

Lablynx Microscope

by Gillett & Sibert

GS

Catalogue 4

Instructions

1 Electrical Connections

Turn lamp control to off. Connect microscope lead to suitable plug as follows:

230V range	115V range
Brown wire to Live	White wire to Live
Blue wire to Neutral	Black wire to Neutral
Green & Yellow wire to Earth	Green wire to Earth

The lead fitted for 115V (U.S.A.) carries the correct plug.

2 Fitting Binocular, Monocular Heads etc.

The head chosen can now be fitted. The heads are screwed into the top of the nosepiece with a large knurled ring. When the ring has seated the unit will rotate in its bearings, allowing for viewing in any position.

3 Eyepieces

When the head is in place, fit the eyepiece(s). Ensure that eyepieces slide as far as they can into the tube. This will prevent entry of dust, and ensure correct eyepiece position.

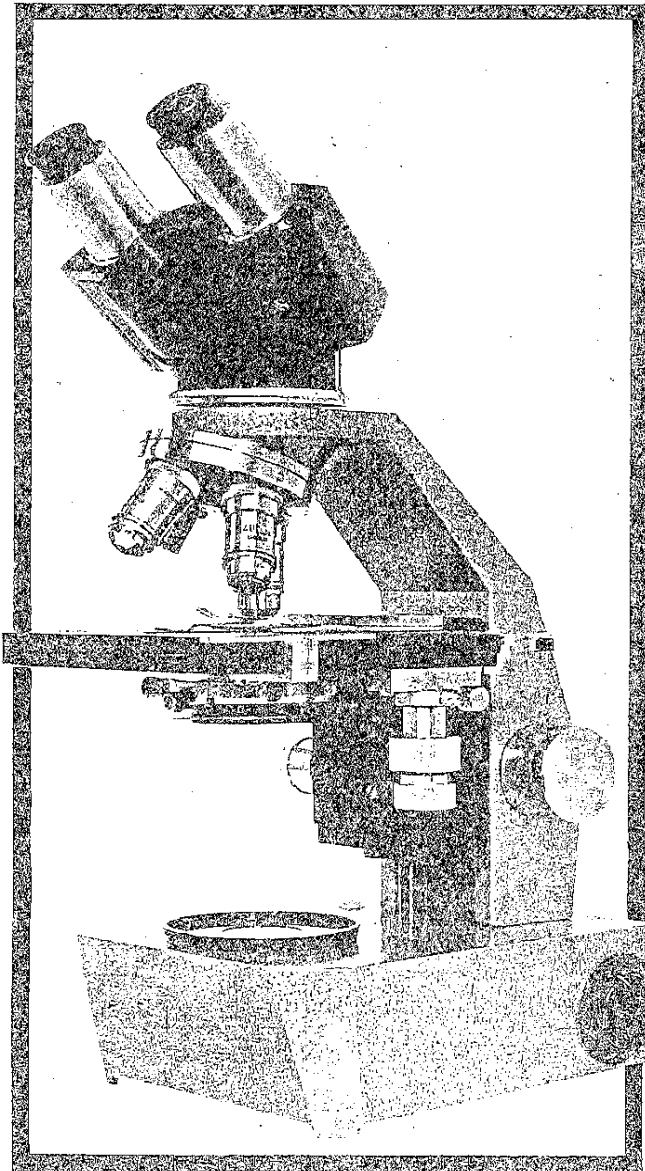
4 Fitting Substage Condenser

The substage condenser should be located SQUARELY in the substage carriage mount and pressed into position. If condenser is of the flip-top lens type, rotate condenser until flip-top actuating lever is in a suitable position. Lock condenser in place by tightening Hexagon clamp screw on front of carrier mount. The knurled screws on either side of the condenser carrier mount are for centering the condenser unit.

Using the condenser unit focusing knob, raise unit until condenser is as near the stage as possible, or if sleeve focusing, push condenser fully into place.

5 Aligning Lamp

Having connected electrical supply, rotate lamp control to position 3. Stage should be raised to approximate focus position of X10 objective, by turning combined coarse and



fine focusing control. Close field iris diaphragm to approximately midway position and completely close substage condenser iris diaphragm.

