of stars some distance apart. The double-image prism is placed at the focus and the two images of the object glass are formed by two achromatic prisms which can be slid to any desired distance from the focus. A Foucault prism and eyepiece are placed behind the double-image prism. With this instrument stars 35' apart may be brought together. This form is recommended for large telescopes for determining the brightness of the fainter stars.

On the Forms of the Disks of Jupiter's Satellites: S. I. BAILEY. Observations made at Arequipa during the early part of the year indicate that under the best conditions, II., III. and IV. are always seen round. I. was twice observed to have an elongation, in each case being near the planet.

Note on the Magnesium Band at  $\lambda$  5007: H. CREW and O. H. BASQUIN. This fluting upon being photographed plainly showed its bands to have a linear structure. A table gives the wave-lengths of the main lines.

Note on the Spectrum of Carbon: H. CREW and O. H. BASQUIN. This confirms the work of Kayser and Runge in showing by independent evidence that the three carbon bands at  $\lambda$  4216,  $\lambda$  3883 and  $\lambda$  3590 were due to cyanogen.

The Measurement of some Standard Wave-lengths in the Infra-red Spectra of the Elements, II.: EXUM PERCIVAL LEWIS. In this second paper on the investigation of the infra-red spectra with the radiomicrometer, measurements are given of lines due to calcium, strontium and thallium.

Preliminary Table of Solar Spectrum Wavelengths, VII.: HENRY A. ROWLAND. The table is continued from  $\lambda$  4903 to  $\lambda$  5148.

Résumé of Solar Observations made in 1894 at the Astrophysical Observatory of Catania: A. MAS-CARI. The months richest in the various phenomena were May for spots and pores, July for groups of spots and pores and for prominences, and September for faculæ. The prominences and faculæ have been more numerous in the southern than in the northern hemisphere. A marked maximum for the faculæ occurs between  $10^{\circ}$  and $20^{\circ}$ . There is a secondary maximum in the southern hemisphere between  $60^{\circ}$  and  $70^{\circ}$ , and a decided minimum in the polar regions. From the tables it is concluded that the secondary maxima of prominences of 1893 have moved toward the equator, while the absolute maximum has moved nearly 10° south. The phenomena of prominences and faculæ have not been always in complete accord.

A Spectrographic Determination of velocities in the System of Saturn: W. W. CAMPBELL. The work of the new Mills spectograph on the Saturnian system has been a confirmation of that of Professor Keeler.

On the Existence of a Twilight Arc upon the Planet Mars: PERCIVAL LOWELL. Micrometric measures of the equatorial diameter of Mars in November showed an increase over those made in October when the planet was nearer opposition, while the polar diameter remained practically unchanged. From this the author argues the existence of a twilight arc of 10° upon Mars.

Spectroscopic Observations of Colored Stars: FRIEDRICH KRUEGER. This is a list of observations of such colored stars as have not hitherto been examined spectroscopically and of those which required a review because of former dubious results.

Minor Contributions and Notes: Preliminary Note on the Radiation of Incandescent Platinum. The Visible Spectrum of the Trifid Nebula. Note on the Spectrum of the Aurora Borealis. Observations of the B Band in Stellar Spectra. Note on the Spectroscopic Proof of the Meteoric Constitution of Saturn's Rings. Photograph of the Nebula near 42 Orionis Made at the Astrophysical Observatory of Colonia. Note on the  $D_3$  Line in the Spectrum of the Chromosphere. Étienne-Léopold Trouvelot. The Belgian Astronomical Society.

## NEW BOOKS.

- The Alps from End to End. SIR WILLIAM MAR-TIN CONWAY. Westminster, Archibald, Constable & Co. New York, Macmillan & Co. 1895. Pp. xii+403. \$7.00.
- Icebound on Kolguev. AUBYN TREVAR BATTYE. Westminster, Archibald, Constable & Co. New York, Macmillan & Co. 1895. Pp. xxviii+458. \$7.00.
- An Introduction to the Study of Zoölogy. B. LINDSAY. London, Levan, Sonnenschien & Co. New York, Macmillan & Co. 1895. Pp. xii+356. \$1.60.