

A binocular eyepiece (Fig. 120) to fit on a monocular microscope gives substantially the same optical result as the binocular microscope described on page 166, except that it lengthens the optical tube-length. This is compensated as regards the optical corrections by a tube-length corrector attached to the eyepiece. It may give a higher magnifying power, which is not necessarily a disadvantage; but on the whole, the binocular microscope is preferable to the binocular eyepiece.

The second form of binocular microscope (Figs. 121 to 124) consists of two separate microscopes mounted to each other at an angle which corresponds to that of the natural convergence of the eyes for near objects. Due to the magnification, it gives an increased stereoscopic effect and shows the depth and contours of an object in high relief. It has the further advantage that the image is not inverted and is the most useful form for all low-power examination and dissection. Due to constructional difficulties, large-aperture object-glasses cannot be employed and therefore its use is limited to low and moderate magnifications. Powers up to about 200 can be used when the highest resolution is not required, but in general it is employed with powers from 4 to 60. It is generally known as the "Greenough" binocular and may be mounted on a microscope stand of the ordinary pattern (Figs. 121, 124), or various forms of adjustable stands (Figs. 122, 123) which are more convenient for dissection, examination of objects in troughs of fluid, or for the many industrial purposes for which a microscope is required.

A very convenient form of the instrument called the

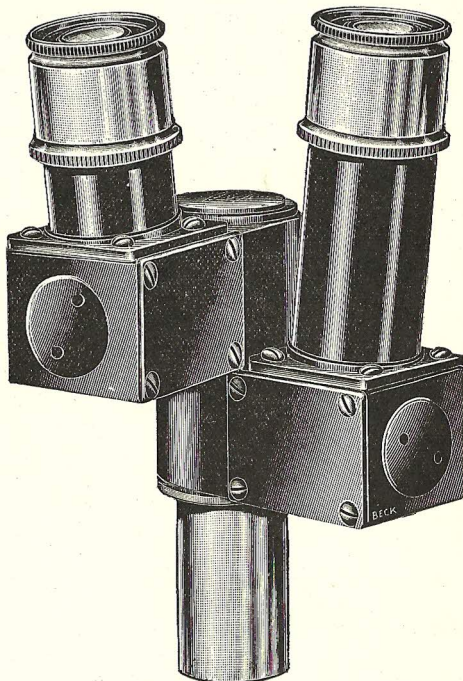


FIG. 120.