

year's work with the eleven-inch Draper telescope was so satisfactory, that Mrs. Draper enlarged the scope of the Draper Memorial. The investigations in 1888, comprised under this heading, were:

1. A catalogue of the spectra of all stars north of -20° , of the 6th magnitude, or brighter.

2. A more extensive catalogue of spectra of stars brighter than the 8th magnitude.

3. A detailed study of the spectra of the bright stars; including a classification of the spectra, a determination of the wave lengths of the lines, a comparison with terrestrial spectra, and an application of the results to the measurements of the approach and recession of the stars.

Since the work was first undertaken, other minor investigations have sprung from these; and in the course of the work, several brilliant discoveries have been made.

The instruments employed in the



Mrs. Mina Fleming.

Draper Memorial work are the eight-inch Bache telescope, now in Peru; and the eight-inch Draper telescope, in constant use at Cambridge. This latter instrument was provided by Mrs. Draper after it had been found necessary to send the Bache telescope to Peru. While the whole work is under the direction of Professor Pickering, the director of the Harvard Observatory, the photographs have been taken by Mr. H. H.

Clayton, and later by Mr. W. P. Gerrish. The examination of the plates, the measurement of the position and the brightness of the stars, the discussion of the results obtained from the plates, and the forming of catalogues from these results, have been carried on mainly by Mrs. Mina Fleming and her assistants, at present numbering eight.

Now the brightness of a star may be photographed: 1. As a point (if the telescope is moved by clockwork). 2. As



An Interior at the Harvard Observatory.