between the inversion and the bottom relief, and points out that the depth of the inversion rises and sinks in accordance with the semi-diurnal tide. There are probably also seasonal and aperiodic pulsations. An important paper by W. Horn gives a concise and partly new representation of the tides as a function of time. G. Tomczak describes a wave gauge, an instrument for measuring short-period oscillations of pressure in the sea, and F. Nusser presents a notable report on ice-conditions on and off the German coasts during the severe winter of 1946–47.

Chemical Prevention of Potato Dry Rot Disease

As a result of research during the past five years, Bayer Products, Ltd., Crawley Research Station, Brighton Road, Crawley, Sussex, claim to have developed a highly efficient preparation for the prevention of dry rot of potato tubers caused by the fungus *Fusarium cœruleum*. This preparation, marketed under the trade name of 'Fusarex', is based on 2,3,5,6 tetrachlornitrobenzene, a chemical first described in 1868 by Jungfleish, who prepared it by treating tetrachlorbenzene with fuming nitric acid for some hours at near boiling point. 'Fusarex' is most effective for the control of dry rot when applied to the tubers immediately on lifting, followed by a period of four to six weeks storage in a clamp. It has been found in trials that the preparation does not need to cover each potato completely so long as an even distribution through the mass of tubers is obtained. Thus a simple manual application can be employed, involving no expense in labour or machinery, and no interference with the normal lifting operations. It has also been found that suitable 'Fusarex' treatment and storage conditions can delay the development of sprouts by the tubers. The treatment of main-crop varieties to prevent sprouting is now a practical proposition; but special techniques are still being worked out for early varieties. Intensive pharmacological tests have shown that tetrachlornitrobenzene is of such a low order of toxicity that it can be regarded as non-poisonous under the conditions of use suggested, and it is therefore safe to use on potatoes destined for human consumption and stock feeding.

Jewels for Instruments

A REVISED edition of "British Standard 904", first issued in 1940, has recently been published (British Standard 904 : 1948. Dimensions of Instrument Jewels. Pp. 12. (London : British Standards Institution, 1948.) 2s. net). The forms and dimensions of V-jewels, ring stones and end stones for instrument purposes, and compass jewels, are specified ; and in an appendix the method and apparatus required for the inspection of jewels is described. The Standard does not relate to jewels for watches and clocks, for which a separate British Standard is being prepared, nor to cup jewels for integrating meters, the form of which is still the subject of research.

Sun-Bathing by Birds

RECENT communications to *British Birds* have directed attention to the widespread occurrence of the habit of sun-bathing among birds. The question has been raised "whether irradiation of the skin, with its consequent effect of vitamin D production, could take place through sun-bathing". Prof. W. C. Wynne-Edwards has stated that direct irradiation of the skin is usually impossible in both birds and mammals because of their thick coats. From observ-ations lasting over sixteen years, however, Noble Rollin has collected photographs and information which lead him to the belief that irradiation of the skin takes place among jackdaws, chaffinches, blackbirds, hedge-sparrows and house-martins, although no evidence of sun-bathing has been observed among gulls and wading birds (*British Birds*, **41**, No. 10 ; October 1948).

Science Progress

AMONG the articles in the current issue of *Science Progress* (**36**, No. 144 ; October 1948) is one which has not only the appeal of a biography of a well-known man of science but also the charm of writing which reminds one of Maurois. This is "Augustin Fresnel : His Time, Life and Work, 1788–1827", by G. A. Boutry, director of the Laboratoire d'Essais, Paris. In the same volume Prof. H. P. Himsworth contributes a masterly survey of recent developments in the researches into liver disease, while E. E. Schneider's review of contemporary knowledge of the electronic structure of solids and H. H. Macey's consideration of the theoretical aspects of clay consolidation are supported by an article on the relationship between "Indeterminism and the Wish" by J. C. Gregory. The volume also contains the usual summary of recent advances in various aspects of science and a considerable number of reviews.

Proceedings of the Physical Society

IN order to accommodate the increased number of papers submitted for publication, the *Proceedings of the Physical Society* is to appear in two parts, A and B. *Proceedings A* will include a contents list of the corresponding *Proceedings B* and vice versa. Section A will include subjects such as quantum theory, statistical mechanics, nuclear physics and cosmic rays, atomic physics, molecules, spectra, theories of solids, liquids and gases, surface phenomena, growth and properties of crystals, crystal structure, luminescence, electrodynamics, heat and thermodynamics, standards. Section B will include subjects such as acoustics, including ultrasonics, optical design, electron optics, colour, elasticity and other mechanical properties of solids and liquids, crystal structure analysis, magnetic materials, refrigeration and liquefaction, electric discharges, radio, geophysics, including ionosphere, astrophysics, solar physics.

International Congress of Mathematicians

AN International Congress of Mathematicians will be held in Cambridge, Massachusetts, during August 30–September 6, 1950, under the auspices of the American Mathematical Society. It will be open to mathematicians of all national and geographical groups. Harvard University will be the principal host institution. A number of other institutions in Boston will join in the entertainment of Congress visitors. In recent years, mathematicians have been much impressed by the success of the conference method for presenting recent research in fields in which vigorous advances have just been made or are in progress. The 1950 Congress will include conferences in several fields. Following established custom, there will also be a number of invited addresses by outstanding mathematicians. In addition, sectional meetings for the presentation of contributed papers not included in conference programmes will be held in the following fields : I, Algebra and Theory of Numbers ; II, Analysis ; III, Geometry and Topology ; IV, Probability and