The light source:-

The Lablynx Microscope has a light source based on Koehler Principles of illumination, by which the lamp filament is imaged on the underside of the substage condenser. Looking from below, an image of the light source appears on closed substage condenser iris diaphragm. Centre image if necessary, with three screws on rear of microscope base.

6 Focusing the Microscope

Open substage iris diaphragm about one-third. Place specimen on microscope stage, use X10 objective. If using flip-top condenser, swing the top lens off optical axis. Focus specimen using coarse and fine focusing control. Fine focusing is achieved in any position by reversing the rotation of the control knob.

7 Substage condenser focusing and centering

Knob Substage focusing:- Adjust substage focus knob to focus substage condenser.

Sleeve focusing:- Slide substage condenser up or down in condenser sleeve to focus.

Close field iris diaphragm to position 1.

The substage condenser is then focused until an image of the field iris diaphragm appears sharply in focus superimposed on the specimen. If it does not appear in the centre of field it should be corrected by two knurled centering screws.

Open field iris diaphragm until circle of illumination only just fills the field of view.

Remove eyepiece, look at back of objective; and set diameter of substage condenser iris diaphragm to two-thirds of objective aperture with condenser iris lever - this corrects N.A. (numerical aperture) of condenser to N.A. of objective, replace eyepiece.

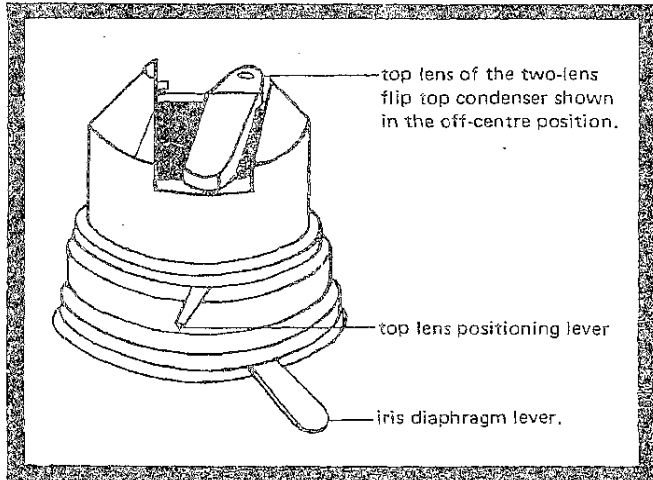
NOTE:- Substage centering and focusing are carried out simultaneously.

If specimen is to be examined with higher power, swing X40 objective into optical axis, check focus of objective. Now swing in top lens of substage condenser, refocus condenser until field

iris is sharply in focus and free of colour fringes, centre with two knurled screws.

Open field iris diaphragm until circle of illumination fills field of view.

Remove eyepiece, set substage condenser iris diameter to two-thirds of objective aperture, replace eyepiece.



