



Fig. 5. View showing Cradle Stop Screw (11)

Fig. 6. Inserting the External Supply Adaptor



side of the negative is in contact with the diffusing window. If the instrument is used in a dimly lighted room and the diffuser window is masked down to a small aperture by means of a thin black mask placed under the negative and the negative itself is placed face downwards on the platform, these conditions are fulfilled. The aperture in the mask should be only sufficiently larger than the image of the photometer spot to ensure exclusion of any brighter surrounding area of negative. It has been found, however, that by placing the negative *face upwards* on the platform and the aperture of the supplementary attachment in contact with the negative, correct readings are obtained without masking provided the area to be measured covers the aperture. When these conditions are fulfilled, there is also no need to work in an inconveniently darkened room. It is for this reason that in paragraph 14 of the instructions it is advised that the negative be placed 'face upwards'.

For measuring densities which will not permit contact either with the diffuser or with the aperture, e.g. lantern slides with cover glasses, the diffuser must be masked and the room should be only dimly lighted.

The values of density obtained with this instrument from negatives which are neutral grey in colour will be directly applicable to contact printing. They will not, without further experiment, give correct printing values for negatives which are to be used for projection printing.

Measurement of reflection density

For measuring reflection densities of prints the lamp within the illuminator is switched off and the paper print to be measured is placed face up under the aperture of the supplementary attachment. The illumination must now be provided by means of an external lamp arranged so that it can shine at an angle of about 45° to the surface of the paper through the side aperture of the supplementary attachment (Fig. 7). This aperture is uncovered by turning the sleeve provided.

Although it is possible to adjust the position of the external lamp so that the white of the fixed out paper gives photometric balance when the relative density scale reads zero, it is more convenient to fix the position of the lamp relative to the photometer and obtain balance by turning the operating ring of the photometer. The photometer reading obtained with the instrument so set must be taken as the zero position and all subsequent readings must be measured from this point.

To obtain the best out of the apparatus for reflection density work, it is best to use a lamp like that used in the adaptor (6-volt 6-watt). This must be fed by a parallel circuit tapped from the same plugs as used for the adaptor.