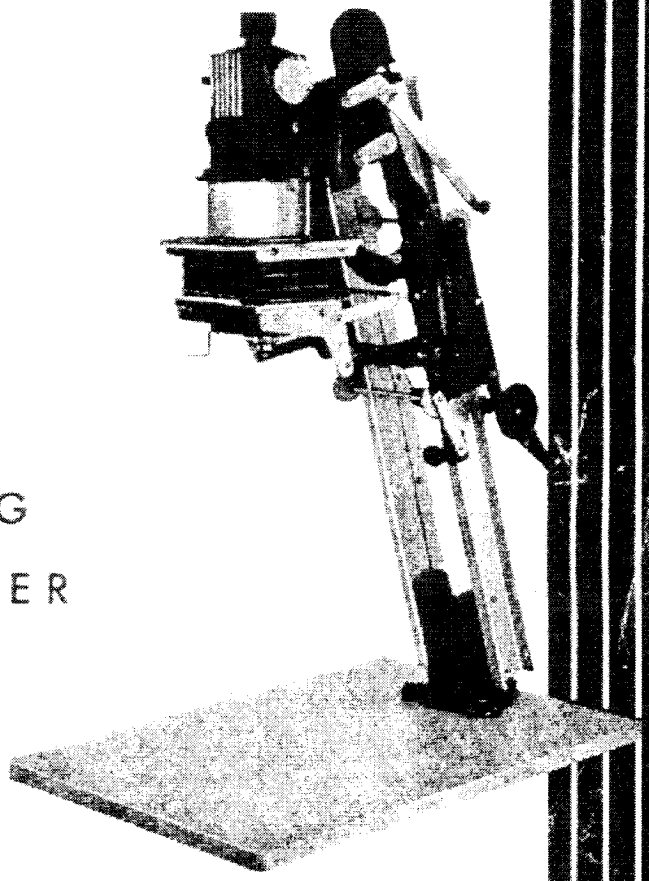
INSTRUCTIONS

FOR SETTING-UP AND
OPERATING THE

OMEGA B-8



A
2¼ x 3¼
MANUAL
FOCUSING
ENLARGER

1955-1974

SIMMON OMEGA, INC.
Manufacturers of Fine
American Photographic Equipment
25-20 Brooklyn-Queens Expressway West
Woodside, N. Y. 11377

SIMMON Omega

Printed in U.S.A

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INTRODUCTION

You now own an Omega B-8, one of the finest, most versatile enlargers ever made.

As a member of the Omega family, you are cordially invited to call on us at any time for photographic advice or assistance. Our staff of photo experts will be pleased to supply you with any additional information you may require about your Omega B-8, and if ever necessary, we will properly check or otherwise service it.

IMPORTANT:

The instructions that follow are very simple. Please read them as soon as possible, even before you unpack the enlarger. This will get you started on the right foot, saving you valuable time and helping you obtain top-notch results without delay.

LIST OF PRINCIPAL PARTS

1. Lockscrews, fastening main column to baseboard.
2. Handwheel for focusing.
3. Rack and pinion for carriage movement.
4. Lock for carriage.
5. Lamphouse lifting lever
   (for inserting filmholders).
6. Condenser housing.
7. Knurled screws for condenser housing.
8. Screw fastening top lamphouse casting
   (loosen to insert supplementary condensers and heat absorbing or diffusing glass).
9. Lockscrews for lamp socket assembly.
10. Lensmount.
11. Filmholder.
12. Knurled screws holding lamphouse to lifting levers and carriage.

HOW THE OMEGA B-8 IS PACKED

The Omega B-8 is packed in a corrugated cardboard carton. The carriage and girder assembly, baseboard and lamphouse are packed separately within the outer carton. Accessories, such as negative carriers and lensmounts are contained in the same carton, therefore, do not hastily discard any apparently empty part before looking inside it.

