staff of the Scientific and Industrial Competition which is to be held in Brussels next year. M. Charles Mourlon is the Chief Secretary.

MR. HILCKEN, Librarian of the Bethnal Green Free Library, writes to us that the Library is greatly in need of one or two microscopes. "We have received," he says, "a present of interesting 'objects,' but they are useless without microscopes. Many of our readers would gladly avail themselves of the use of such instruments."

DR. R. H. GUNNING, of Rio de Janeiro and Edinburgh, has made the following munificent gifts in connexion with Her Majesty's Jubilee:—To the Council of the Royal Society of Edinburgh, a triennial prize of £105, to be named "The Victoria Jubilee Prize for the Advancement of Science." To the Council of the Society of Antiquaries of Scotland, £40 yearly, or £120 every three years, as they may prefer, to be named "The Victoria Jubilee Gift," the object of the founder being to assist experts to travel, with the view of "examining other collections, and keeping the Edinburgh Museum as completely furnished with information and examples as possible." To the Senatus of the University of Edinburgh, £200 per annum, to provide eleven post-graduation triennial prizes of £50 each. These are to be named the Monro, Sir Charles Bell, Edward Forbes, Hutton Balfour, Joseph Black, Christison, Lister, Gregory, John Thomson, Simpson, and Alison Prizes, and are to be administered by the Senatus, the incumbent of the Chair in connexion with which the prize is to be awarded having a wide choice in the subjects of examination. To the Royal College of Physicians of Edinburgh, £100 triennially, for a prize to bear the title "Dr. Gunning's Cullen Prize for the greatest benefit done to Practical Medicine." To the Royal College of Surgeons of Edinburgh, £120 triennially, for a prize to be called "The Liston Victoria Jubilee Prize," which shall be open to all Fellows and Licentiates of the College, and shall be awarded for the greatest benefit done to practical surgery. To the Edinburgh Association for the University Education of Women, £40 annually for a bursary to be called "The Victoria Jubilee Bursary." In addition to the above, Dr. Gunning has intimated, through Lord Maclaren, a gift of £100 for the Ben Nevis Observatory. Dr. Gunning, who was long resident in Brazil, is a Dignitary of the Brazilian Empire, a Fellow of the Royal Society of Edinburgh, and a Fellow of the Society of Antiquaries of Scotland.

THE additions to the Zoological Society's Gardens during the past week include a Bonnet Monkey (*Macacus sinicus* ♂) from India, presented by Mr. Francis Yare; a Cape Zorilla (*Ictonyx zorilla*) from Cape Colony, presented by Mr. J. A. Willet; a Spotted Ichneumon (*Herpestes nepalensis*) from Nepal, presented by Mr. T. C. Bacon; two Spotted Cavys (*Cœlogenys paca*) from South America, presented by Mr. William F. Kirton; an Arizona Squirrel (*Sciurus arizinensis*) from New Mexico, U.S.A., presented by Dr. R. W. Shufeldt; a Common Cuckoo (*Cuculus canorus*), British, presented by Mr. W. M. Alexander; a Lesser Kestrel (*Tinnunculus cenchris*), South European, presented by Mrs. M. Travers; two Corn Crakes (*Crex pratensis*), British, presented by Mr. S. C. Hincks; two Cardinal Grosbeaks (*Cardinalis virginianus*) from North America, presented by Mr. Samuel Nicholson; two Hybrid Herring Gulls (between *Larus argentatus* and *Larus dominicanus*), presented by Lord Lilford; two Viperine Snakes (*Tropidonotus viperinus*) from North Africa, a Bordeaux Snake (*Coronella girondica*), South European, presented by the Rev. T. W. Haines; a Grey Ichneumon (*Herpestes griseus*) from India, an Aldrovandi's Skink (*Plestiodon auratus*) from North Africa, deposited; a Crested Porcupine (*Hystrix cristata*), born in the Gardens; two Slender Ducks (*Anas gibberifrons*), bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

