

much damage. The species concerned is a common one which often causes local and temporary injury to grass. Its appearance in epidemic form on cereals is quite unique in recent times. The reasons for the outbreak are unknown, but they are probably associated with the relatively mild autumn and winter and the advanced condition of the crops. The standard control method would be the application of an insecticidal dust by means of a powder sprayer. The necessary equipment, however, is not available on many farms, and expenditure to meet this treatment seems scarcely justifiable in view of the damage that has already been done. It is probable that the aphids will shortly migrate, while natural enemies are already actively at work.

Metals in Food

THE Society of Public Analysts has issued a useful "Bibliography of the More Important Heavy Metals occurring in Food and Biological Material", the period covered being the years 1921-33. The elements dealt with are antimony, bismuth, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, thallium, tin and zinc. Each reference indicates the nature of the information to be found in the paper. The largest sections deal with copper, lead and manganese, which account for half the references quoted. The pamphlet (30 pages) can be obtained from the Editor of the *Analyst*, 85 Eccleston Square, London, S.W.1 (2s. to members of the Society; 3s. to non-members).

Principles and Design of Precision Gauges

IN these days of motor-cars, electric fittings and so on, everyone learns something of the value of interchangeability of parts and also experiences the disadvantage of finding that a part 'will not fit'. The progress of manufacture, indeed, depends largely on parts being interchangeable, and in mass production it is absolutely necessary to place limits on the permissible variation from standard dimensions. This necessity has given rise to the system of working to gauges, a system which received a great impetus through the manufacture of vast quantities of munitions during the War, and which to-day is perhaps used most extensively in the manufacture of motor-car engines and other parts. From being a comparative novelty, gauging has become a matter of ordinary routine, while the making and testing of gauges has itself become an industry. There will thus be many persons who will be able to appreciate the pamphlet of Mr. R. J. Foster on "The Principle and Design of Precision Gauges for Interchangeability" recently issued by the Association of Engineering and Ship-building Draughtsmen, and published by the *Draughtsman* Publishing Co., Ltd. (2s.). In this the reader will find sections on tolerances and fits and limits, plug gauges, pin gauges, external and internal gauges, height and depth gauges and comparators, together with many sketches and useful notes.

International Geological Congress

PRELIMINARY arrangements are announced from Moscow for the meetings of the Seventeenth International Geological Congress, which is to be held in the U.S.S.R. during the summer of 1937, the year of the twentieth anniversary of the Soviet Government. It is proposed that the first half of August should be devoted to the sessional meetings. The special topics suggested for discussion include petroleum, coal, ore-deposits, rare elements, geophysical methods, the Permian system, tectonic and geochemical problems, the relationship of magmatic rocks and ore-deposits to tectonics, and the history of geological knowledge. Three series of excursions, *A*, *B* and *C*, are provisionally arranged, to take place respectively before, during and after the sessions, the whole programme extending from the beginning of July to the end of September. The *A* series includes excursions to the north (Pre-Cambrian and Khibina Complex); the Urals; the south (Crimea and Donets Basin); the Volga Basin; and the Caucasus. The *C* series are on a larger scale and cover very wide regions. They are described as petroleum and stratigraphical (main oil districts and Central Asia); Central Asia (stratigraphy, tectonics and volcanic phenomena; transcontinental (stratigraphy, tectonics and economic geology of Urals to Soviet Far East); and Turkestan-Siberia (Perm, Altai and Kuznetsk). More detailed descriptions will be given later. Meanwhile inquiries are invited and should be addressed to the Organisation Committee of the Seventeenth International Geological Congress, Moscow, 4, Kotelnicheskaya, Naberezhnaya, 17.

A Recent Sunspot

A FAIRLY large group of sunspots has recently been visible whilst crossing the sun's disc on June 23-July 6 in long. 305° and lat. 24° S. Its area on June 28 was 1000 millionths of the sun's hemisphere, of which 850 millionths was the area of the leader spot. When near central meridian passage, which occurred on June 29-9, the group was visible to the naked eye. Though itself not a return of an individual spot of the previous rotation, the recent spot represented a continuation of localised disturbance which has been apparent for the last two months in this part of the solar surface. In an ordinary telescope, the group has been an interesting object with conspicuous 'bridges' across the leader spot in particular. The spectroscope offered, as usual, a further range of observation. On June 26 at 8^h 45^m G.M.T. a bright eruption took place that was observable visually in the hydrogen *C* line of the solar spectrum and should have been possible to photographic records in the *H* and *K* lines of ionised calcium. The spectroheliograph showed with perfection the contour of the areas of the brilliant hydrogen ($H\alpha$) emission and the dark filaments of gas bordering them at a later stage. The largest radial velocities measured at Greenwich for the absorption filaments were 20 km. a sec. outwards and 60 km. a sec. inwards to the sun. On June 29 at about 8^h 45^m, several moderately large radial

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