

its scientific side by chemists and others, but the artistic aspects of the photographer's work are dealt with in a helpful manner by experienced writers. The magazine is admirably illustrated by a profusion of well executed plates, and is published by Messrs. Hodder and Stoughton.

MESSRS. F. E. BECKER AND CO., of Hatton Wall, London, are manufacturing cheap electric switchboards for use in physical laboratories supplied with continuous current, designed by Mr. William Bennett, of the Gravesend Technical School. It is claimed that by this method it is impossible for students to short circuit the mains, as only one wire is carried round the room. A switch block is provided in each working place, and all students have the same current, but any student can switch the current on or off without interrupting others. The boards are supplied with resistances, instruments for measuring current, and other necessary adjuncts.

WE have received the thirty-sixth volume, that for 1902, of the *Journal and Proceedings* of the Royal Society of New South Wales. The original papers contained in the first part of the volume are seventeen in number, and many of them are illustrated by plates, of which there are no less than twenty-one. The volume concludes with the annual address delivered to the engineering section of the Society, and two papers also read to the same section. As abstracts of the papers read before the Society are periodically published in NATURE, it only remains to be said that the scientific work of the Society, as represented by the contents of the volume before us, does honour to the colony of New South Wales.

THE additions to the Zoological Society's Gardens during the past week include two Black Lemurs (*Lemur macaco*) from Madagascar, presented by Mr. Walter Barnes a South African Hornbill (*Bucorvus cafer*) from South Africa, presented by Mr. W. Champion; two Larger Patagonian Conures (*Cyanolyseus byroni*) from Chili, presented by Mr. E. C. Davids; two Grey-winged Ouzels (*Merula bouboul*) from India, an Adelaide Parrakeet (*Platycercus adelaidae*) from Australia, three Derbian Sternotheres (*Sternotheres derbianus*) from West Africa, two Adorned Terrapins (*Chrysemys ornata*) from Central America, four Brazilian Tortoises (*Testudo tabulata*), four Orbicular Horned Lizards (*Phrynosoma orbiculare*) from Brazil, deposited.

OUR ASTRONOMICAL COLUMN.

REPORTED DISCOVERY OF A NOVA.—A telegram received from the Kiel Centralstelle on October 5 announced that Prof. Wolf had discovered what was probably a new star on the evening of September 21. He found the position of the object, reduced to the equinox of 1903, to be R.A. = 20h. 14m. 6.8s., Dec. = +37° 9' 49", and reported that its spectrum was of the nebular type.

A further communication received from Kiel announces, however, that a telegram received from Prof. Pickering states that the object is not a Nova, but a variable having a spectrum of the fourth type, whilst another telegram from Prof. Hale announces that Barnard has identified the supposed Nova with the star B.D. + 37°.3876 (R.A. = 20h. 14m. 6.8s., Dec. = +37° 9' 47"), and found the colour to be "very red." Dr. Parkhurst determined the magnitude of the variable on October 5, and found it to be 10.6.

1903-4 EPHEMERIS FOR WINNECKE'S PERIODICAL COMET. The elements and ephemeris of Winnecke's comet for its appearance during 1903-4 have been calculated by Herr C. Hillebrand, of Graz, and are published in No. 3907 of the *Astronomische Nachrichten*. The elements and part of the ephemeris are given below:—

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Epoch = 1904 Jan. 24^o (M.T. Berlin).

M = 0 28 1'61
 π = 274 19 45'40 } 1903^o φ = 45° 38' 0" 12
 Ω = 104 12 36'44 } μ = 608' 801706
 i = 16 59 54'78 } Perihelion = 1904 Jan 21'24

Ephemeris Oh. (M.T. Berlin).

1903	h.	m.	s.	δ app.	log r	log Δ
Nov. 1	13	35	54'28	+ 1 11 47'0	0.166981	0.374761
" 3	13	41	49'41	+ 0 35 3'6		
" 5	13	47	50'73	- 0 2 5'9	0.155366	0.366226
" 7	13	53	58'38	- 0 39 40'7		
" 9	14	0	12'47	- 1 17 39'6	0.143512	0.357652
" 11	14	6	33'07	- 1 56 2'0		
" 13	14	13	0'47	- 2 34 46'1	0.131432	0.349133
" 15	14	19	34'92	- 3 13 50'8		
" 17	14	26	16'54	- 3 53 13'8	0.119153	0.340701
" 19	14	33	5'45	- 4 32 53'3		
" 21	14	40	1'91	- 5 12 46'9	0.106706	0.332417
" 23	14	47	6'18	- 5 52 52'6		
" 25	14	54	18'36	- 6 33 7'1	0.094136	0.324344
" 27	15	1	38'61	- 7 13 27'7		
" 29	15	9	7'05	- 7 53 50'7	0.081493	0.316550

DIAMETER OF NEPTUNE.—Herr C. W. Wirtz, Strassburg, publishes the results of a series of measurements of the diameter of Neptune, made by him during the period December, 1902-March, 1903, in No. 3907 of the *Astronomische Nachrichten*. As the mean result of forty-nine measurements, made on twenty-six evenings, he obtained 2".303 with a possible error of ±0".044 for the value of the diameter.

Taking the value of the solar parallax as 8".80, and Bessel's dimensions for the earth, this gives the actual diameter of Neptune as 50,251 km. and the mean density of the planet as 1.54, the density of the earth being taken as 5.53.

THE POSITION OF EROS IN 1905.—In No. 73 of the Harvard College Observatory *Circulars* Prof. Pickering publishes an ephemeris for Eros during the opposition of 1905.

This ephemeris gives the Julian Day, the date, the R.A. (1900) and Dec. (1900), the logarithms of the distances from the sun and earth respectively, and the computed magnitude for every tenth day from November 21, 1903, to December 20 1905; it has been obtained by interpolation from an ephemeris, for intervals of forty days, computed by Mr. F. E. Seagrave from the elements published in the *Berliner Jahrbuch* for 1905.

As seen from the ephemeris, the opposition of Eros during 1905 will be one of the most unfavourable oppositions that can possibly occur, for the computed magnitudes never exceed the twelfth. Prof. Pickering recommends that observations of the light variations, both photographic and visual, should be made during the opposition, although Prof. Bailey, working with the 13-inch Boyden telescope at Arequipa during the present year, has obtained an excellent set of light-curves of this planet. In general the position of the planet in the sky, during the 1905 opposition, will be nearly opposite to that which it occupied during the spring of 1901, when its variability was discovered.

THE ROYAL UNIVERSITY OBSERVATORY, VIENNA.—The sixteenth annual volume of the Vienna Observatory *Publications* contains the details of the "zone observations" for the zone -6° to -10°, made in accordance with the programme of the Astronomische Gesellschaft for its star catalogue, and collected by Dr. Johann Palisa. The observations were made with the 11½-inch Clark refractor, and the tables give the position for 1875.0, together with the usual reductions.

The same instrument was also used by Herr J. Rheden for observing the opposition of Mars during the period December 21, 1898-March 16, 1899, and the results of these observations, including eight excellent coloured reproductions of Herr Rheden's drawings, form the second part of the publication.

The third and last section is devoted to the meteorological observations made during the years 1897, 1898, 1899 and 1900.