THE TOTAL SOLAR ECLIPSE OF 1886.—Mr. W. H. Pickering, who observed the total solar eclipse of August 1886 at Grenada, W.I., communicates to *Science*, vol. x. No. 230, a brief account of his results, in order that it may be published in time to be of service to the observers of the approaching eclipse on August 18. It was found that, by using rapid gelatine plates, an exposure of one or two seconds was sufficient to show the details of the inner corona satisfactorily with an ordinary telescope-lens. With a portrait-lens, the ratio of whose aperture to its focus was as one to five, the same exposure showed the outer corona satisfactorily as far as a distance of 15′ to 30′ from the limb of the moon. Beyond that the light was very decidedly fainter, and was shown best by exposures of from eight to forty seconds. The corona showed the usual short rays proceeding from the sun's poles, and from the south-western quadrant a very conspicuous ray, appearing like a hollow cone, projected to a distance of about 20′. A number of prominences were seen near the equator, on both sides of the moon; but the most conspicuous one was situated in the north-western quadrant. It extended to the height of about 100,000 miles, and had apparently a somewhat spiral structure. The spectra of the various prominences were shown very clearly by the prismatic camera. In the equatorial ones the hydrogen and H and K lines were prominent, superposed on a background of continuous spectrum; but in the large prominence the hydrogen lines were absent, although the H and K lines were strongly marked. The position of the maximum density in the continuous spectrum of the prominences was found to be quite different from that of the corona; in the former it is not far from G, whilst in the latter it lies between G and F. A large number of persons observed the shadow-bands, which appeared before and after totality. The general result of their observations indicated that the bands were about 5 inches wide and 8 inches apart, that they were coloured like the spectrum, and that they moved with a velocity comparable with that of an express train; at all events much faster than a man could run. Before totality the bands lay N. 12° W. and S. 12° E., and travelled west; after totality they lay N. 60° E. and S. 60° W., and travelled north-west.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1887 JULY 31—AUGUST 6.

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

At Greenwich on July 31

Sun rises, 4h. 24m.; souths, 12h. 6m. 9·1s.; sets, 19h. 48m.; decl. on meridian, 18° 18′ N.: Sidereal Time at Sunset, 16h. 24m.

Moon (Full on August 3) rises, 17h. 15m.; souths, 21h. 36m.; sets, 1h. 56m.*; decl. on meridian, 19° 37′ S.

Planet.	Rises. h. m.	Souths. h. m.	Sets. h. m.	Decl. on meridian. ° ′
Mercury	4 26	11 46	19 6	14 35 N.
Venus	8 41	14 53	21 5	1 42 N.
Mars	2 2	10 20	18 38	23 35 N.
Jupiter	11 56	17 10	22 24	9 45 S.
Saturn	3 26	11 24	19 22	20 47 N.

* Indicates that the setting is that of the following morning.

Variable Stars.

Star.	R.A. h. m.	Decl. ° ′		h. m.	
U Cephei	0 52·3	81 16 N.	Aug. 1,	21 30	*m*
			,, 6,	21 9	*m*
Algol	3 0·8	40 31 N.	,, 1,	22 54	*m*
V Boötis	14 25·2	39 23 N.	,, 5,		*M*
δ Libræ	14 54·9	8 4 S.	,, 5,	22 24	*m*
V Coronæ	15 45·5	39 55 N.	,, 4,		*M*
R Ursæ Minoris	16 31·5	72 30 N.	,, 5,		*m*
U Ophiuchi	17 10·8	1 20 N.	July 31,	4 2	*m*
		and at intervals of		20 8	
W Sagittarii	17 57·8	29 35 S.	Aug. 2,	1 0	*m*
T Herculis	18 4·8	31 0 N.	,, 2,		*M*
η Aquilæ	19 46·7	0 43 N.	,, 2,	2 0	*M*
			6,	21 0	*m*
S Sagittæ	19 50·9	16 20 N.	,, 5,	21 0	*m*
δ Cephei	22 25·0	57 50 N.	July 31,	4 0	*M*
			Aug. 3,	22 0	*m*

M signifies maximum; *m* minimum.