadays (see NATURE, 149, 456; April 25, 1942). There are two aspects to the study of science, (1) its historical and logical development and its social uses, and (2) its application to the pupil's life—his home, body, food, etc. Later in the science course should come a broadening of these early ideas, so that science is regarded as a struggle of mankind to master Nature for knowledge, power, and freedom.

A New Universal Bevel Protractor

MESSRS. E. R. WATTS & SON, LTD., 123 Camberwell Road, London, S.E.5, have designed and introduced a new type of bevel gauge which should prove a most valuable tool in the engineering workshop for the convenient and accurate measurement of angles. The instrument consists essentially of two straight-edges hinged together by means of the protractor head and capable of being set at any desired angle. The principal feature of this bevel gauge is the circular scale, which is divided accurately on a glass annulus mounted inside the head. The graduations on this scale are read by means of a high-power magnifier attached to the head and giving a wide field of view. The scale is most conveniently observed by looking through the eyepiece when the instrument is held in front of a source of artificial light, and under these conditions angles can be measured to within one twelfth of a degree. The straight-edges or blades are made of hardened steel and one of them is capable of sliding, an arrangement which greatly extends the range of the instrument, and two sizes of blade are provided—6 in. and 12 in. The sliding blade is secured by an eccentric operated by a lever extending from the centre. When fitted with the short sliding blade, the dimensions of the gauge, closed, are $6\frac{1}{2}$ in. × $2\frac{3}{8}$ in. × $1\frac{1}{4}$ in. and its accuracy in measurement is 5 minutes of angle. The blades are secured in angular position by means of a knurled ring concentric with and surrounding the protractor head so that, in all respects, this tool lends itself to rapid and convenient operation.

The Royal Observatory, Cape of Good Hope

THE 1941 report of H.M. Astronomer at the Cape, though showing only too clearly the impact of the War on South African astronomy, contains much of interest. The reversible transit circle has been fairly fully employed in making 7,234 transit observations, including fifty-seven of the moon, which were undertaken in view of the fact that lunar observations have perforce been dropped from the restricted programmes of many European observatories. With the Victoria telescope the stellar parallax programme has been continued, 2,642 plates having been secured during the year. A new determination of the parallax of Proxima Centauri, the star closest to the sun, gives $0{\cdot}763'' \pm 0{\cdot}007''$, in good agreement with the previously accepted figure of $0{\cdot}762'' \pm 0{\cdot}005''$; this should be compared with the value $0{\cdot}756'' \pm 0{\cdot}007''$ for α Centauri. It is interesting to note that during recent years the number of plates used for a parallax determination has increased to thirty, taken over three years or more: this change is fully in accord with the experience gained in the cloudier weather (but better seeing) at Greenwich.

The photoheliograph record of the sun's disc has suffered somewhat from the shortage of fine-grain plates, but a record, either on lantern plates or faster emulsions, was obtained on 311 days. Observations of occultations by the moon indicate a correction of $0{\cdot}77''$ to its ephemeris longitude, which is of course based on Brown's Tables. This correction is expected to reach zero in 1943. Cometary