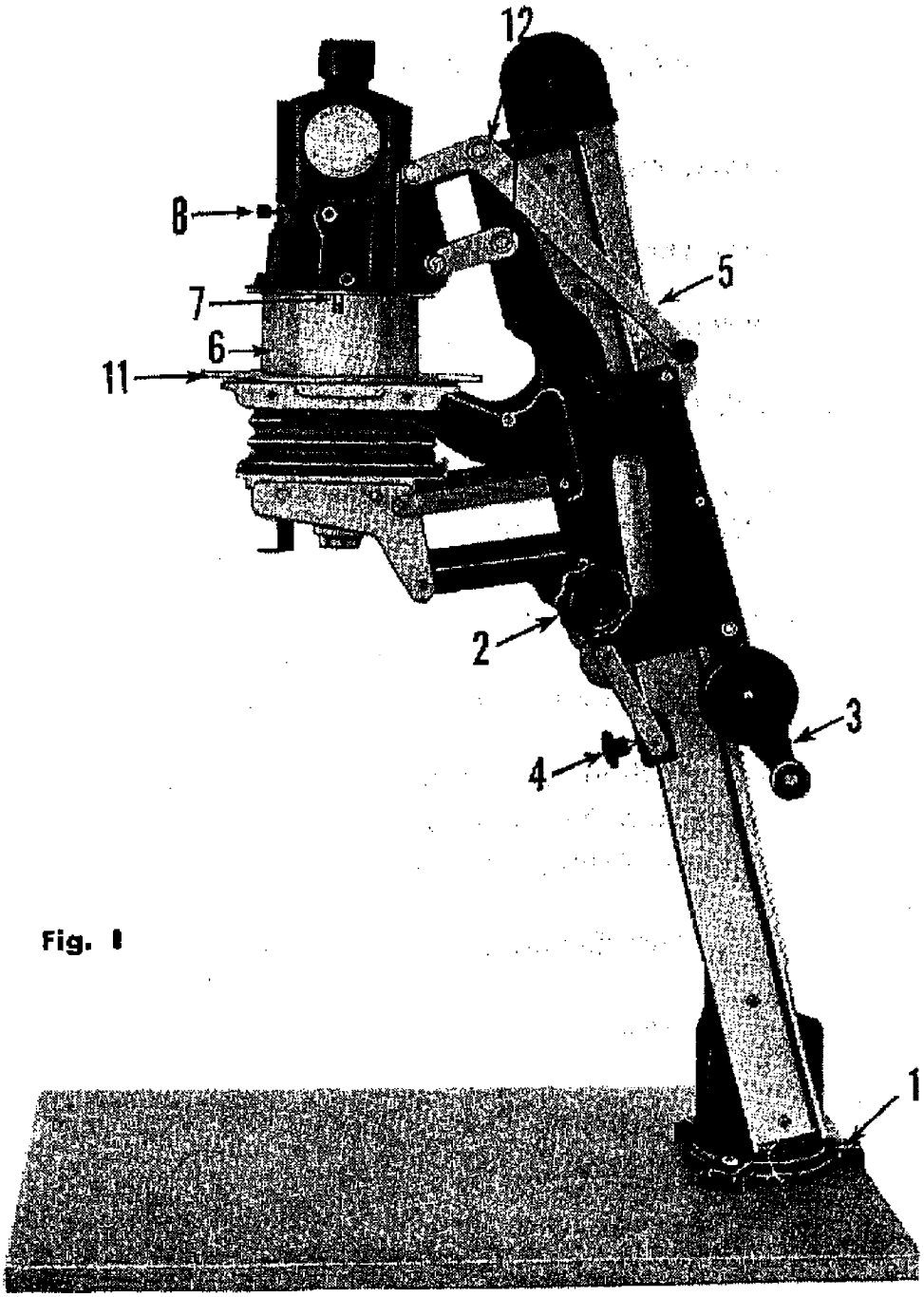

Fig. 1

HOW TO ASSEMBLE THE B-8

a. Carefully open the carton and unpack the enlarger proper, the baseboard, lamphouse, and all accessories. *Check all items for completeness!*
Set the baseboard on a table and remove at least one of the screws 1 (Fig. 1) and loosen the two others.
b. Before handling the enlarger proper, be sure that the projector carriage is securely locked to the column by means of lock 4.

Note: All enlargers are now made with the lifting lever (5) on the left side (opposite of the above illustration).

