recorded some experiments carried out on the common mealworm (*Tenebrio molitor*) which afford further evidence that moulting is not necessarily correlated with growth. Mr. C. Macnamara, Arnprior, Ontario, Canada, writes pointing out that Folsom and Welles in 1906, working on the Collembola, concluded that moulting is connected with excretion. The suggestion that the moulting of insects has other functions than providing for growth is recorded in the standard works on insects.

THE "Lopulco" system of powdered fuel firing is making progress in Great Britain. The North Metropolitan Electric Supply Co. will have shortly its new station at Brimsdown working on this system. There are five boilers, each of which has a heating surface of 11,000 square feet. The equipment includes the latest design of pulverising mills each of 15 tons per hour capacity, the making of which, together with the feeders, bunkers, separators, water screens, exhausters, etc., provides employment to many workmen at Barrow and Derby, where the Lopulco works are situated. Capt. Donaldson, the electrical engineer, is satisfied that the system will assure him high thermal efficiency with minimum maintenance and operating charges even from the lowest grades of fuel. As this station when complete will be the largest in the London area operating entirely with pulverised fuel, engineers are awaiting the results with much interest.

WITH the December issue, the Journal of the Franklin Institute completes one hundred years of uninterrupted publication, during which it has come to occupy an important position as an organ of the scientific world. Its purpose, that "of reporting to the community the activities of the Institute, and of disseminating knowledge of science and the arts," has enabled it to serve a wide range of readers. Commenting on the increasing specialisation of modern research, which has of necessity been reflected in the pages of the journal, the editors refer to the importance of communicating the multitudinous results obtained by scientific workers in justification of the step they are taking in making the journal the agency for the publication of researches carried out at the Bartol Research Foundation. Thus even more than formerly, the Journal of the Franklin Institute will be an organ for the publication of research, though its traditional regard for invention and matters of wide interest in science will be maintained.

APPLICATIONS are invited for the following appointments, on or before the date mentioned:—An assistant lecturer in zoology in the University of Birmingham—The Secretary (March 1). A laboratory assistant in the physics department of the Liverpool Collegiate School for Boys—Director of Education, 14 Sir Thomas Street, Liverpool. A science mistress at the County School for Girls, Gravesend—The Head Mistress.

## Our Astronomical Column.

RECENT SUNSPOT ACTIVITY.—The first half of February has offered only very occasional opportunities for observing the sun. A photograph taken on February 5 showed the disc comparatively free from spots, but another taken on February 13 recorded nine or ten groups, including one visible to the naked eye. This spot is the chief of a procession of spots of recent origin, extending for nearly 25° of solar longitude. Details of it are as follows:

No. Date on Disc, rogo. Central Meridian Passage. Latitude. Area.

3 Feb. 9-21 Feb. 15.0 18° S. 1/1200 (Area expresses the proportion covered of the sun's hemisphere.)

One of the other spots elsewhere on the disc is the large recurring spot, in latitude 21° S., seen previously on the central meridian on December 25 and January 22. It is of regular outline and of about half its original size.

The great spot No. 2 (NATURE, January 30) has returned to the sun's visible disc, but is so much diminished that it is a telescopic object only.

COMETS.—An observation of Blathwayt's Comet was obtained on Feb. 8 by M. Chofardet at Besançon, which led to the following corrected elements:

The comet has now passed its nearest point to the earth and may be expected to fade rapidly; but it is well placed for observation.

A HOMERIC ECLIPSE.—The suggestion has been made many times that the passage in the 20th book of the Odyssey, where the seer Theoclymenus describes the sudden gloom and the disappearance of the sun, seems to indicate a total solar eclipse. But until now no one has considered it worth while to carry the matter further.

Dr. C. Schoch, in the Observatory for January, describes a research he has made, using Oppolzer's "Syzygien-tafeln" corrected by his own and Dr. Fotheringham's researches on ancient eclipses and occultations. He has examined all the eclipses of the twelfth century B.C., and finds that the only one total in Ithaca was that of April 16, 1178 B.C., This is five total there at 11h 41m A.M. local time. years earlier than the traditional date of the return of Odysseus, a very small discordance. The deduced date of the siege of Troy is 1198 to 1188 B.C. would be unsafe to lay any great stress on this eclipse, since the poem is much later than the event; but it is extremely interesting to find that calculation supports the narrative, which makes it likely that the tradition used by Homer was not wholly mythical but had a substratum of fact. Dr. Schoch gives the dates in astronomical reckoning, but they are corrected here into civil reckoning.