WE have received from Messrs. Negretti and Zambra the "Easy Setter" Thermometer Case. It consists of a clinical thermometer case of the usual type with a screw-on cap and provided with two short arms placed at right angles to the main part of the stem just below the cap. One arm is fixed to the stem, while the other is covered by a loose cylinder, so that by holding this arm between the thumb and forefinger the whole case can be made to rotate on this arm as axis. The fixed arm is milled to give purchase to the thumb and forefinger of the opposite hand in spinning the case. The principle is that of the centrifuge. The thermometer is placed in its case with the bulb downwards, the cap screwed on, and the instrument spun, when the mercury falls towards the bulb. The necessity of shaking the thermometer is thus obviated.

AN article appears in the *Fortnightly Review* for December, by J. B. C. Kershaw, on the domestic smoke problem. Data are available which show that the burning of coal in open grates contributes very largely to the haze of smoke which hangs over large towns. The use of gas coke and anthracite in closed stoves and of coal gas for heating has solved part of the domestic smoke problem, but the use of smokeless fuels in the open grate is essential before houses can be run without the production of any smoke whatever. We have also received a copy of the sixth report of the Smoke Abatement League of Great Britain, containing accounts of the annual meeting, smoke abatement exhibition, "smoke weeks," exhibits, lectures, literature, etc. The work of the League is fostered by local authorities, but the report indicates that it is hampered by lack of means.

AMONG the announcements by the Cambridge University Press of forthcoming books are "Clouds and Weather Phenomena," by C. J. P. Cave, the aim of which is the explanation of clouds, rainbows, mirages, the colours of the sky, and other atmospheric phenomena, and part 4 of "Ticks," which work is by Prof. G. H. F. Nuttall and others. The new part is by Dr. L. E. Robinson and deals with the genus Amblyomma.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A junior assistant in the physics department of the National Physical Laboratory, Teddington—The Director (February 1). Three technical assistants in the Torpedoes and Mining Department of the Admiralty—The Secretary of the Admiralty (C.E. Branch), Whitehall, S.W.1 (February 5). A junior scientific assistant in the Ignition and Electrical Department of the Royal Aircraft Establishment to assist in research in connexion with aircraft appliances—The Superintendent, Royal Aircraft Establishment, South Farnborough, Hants (February 13, quoting A. 78). The Wilson Philological lectureship for 1926–27 in the University of Bombay—The Registrar, the University, Bombay (March 10). An assistant physicist to the Linen Industry Research Association, Lambeg, Co. Antrim—The Secretary.

Our Astronomical Column.

THE NEW COSMOGONY.—An interesting article by Dr. J. H. Jeans on "The New Outlook in Cosmogony" appears in the December number of *The Nineteenth Century*. "We now get the best picture of the universe," he says, "by thinking of it as consisting of a number of sub-universes, detached from one another like islands in an ocean." Our own star-system is one such universe—"a very big island indeed, with the sun not far from its centre."

Space is not infinite, so that there are a finite number of sub-universes. As a guess we may suppose that the most remote bodies of all in our universe are at four million light-years from us. The Andromeda nebula and the star cluster N.G.C. 6822, the most remote bodies the distances of which are yet known, appear to be about one million light-years away. The history of this universe is investigated in terms of the energy changes which we deduce must occur from the fact that the stars radiate more energy than they receive. All possible sources of their energy so far suggested have proved to be altogether inadequate except that arising from the annihilation of mass. According to the theory of relativity, loss of energy must entail loss of mass, and if we suppose the mass lost to be the actual "material" mass of the atoms—the so-called "rest-mass"—then there is a sufficient store to account for stellar radiation over the periods indicated by geological and other evidence.

The life of a star on this hypothesis can be calculated, and comes out to about 200 million million years. The sun has at present lived about seven million million years, so that the greater part of its life has yet to come, although as regards magnificence it has been and will be continuously on the wane. The great length of stellar life now contemplated makes it possible that many solar systems such as ours have been formed in the past by the close approach of two stars, although, even now, "a small proportion only of the stars in the sky are likely to be surrounded by families of planets and so to form possible abodes of life." Dr. Jeans sees no prospect of a utilitarian application of the conversion of mass into energy. "So far as can at present be seen, this dream is not destined to be fulfilled."

THE BRIGHTNESS OF SATURN'S RING.—B. Fessenkoff of the Astrophysical Institution, Moscow, describes in *Astr. Nachr.*, No. 5408, some interesting comparisons of the brightness of Saturn's ring as compared with the centre of the disc; the observations were made by him and Mr. Vsechsviatsky, using a Rosenberg-surface-photometer on the 7-inch refractor of the Koutchino Observatory.

A square 5″ in the side at the centre of the disc was compared with an equal square at each ansa of the ring. The result of comparisons on five nights in June last is that the centre is brighter than the western ansa by $0{\cdot}414 \pm 0{\cdot}0104$ magnitudes, and than the eastern ansa by $0{\cdot}317 \pm 0{\cdot}0057$ magnitudes. The difference of 0·1 mag. between west and east was clearly shown, but can scarcely be permanent. The above differences do not directly apply to albedo, since the centre of the disc is vertically illuminated by the sun, while the illumination of the ring is very oblique. Moreover, the measures were apparently made on the outer ring A, which is well known to be considerably less bright than the outer part of ring B. Thus the albedo of the latter probably exceeds that of the disc, a result that has been obtained from earlier measures.