

Owing to preparations for and absence on the Eclipse expedition, and other work of a pressing nature, it was not until late in November, 1905, that any work in stellar spectroscopy was undertaken. It did not take long to discover that the instrument, as originally constructed, was unsuited for obtaining accurate velocity values. While it admirably fulfilled the purpose for which it had been designed, general spectroscopic work, radial velocity determinations require an altogether different type of construction, and it was inevitable that difficulties in the way of flexure should occur in the long exposures required in stellar spectra.

DESCRIPTION OF THE INSTRUMENT.

The spectroscope is of the universal type similar to those furnished by the same maker, Brashear, to the Lick, Naval,

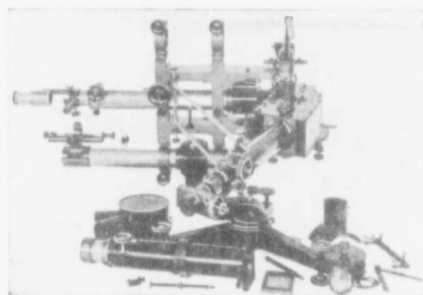


FIG. 1.

and Yerkes Observatories. It is arranged to be used both visually and photographically with the following dispersing media: (1.) A light flint prism. (2.) A dense flint prism. (3.) A train of three dense flint prisms. (4.) A plane grating. The instrument, which, with its various attachments, is shown in Fig. 1, with the prism train in place, is supplied with a swinging arm and rotating table, whose angular move-