Economics—The Academic Registrar, University of London, South Kensington, S.W.7 (January 22). A medical superintendent in the Infectious Hospitals Service of the Metropolitan Asylums Board—Clerk to the Metropolitan Asylums Board, Victoria Embankment, E.C.4 (January 26). An electrical engineer and electric inspector for the public works department of the Government of Bihar and Orissa—The Secretary to the High Commissioner for India, 42 Grosvenor Gardens, S.W.1 (January 29). An assistant engineer and a junior assistant engineer at the Fuel Research Station, East Greenwich, for research work in connexion with coal purification and internal combustion engines respectively—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, Westminster, S.W.1 (January 30). A forestry inspector in the Lands and Agriculture Department of the Irish Free State—The Secretary, Civil Service Commission, 33 St. Stephen's Green, Dublin (January 30). Sir Ernest Cassel readerships in economic geography and in foreign trade at the London School of Economics—The Academic Registrar, University of London, South Kensington, S.W.7 (March 9). A director of research in animal diseases under the Animal Diseases Research Association—The Secretary, 83 Buccleuch Street, Glasgow (March 27). A computer for the Cadastral Framework Party, Gold Coast Survey Department—Crown Agents for the Colonies, 4 Millbank, S.W.1 (quoting M/13965). A chief engineer for the Public Works Department of the Government of Nyasaland—Crown Agents for the Colonies, 4 Millbank, S.W.1 (quoting M/14046).

Our Astronomical Column.

THE TOTAL ECLIPSE OF THE SUN, JANUARY 14.—It is hoped that fine weather has favoured the various expeditions sent to stations on the path of totality passing from East Africa across the Indian Ocean to Sumatra and Borneo. One matter of interest is the shape of the corona, which is known to vary in a cyclical manner with the sunspots, flocculi, and prominences. This eclipse, occurring about midway between sunspot minimum and maximum, may be expected to show a type of corona which is intermediate between the characteristic minimum type, with polar "brushes" and extended equatorial streamers, and that of the maximum type in which the distribution of the corona is more concentric with the sun's disc.

The finer details of the inner corona have sometimes been observed to show local structures which were apparently related either to sunspots, flocculi, or prominences near the limb at the time of eclipse. It may be noted that, on January 14, the region of the sun containing the large sunspots which crossed the central meridian on December 25, was within a short distance of the limb at position angle 106° east of the north point of the disc.

THE JANUARY METEORIC SHOWER.—Mr. W. F. Denning writes: "The weather proved unfavourable for observation on January 3. There were, however, a few brief intervals of clear sky between successive storms at Bristol. About 20 meteors, including 17 Quadrantids, were observed, and they were mostly brilliant objects with long flights and fairly slow motion. The largest meteors were seen at $6^h\ 16^m$, $6^h\ 21^m$ and $6^h\ 50^m$. At $7^h\ 18^m$ P.M. a fine object with exceedingly slow motion was seen in Gemini and directed from a southern radiant near γ Eridani. Later in the night the sky was more or less clouded, though there were temporary clearances and occasional meteors were observed.

"At $9^h\ 52^m$ P.M. a fireball was viewed from various south-western stations falling in the northern sky. It was directed from a region of the heavens opposite to that in which the radiant of the Quadrantids was situated. Mr. Corder of Bridgwater observed this object and described it as quite equal to Venus; emerald green in colour with a red flash at the end. Several observers saw the meteor from Bristol, and I am collecting details with the view of finding the height, velocity, and radiant point.

"On January 4 unsettled weather continued and the prevalence of clouds frequently interrupted watching. Among the meteors observed were five certain Quadrantids, thus proving the shower's active sustenance. In fact, the evidence obtained this year strongly indicates that this display has lengthened its visible duration in recent times. In 1880, 1886, and some other years, extreme brevity appeared to be a characteristic feature of the shower's richer phase, though occasional shots were directed from the same radiant on later nights of the month, certainly to January 15."

THE NEW GREENWICH SIDEREAL CLOCK.—The new clock by Short with a free and a slave pendulum, the former in an airtight case, has now been in use for a year, and Mr. W. Bowyer contributed a paper to the Royal Astronomical Society, which was read at the meeting on January 8, in which the performance of the clock is described and analysed.

The rate at the beginning of 1925 was very small, but gradually increased, owing partly to a slight amount of air leakage into the case, which necessitated reduction of the air pressure on one or two occasions.

The clock error could be expressed very exactly by an expression of the form $a + bt + ct^2$. The quantity c remained uniform from January until August, when it underwent a notable reduction, the cause of which is unexplained. It retained the new value until the end of the year.

Dr. Jackson noted that the clock performs so well that it raises the question whether we should not make sidereal time vary uniformly, *i.e.* reckon it from the mean equinox instead of the true, which is affected by nutation. The rate of the former clock was not uniform enough to make the difference an important one.

STAR FISSION AND CEPHEID VARIABILITY.—Dr. Jeans read a paper at the January 8 meeting of the Royal Astronomical Society, in which he elaborated the suggestion made at the previous meeting that Cepheid variables might be stars in which the process of fission was in progress but uncompleted. He gave an estimate of the duration of this stage as compared with the whole life of the star, and concluded that the result accorded with the observed number of Cepheids. He enumerated several points in which the new theory seemed to fit the facts better than the pulsation theory. The latter seemed to require too large a time-lag for the heat produced by compression in the star's interior to reach the surface. Also he found it difficult to picture the whole star pulsating in a single period. He would rather have expected a complex curve like that arising from the striking of several adjacent notes on the piano.

Prof. Eddington continued to defend the pulsation theory, so the matter is one for further discussion and consideration.