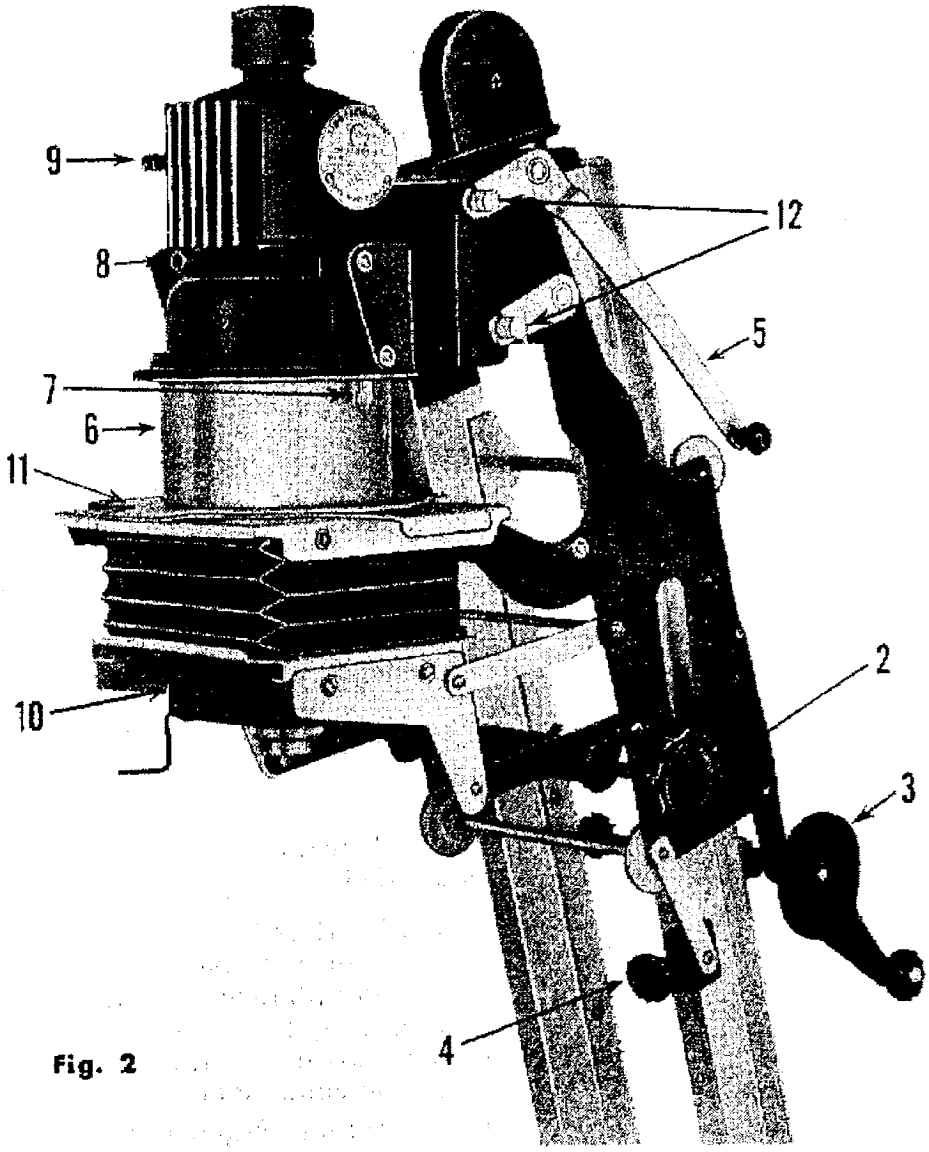

Fig. 2

c. Place the enlarger between the screws 1 in such a way that the square steel clamps are on top of the flange of the base casting. Replace the screw that was removed and tighten all three.

Caution: It is much easier to do this assembly if you have another person to help you.

d. If you have a condenser enlarger, after unpacking the lamphouse and condensers, please clean condensers with lens tissue or a clean soft towel. Install condensers in the condenser housing with the curved surfaces facing each other on the inside so that the flat surfaces are on the top and bottom, as illustrated in Fig. 3.

