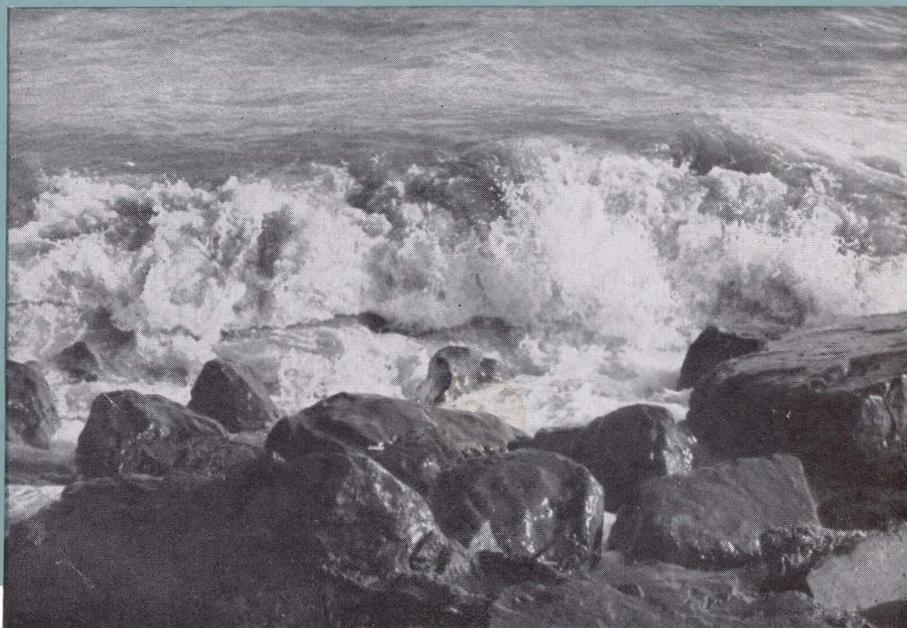


INSTRUCTIONS



**2**



***Enlarger***

# Instructions **GaMi 16** Enlarger

## Enlarger for GaMi 16 Subminiature Photographs.

This enlarger is designed for the specific purpose of enlarging photographs taken on 16 mm film with GaMi 16 or with other subminiature cameras.

### Outstanding features are:

\* Predetermined focussing system, excluding adjustments by the operator.

\* Optical system especially designed for high correction on subminiature formats.

\* Ruggedness and stability.

Many details in design make this enlarger unique for handiness and efficiency. The base is in plywood, dimensions 45 x 45 cm, or 18 x 18 inches. The column, ground to strict tolerances, is 26" high and detachable.

The light-housing, double walled for efficient air cooling, holds a 60 W. bulb on a socket which is centerable and adjustable in height.

The light-housing is held by a pivoting arm, so that it can be tilted upwards for inspection and cleaning of the condenser and of the negative. In the tilted position the negative is invested by grazing light which reveals the slightest specks or other defects, so that they can be easily detected and removed. This helps in obtaining enlargements free from spots and other blemish.

### Focussing

The arm holding the head can be stopped at different heights of the column corresponding to different numbers engraved on the column. The same numbers appear on the focussing ring of the objective. By matching these two series of numbers, perfect focussing is achieved for a certain magnification.

The focussing obtained by this procedure is perfect inasmuch it has been calibrated at the factory using a microscope. Therefore, the operator should not worry about focus control if he works with the standard enlarged sizes for which the enlarger is calibrated.

If the operator, on the other hand, wants to use the enlarger to obtain enlargements intermediate of the outside the range pro-

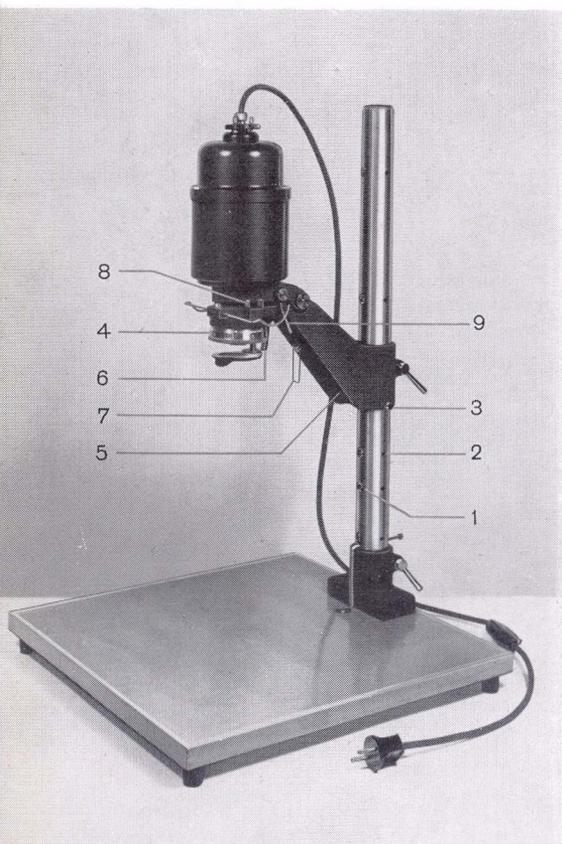


fig. 1

vided for, he must proceed in the conventional way stopping the head at any height on the column and adjusting the helicoidal focussing mount of the objective until he obtains to his own judgement the best focus. For higher magnifications than those allowed by the height of the column one can turn the arm and head of the enlarger by 180° around the column and operate outside of the base.

