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## Prof. Gullstrand's Slit Lamp

### Directions, Med 135.

To be read in conjunction with

- Med 111** Description of the Slit Lamp      **Med 131** Description of the Eye Microscope and  
**Med 4** Description of the Corneal Microscope, or **Med 134** Directions for the Eye Microscope  
**Med 133** Bibliography.

Attention is also drawn to the comprehensive theoretical and practical expositions given in the following treatises:

- L. Koeppe:** "Die Mikroskopie des lebenden Auges", Vol. 1. "Die Mikroskopie des lebenden vorderen Augenabschnittes im natürlichen Lichte". J. Springer, Berlin, 1920; 310 pp., 62 illustrations (in the following pages these illustrations are referred to by the prefix "MI").  
— "Die ultra- und polarisationsmikroskopische Erforschung des lebenden Auges und ihre Ergebnisse"; E. Bircher, Berne and Leipzig, 1921, 269 pp., 74 illustrations (referred to by the prefix "Po" in the following pages).  
— "Die Bedeutung der Gitterstruktur für die Theorie der subjektiven Farbenercheinungen in den lebenden Augenmedien". E. Bircher, Berne and Leipzig, 1921, 21 illustrations.  
**A. Vogt:** Atlas der Spaltlampenmikroskopie des lebenden Auges (German, English, French, Italian), mit Anleitung zur Technik und Methodik der Untersuchung. J. Springer, Berlin, 1921. 370 figures.

### Manner of Setting up the Slit Lamp.

(1) **Figs. 1—2, Med 111.** Place the stand on the plate of the swing-out double arm of the instrument table and secure it thereon by means of the three screws. The socket pin on the upper part of the slit-lamp should be slipped into the pillar and fixed therein by means of the screw at the side. Attach the chin and head rests on the long side of the table.

(2) **Fix the Slit Lamp Bracket** in the extended stand column by means of the clamping screw at the side (Fig. 2, Med 111). At the end of the arm put in position the slit lamp lens (with the rectangular stop facing the slit) and fix it, when adjusted, with respect to the optical axis (likewise by means of the clamping screw). The optical axis of the lens should be about 44 mm. above the slit-lamp bracket.

(3) Use the slit lamp lens of **7 cm.** focus of the Vogt or Koeppe type, with a stop of  $16 \times 10$  mm. In addition to this stop the Koeppe lens has supplementary stops of  $13 \times 9$  and  $9 \times 6$  mm., the latter being principally required for ultra-microscopic investigations. The Koeppe slit-lamp lens of **10 cm.** focus with the same set of three stops furnishes a still more elongated and pointed pencil of light (for the microscopic examination of the chamber angle). Our ophthalmoscope lens of 50 mm. free aperture and 7 cm. focus, on the other hand, furnishes a broad pencil of light. When placing this aplanatic non-spherical lens in position make sure that the more deeply curved side faces the slit lamp; also, the slit-stop should be on this side of the ophthalmoscope lens.

(4) The **silvered mirror** should be used when it is necessary to introduce an acute angle between the axes of illumination and that of observation (as when viewing the chamber angle, the more deeply seated layers of the vitreous humour, and the fundus oculi). It is also required for ultra-microscopic observation and with the polarising microscope.

The two figures 1 to 2 show the manner in which the mirror is to be attached. The position of the mirror may be altered by means of the flexible holder and the ball-and-socket joint (Fig. 1). The silvered mirror (Fig. 2) may be turned about its vertical axis and is also inclinable about its horizontal axis. After releasing the small clamping screws

