and Air-Port and to Whitgift's Hospital, Croydon. Particulars can be obtained from Mr. E. A. Martin, "Croham Hyrst," St. Lawrence, Isle of Wight, or Mr. R. W. Strickland, 5 and 6 Clement's Inn, W.C.2.

AN unusually extensive edition of the old-fashioned travelling menagerie is being put on the road by Chapman's, the well-known animal dealers of Tottenham Court Road, London, W.C.1. Its extent is indicated by its major attractions, which include 14 lions, 12 tigers, 10 zebras, 10 polar bears, 8 other bears, 7 leopards, and 200 'various species,' which we imagine means *specimens*, of monkeys, as well as many lesser mammals and interesting birds. Beginning on Sept. 24 at Chelmsford, the route traverses the midlands of England, and ends with a month's exhibition in Glasgow in December and January. The passing of this large collection should afford an opportunity for many who are out of touch with the larger zoological gardens to see a good selection of the interesting creatures of other lands.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned :—A resident chaplain and lecturer in mathematics ; or a resident lecturer in mathematics and physics at the York C. of E. Training College for Schoolmasters—The Principal, St. John's College, York (Oct. 14). A research assistant, under the Safety in Mines Research Board, for work in connexion with wire ropes used in coal mines—The Under-Secretary for Mines, Establishment Branch, Mines Department, Dean Stanley Street, S.W.1 (Oct. 15). A head of the Engineering Department and assistant headmaster of the Junior Technical School of the Darlington Technical College—The Chief Education Officer, Education Office, Darlington (Oct. 18). A senior chemistry master at the Hull Grammar School—The Headmaster, Grammar School, Hull (Oct. 20). A principal of the Denbighshire Technical Institute—The Secretary and Director of Education, Education Offices, Ruthin (Oct. 29). A professor of pathology in the University of Otago, Dunedin —The High Commissioner for New Zealand, 415 Strand, W.C.2 (Oct. 31). A lecturer in metallurgy at the Birmingham Central Technical College—The Principal, Central Technical College, Suffolk Street, Birmingham (Nov. 3). An analyst at the Harper Adams Agricultural College—The Principal, Harper Adams Agricultural College, Newport, Salop. A senior mathematical mistress at the Cheltenham Ladies' College—The Principal, Ladies' College, Cheltenham. A senior mathematical mistress at the Bath Royal School—The Principal, Royal School, Bath. A master for chemistry, physics, and mathematics at Connell's Institute, Belfast—The Principal, Connell's Institute, Belfast. Teachers of third year machine design and third year engineering calculations, under the Croydon Education Committee—The Principal, Central Polytechnic, Scarbrook Road, Croydon.

## Our Astronomical Column.

THE PLANET MERCURY.—*Revue Scientifique* of Aug. 11 contains an illustrated article on this subject by M. L. Rudaux, who has been observing the planet at intervals since 1893 at his observatory at Douville. His aperture of 4 inches is rather small for this purpose, but he enjoys a good atmosphere, and several of the sketches reproduced show a considerable amount of detail. His chart of the planet resembles in many of its features that published a year ago by M. E. M. Antoniadi from his studies with the great Meudon refractor. Both charts show the dusky regions much broader than the narrow streaks in Schiaparelli's chart ; for some markings all three charts agree, so these can be accepted with much confidence.

Schiaparelli and Antoniadi both considered that the planet's equator coincides with its orbit plane, but Rudaux suggests that there is an angle of 10° between them, the summer solstice of the northern hemisphere occurring a little after perihelion. He agrees with the other two in making the rotation coincide with the revolution (88 days), so that a large region has perpetual day, and another large region perpetual night. Owing to the very unequal motion in the orbit, arising from the large eccentricity, the region of perpetual night extends over only 133° of longitude instead of 180° for a circular orbit.

A BIG SUNSPOT.—During the latter part of September it was possible for a few days to see at the same time two spots on the sun's disc as naked-eye objects. The first spot to be seen crossed the central meridian on Sept. 24. On the same day a moderate magnetic disturbance, commencing with a typical 'sudden commencement' at 16½ h., was recorded at Greenwich. This disturbance, which lasted until about 2 h. on Sept. 26, had a range in declination just exceeding ½°.

The second spot, or rather group of spots, was a remarkable one. When first observed near the east limb, it appeared as a 'bipolar' group or stream developing in the usual manner, but within four days it had grown rapidly and had become an immense complex group. Approximate measures of its area, corrected for foreshortening, in millionths of the sun's hemisphere, are given at intervals of 48 hours—

| Sept. 22. | Sept. 24. | Sept. 26. | Sept. 28. |
|---|---|---|---|
| 600 | 1400 | 2500 | 2500 |

Changes in structure were especially noticeable between Sept. 24 and 25. Judged from its maximum area, this is the largest group which has appeared since the great spot of January 1926.

No further magnetic disturbance of any note had occurred, however, up to 10 h. on Oct. 1.

Other particulars of the two spots are given as follows, the areas being expressed as the proportion of the hemisphere covered.

| No. | Date on Disc. | Central Meridian Passage. | Latitude. | Maximum Area. |
|---|---|---|---|---|
| 8 | Sept. 18–Sept. 30 | Sept. 24·4 | 15° N.* | 1/750 |
| 9 | Sept. 21–Oct. 3 | Sept. 27·4 | 15° S. | 1/400 |

* A large spot in the same latitude and longitude crossed the central meridian on July 31 (see NATURE, Sept. 22, p. 453).