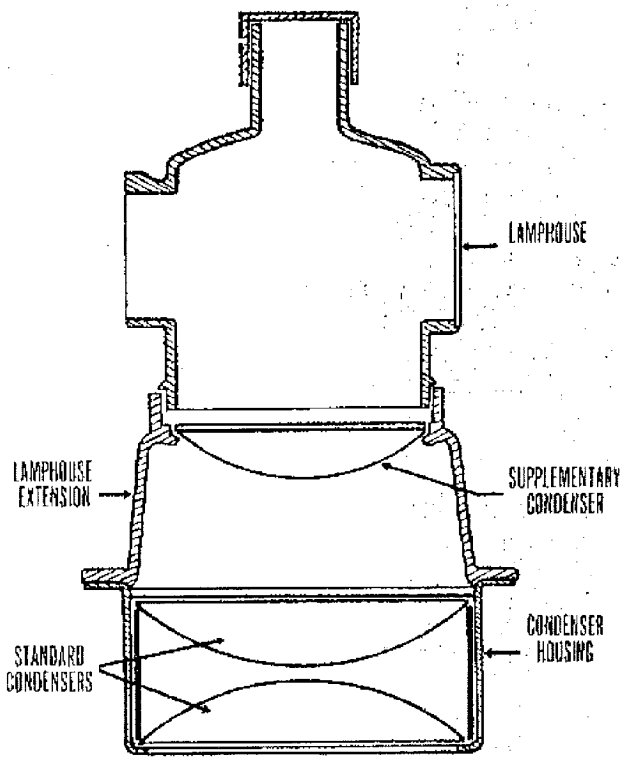

Fig. 3

Complete Lamphouse Showing Position of Condensers for Omega B-8

If you have an enlarging lens of either 3" (75mm) or 2" (50mm), a supplementary condenser must be placed under the lamphouse into the lamphouse extension. Loosen screw 8 (Fig. 1), lift up lamphouse and insert condenser with flat side up as shown in Fig. 3.

e. Place the entire lamphouse and condenser assembly on the film stage of the enlarger and attach it to the lifting mechanism by means of knurled screws 12. If the enlarger is equipped with an Omegalite instead of a condenser lamphouse, the procedure is the same, i.e., the lamphouse is attached to the rest of the enlarger by means of four knurled screws 12 (Fig. 3, page 10).

f. You may now loosen lock 4 whereupon the entire projector assembly can be moved up and down by turning the handcrank 3.

LENSES AND LENSMOUNTS

a. The lens must be of the proper focal length for the size negative to be enlarged. The following focal length lenses are recommended: 3⅝" or 3½" for 2¼ x 3¼", a 3" lens for 2¼ x 2¼" and a 2" lens for 35mm (1 x 1½") and bantam.

RECOMMENDED LENSES, LENSMOUNTS AND CONDENSERS FOR OMEGA B-8

OMEGALITE MODEL: Same lenses and lensmounts are recommended. Condensers are not used.

Max. Neg. Size Lens Will Cover	f:	Focal Length	Approx. Magnification Ratios† Max.*	Min.**	Lensmount	Condensers (not used with Omegalite)
2¼" x 3¼" 2¼" x 2¾"	4.5 4.5	3½" 3⅜" 10	7X	1½X	2" high	Standard double condensers only
2¼" x 2¼"	4.5 4.5 4.5 4.5 5.6	3" 3" 3" 3" 75 3.2"	8½X	1¾X	1½" high	Double condensers plus ⅝" thin supplementary condenser
35mm	4.5 3.5 4.5 4.5 4.0	2" 2" 2" 2" 2" 50	14X	4X	Flatboard	Double condensers plus 13/16" thick supplementary condenser
35 Half Frame & Subminiature	4.0	1⅜"			Recessed	Double condensers plus 13/16" thick supplementary condenser

* Larger magnifications may be made by projecting on floor.

** Smaller magnifications and reductions may be made by means of the Auxiliary Focusing Attachment.

† All figures have been computed for an easel 1" high.

b. Lenses must be mounted in the proper lensmounts (see chart on page 8).

c. Any lens will enlarge negatives smaller than the largest possible size, but the magnification ratio obtainable under these circumstances will be correspondingly smaller than if a shorter lens were used (see chart on page 8).

d. Camera lenses of moderate f numbers (for example f/4.5) can be used. Camera lenses of very low f numbers (f/1.5 and f/2) are not recommended for enlarging.

CONDENSER LAMPHOUSE

a. **Condensers must match the enlarging lens.** For a 3½" lens, the standard double condensers are used. Supplementary small condenser lenses are added for enlarging lenses of 3" and 2" focal lengths respectively. The supplementary lens for the 3" lens is relatively thin (⅝"), whereas the supplementary lens for the 2" lens is thick (13/16").

b. **These supplementary lenses are inserted** between the two parts of the lamphouse, i.e., the upper part of the lamphouse is detached after screw No. 8 has been loosened and the supplementary lens is then inserted, always with the flat side up. Supplementary condensers are notched at the edge for easy removal.

c. **Replacing Lamp:** The lamp-socket assembly can be detached after loosening lockscrews 9. A no. 111A enlarging lamp (General Electric or Westinghouse) is used. This lamp has a bayonet socket like an automobile lamp. Some lamps have markings on the glass. So that these do not face the condenser and cause dark spots on the easel, the entire assembly can be turned around in its seat before screws 9 are tightened.