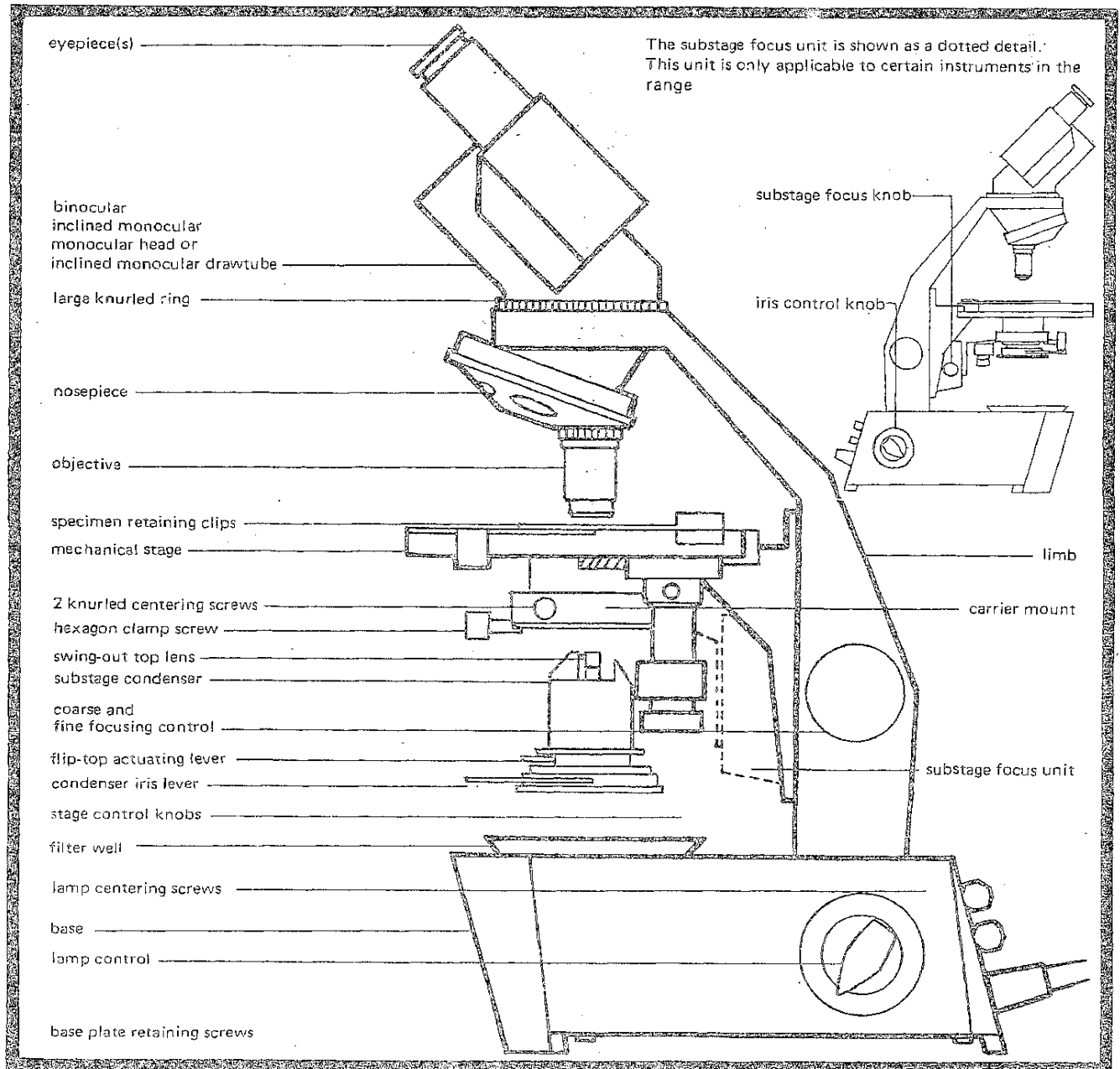
8 Filters

Neutral:- To reduce overall image brightness to a comfortable level, without affecting colour temperature of light from source.

Daylight Blue:- For colour correction of lamp, converts lamp to approximate daylight.

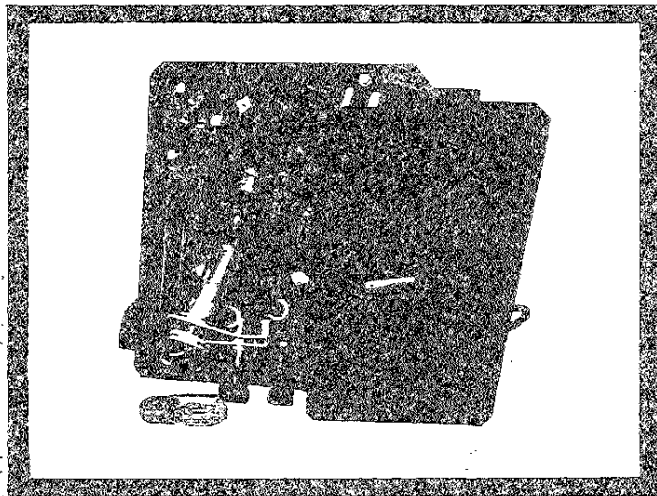
Green:- Can be used to increase resolution and improve quality of image. An example of this is in Phase Contrast Microscopy.

Neutral Density Wedge:- This gives complete control over the light intensity due to its varying transmissions, without affecting colour temperature of light from source.