### Optical system

The optical system is particularly designed for high resolution on subminiature formats.

To avoid as much as possible the reproduction of grains structure, scratches or other blemish, the illumination of the negative is partly by diffusion. The lens has high resolving power, gives high contrast and is chromatically corrected over the whole format. The objective has a fixed stop, adjusted to the value found to give best results.

### Instruction for use.

The instrument is set up as shown in Fig. 1. The numbers appearing on column (1) must appear facing towards the operator.

The arm is slipped on the column from the top.

The bulb should preferably be a frosted type 60 W.

The column has a set of holes (2) in which pin (3) be inserted. Pin (3) holds the arm at a chosen height. Each hole corresponds to one of the numbers on the column. These numbers give approximately the following enlargements and formats.

Number	Enlargement	Format in cm.	Format in inches
1	5,5 ×	6 × 9	2½ × 3½
2	7,5 ×	9 × 12	3½ × 5
3	9 ×	10.5 × 15	4 × 6
4	11,5 ×	13 × 18	5 × 7
5	16 ×	18 × 24	7 × 10
6	21,5 ×	24 × 30	10 × 12

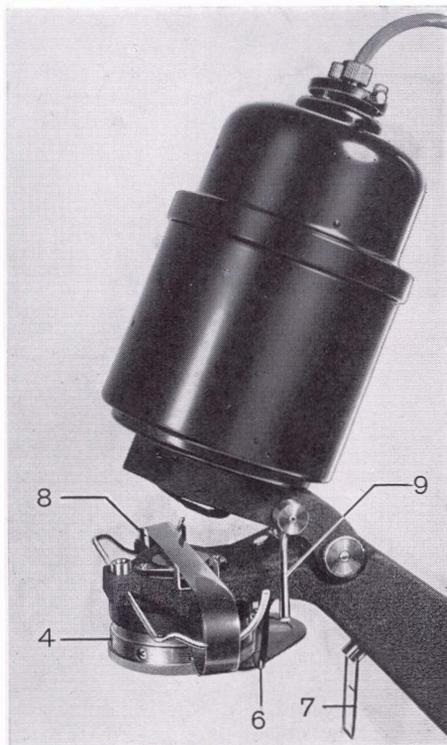


fig. 2

The lens is mounted on a ring (4) which is used for focussing adjustment.

The ring carries also a series of numbers. The number facing the operator is illuminated. This number should correspond to the one appearing on the column immediately under the arm.

To turn ring (4) figure 2, press back lever (6). When released this lever blocks the ring in the precise position which has been calibrated at the factory. In order to use the enlarger freely, without this automatic focussing system, the lever should be engaged in the eyelet (7) on the arm. In this position the helicoidal mount is free and can be turned and adjusted at the will of the operator.

### Film advance

The film is set in its proper seat (8) after the light-housing has been lifted. In this position the film is illuminated and can be carefully cleaned.

In order to advance the film from one exposure to the next one press lever (9) which releases the film from the pressure exerted by the light-housing. If a GaMi viewer has been used to examine the film the shots chosen to be enlarged get marked with a special dot which will be projected by the enlarger so that the proper shots are easily selected.

### Use of easel

If one uses easel, the plane on which the sensitive paper lays may be slightly higher than the plane of the instrument. This would throw off the calibration of the automatic focussing device. The calibration can be reset by the following operation.

Turn lever (10) to release the locking on the column (see fig. 3) and lift column slightly until the indicator pin (12) touches slightly the surface of the easel. In this position the column is locked again tightening lever (10).

The lower edge of the pin (12) always indicated the projection plane for which the enlarger is calibrated.

### Screens

A rotating screen holder located under the lens can hold 50 mm color or diffusing screens in glass or film.

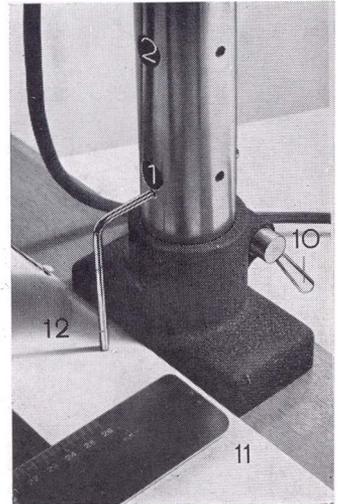


fig. 3