d. **Cleaning Condensers:** The standard double condensers are removed by first loosening knurled screws 7, then turning the housing of the condensers slightly and lifting the lamphouse at the same time by means of lifting lever 5. Place open palm of one hand on top of the condensers and tilt the entire condenser housing until top lens rests on palm of hand. Remove spacer. Bottom lens may be removed by again tilting condenser housing until lower lens rests in palm. After the lenses are cleaned, reassemble condensers and replace. When the enlarger is used with 2" and 3" lenses, a small supplementary condenser lens is used, which is placed between the two castings of the lamphouse. This small lens becomes

accessible after the top part of the lamphouse has been removed (screw No. 8). The flat side of this supplementary condenser lens always faces upward (see Fig. 3).

NEGATIVE CARRIERS

(Negative carriers are available in two styles, with and without glass.)

a. Glass negative carriers have the advantage of keeping the film perfectly flat. The glass, of course, must be kept perfectly clean. The chief difficulty with glass holders in the past was due less to dust than to fingerprints.

b. Wipe glass carefully with lens tissue or silicone impregnated paper ("Sight Savers," made by Dow Chemical Company, sold in optical and drug stores).

c. Immediately before inserting a negative, dust both glasses with a camel's hair brush. Do likewise with the negative, holding it on the edges at one corner.

d. Before inserting the next negative it is usually not necessary to wipe the glass again. Merely remove dust by means of a camel's hair brush.

e. Glassless negative carriers will obviously not keep the film as flat as glass filmholders.

f. Film sizes lack standardization. Numerous sizes are in theory alike, but in practice are different enough to require a different negative carrier. For example, so-called 2¼" x 3¼" sizes vary for roll film, cut film, and pack film. Therefore, when ordering negative carriers, specify accurately the desired size and if possible, send us a sample negative.

g. So-called "Rapid Shift" negative carriers are available for the most frequently used roll film sizes: 35mm, 2¼" x 2¼", 2¼" x 2¾" (Koni-Omega 120 Camera) and 2¼" x 3¼". Be sure to lift lamphouse (lever 5) when advancing film!

HOW TO OPERATE THE B-8

a. Adjusting the enlarger to the desired negative size:

1. Insert a lens mounted on the proper lensmount. This lens must be of suitable focal length for the desired negative size (see chart on page 8).
2. Be sure that the proper condensers are used for this lens; i.e., the standard double condensers only for a 3½" lens, the double condensers with an additional supplementary, thin (⅝") lens for

the 3″ enlarging lens, and the standard condensers with an additional thick (13/16″) supplementary lens for a 2″ or 1⅜″ lens.

b. **How to insert the negative:** The negative is held in the negative carrier by compressing the front lips of the upper and lower plate. Lift the lamphousing slightly (with the aid of lifting lever 5), then place the negative carrier with negative upon the film stage of the enlarger. Lower the lamphouse which then by its weight keeps the negative carrier in place. Negatives are always inserted in the negative carrier with the emulsion (dull) side down.

c. **Adjusting the magnification:** Loosen the knurled screw or lock 4, and move projector up and down by means of handwheel 3. After a satisfactory degree of magnification has been achieved, lock 4 may be tightened again and fine-focusing achieved by rotating handwheel 2.

d. **Red Filter:** The red filter is fastened by a knurled screw to a small flag which is part of the lensmount. When lenses are changed, the filter is removed from one lensmount and fastened to the other by means of this knurled screw.
No red filter is perfectly "safe," and sensitized paper placed on the easel should not be exposed through the red filter for any appreciable time.

e. **Exposures:**

1. Insert negative into filmholder and place on film stage of enlarger as described above. Insert a white piece of paper into your paperholder and place this on the baseboard of the enlarger.
2. Adjust magnification by moving projector up and down as described above and focus by means of handwheel 2.
3. Compose picture by rotating filmholder upon the film stage. This may be facilitated by lifting lever 5 just enough to take the weight of the lamphousing off the filmholder.
4. After a satisfactory composition has been achieved, the lens is usually stopped down. No lens performs as well at full opening as with a smaller stop, and the unusually high light output of the enlarger permits stopping down to f/8 or more.
5. Switch the light off, insert a piece of sensitized paper into your paperholder, and make an exposure. The use of a time switch is recommended.
6. No definite exposure time values can be given. They depend upon many factors, such as the density of the negative, the magnification ratio,

the f number of the diaphragm stop, and the sensitivity of your paper.