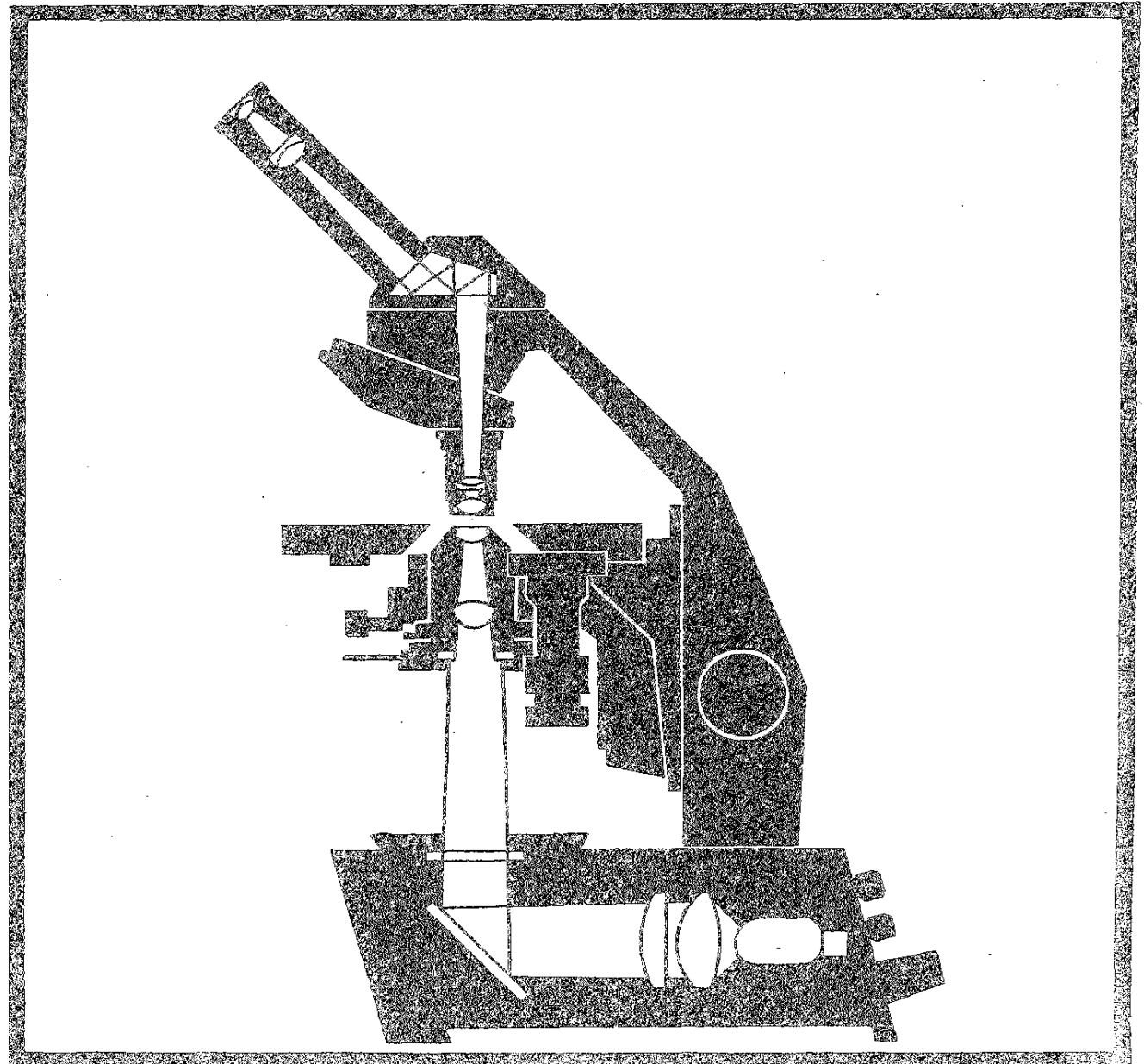
9 Changing Lamp

- 1 Disconnect from Mains Supply.
- 2 Turn microscope on its back.
- 3 Remove screw on base plate of instrument, lift out base plate.
- 4 Remove burnt-out lamp, replace with new one, lamp type 10/074/041.
- 5 Replace base plate.
- 6 Re-align lamp.



Replacement Lamps

Catalogue no. 10/074/041 6V 15W SBC -
DIFFUSED END

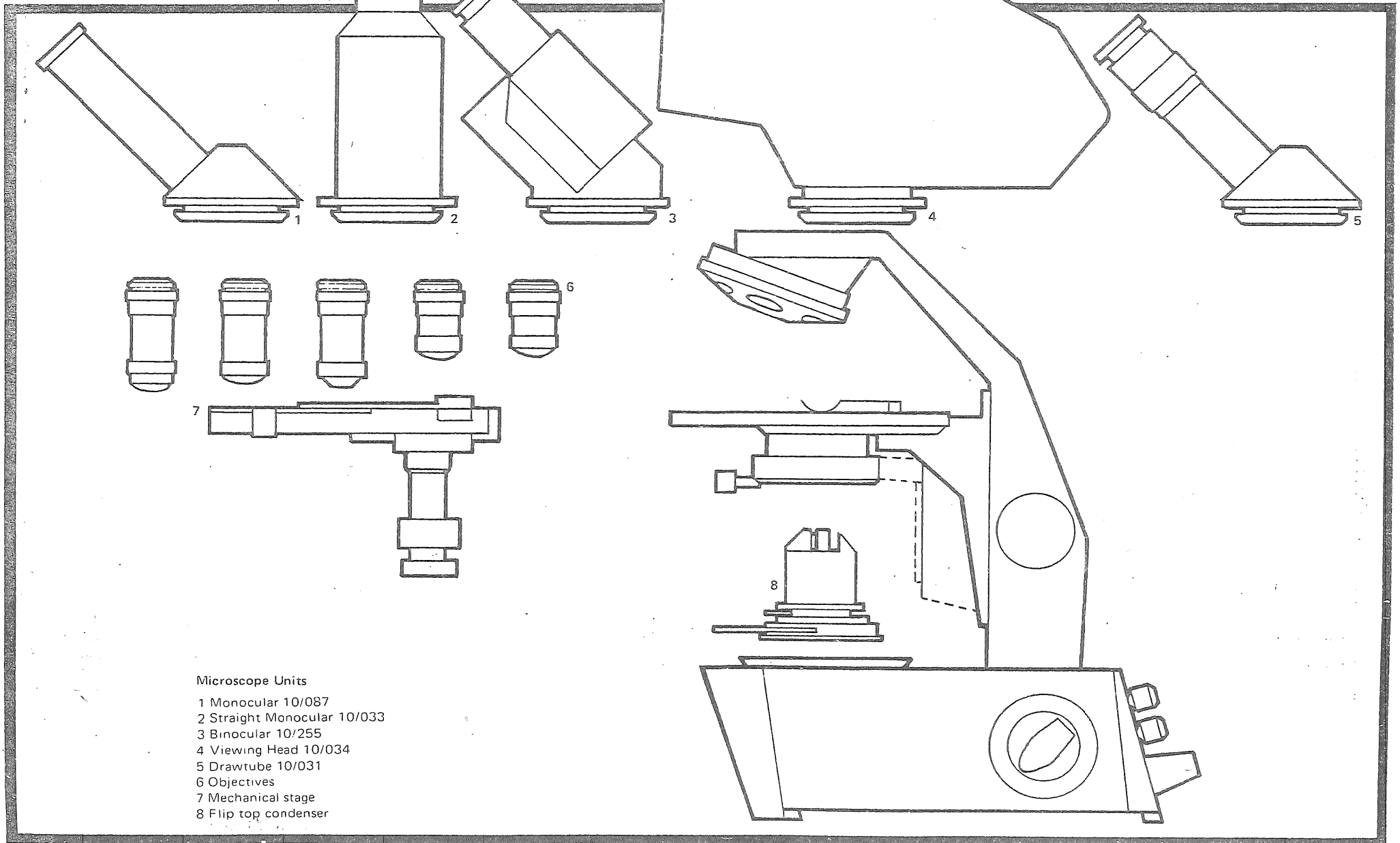


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Microscope Units

- 1 Monocular 10/087
- 2 Straight Monocular 10/033
- 3 Binocular 10/255
- 4 Viewing Head 10/034
- 5 Drawtube 10/031
- 6 Objectives
- 7 Mechanical stage
- 8 Flip top condenser