HOW TO HANDLE SPECIAL WORK

a. **Contrast Control:**

1. The simplest way to control the contrast of prints is by using photographic paper of different contrast grades.
2. Variable Contrast paper: An improved method of contrast control is offered by the use of Variable Contrast paper which yields any degree of contrast depending upon the color of the light to which it is exposed. The B8 Enlarger is excellently suited to this type of work because, due to its high light output, exposure times will be short, even with the necessary color filters.

b. **Color:** Practically all color print processes require the use of filters made of gelatin. These filters may either be placed in front of the enlarging lens, like the red filter, or preferably between the source of light and the transparency. The latter has the advantage that small imperfections of the filters have no effect upon the sharpness of the print. In this enlarger, a round filter of 3½" diameter can be placed between the two halves of the lamphousing (loosen screw 8). Color filters are usually specified under the assumption that a heat absorbing glass will be placed into the optical system. This glass (3½" in diameter) can also be placed between the two halves of the lamphousing (loosen screw 8).

For full information regarding any one of the various color processes, please contact the manufacturer of the materials required for the process that you intend using.

c. **Very small magnifications and reductions:**

AUXILIARY FOCUSING ATTACHMENT: (Available as optional equipment). Take the lensmount off the enlarger, remove the lens by loosening the two small knurled screws and fasten it to the front of the auxiliary focusing attachment. Then place the entire auxiliary focusing attachment into the enlarger in place of the standard lensmount. Focus manually by turning the handwheel on the attachment.

For small enlargements, and particularly for reductions the distance between paper and lens becomes

quite short, and the distance between negative and paper very large. The correct distance can easily be found by holding a piece of white paper at varying distances below the lens.
For very small reductions, always use the shortest focal length lens you have available.
Whenever the auxiliary focusing attachment is used, a piece of opal glass should be placed between the two halves of the lamphousing (loosen screw 8).

d. Very large magnifications: Projecting on the floor: Fasten the baseboard of the enlarger to the table by means of C-clamps or the like. Loosen lockscrews 1, rotate the enlarger on its pivot 180° and replace and tighten the lockscrews. The enlarger will then project onto the floor and naturally yield much larger prints.

GENERAL INFORMATION

a. What kind of negatives to use: No enlarger can yield really good results unless the negatives to be enlarged fall at least approximately within a certain range of contrast. This is because of the fundamental inability of photographic papers to reproduce the full range of tones included in a "snappy" negative.
The deepest shadow areas of such a negative may transmit 500 or 1000 times as much light as distinguishable details of the densest areas. Against this, unexposed white paper reflects only about 50 or 60 times as much light as completely exposed, fully developed areas.
Therefore, excessively brilliant negatives not only are useless but harmful. The best negatives for enlarging have a soft gradation and are rather thin. This is not the place for detailed instructions on processing, but there are numerous fine grain developers available, and suitable negatives are easily obtainable by being careful not to develop too long.

b. How to store your negatives: Small negatives are best stored in short strips usually of six frames of 35mm film, two frames of 2¼" x 2¼", and single negatives of 2¼" x 3¼". Very practical paper or cellophane envelopes are carried by all dealers for this purpose.
Never store roll film in entire rolls. Film loses its moisture content, becomes brittle, and any attempt to manipulate it then results in severe scratches and other damage. No filmholder can keep such film flat.

c. Uniformity of illumination: Great care has been taken to render the illumination of this enlarger as uniform as possible over the area of the easel. By means of a very carefully designed optical system, we have achieved a better performance than that given by

other instruments available not only with 3½" lenses, but also with 3" and 2" lenses.

When using a lens of relatively long focal length, 3½", for relatively small magnifications (2 times or less), the light distributions can be improved by inserting a round piece of diffusing glass, 3½" in diameter, between the two halves of the lamphouse (loosen screw 8).

per instructions
- for 35 mm need 1½ in cone
- also for 75 mm need "thin" 5/8 inch supplementary ring

presently used 75 on flat board w/o - seemed OK

also have ¾ supplemental ~~ring~~ for 50 mm lens + flat board
- note per instructions must use supplemental ring flat
side up

also have 2 inch cone for 90 mm lens - no supplemental ring necessary
- have 2

~~for #1~~
- also supplementary condenser 5/8" for 75 or 90 mm lens # 470-011 purchased 7/19/16
- 2 ring cone 1½ inch for 75 mm & 50 mm lens # 421-151 or 421-195
Purchased 5/17/16

Go to K-S Photographic on Lomaya Enlargers