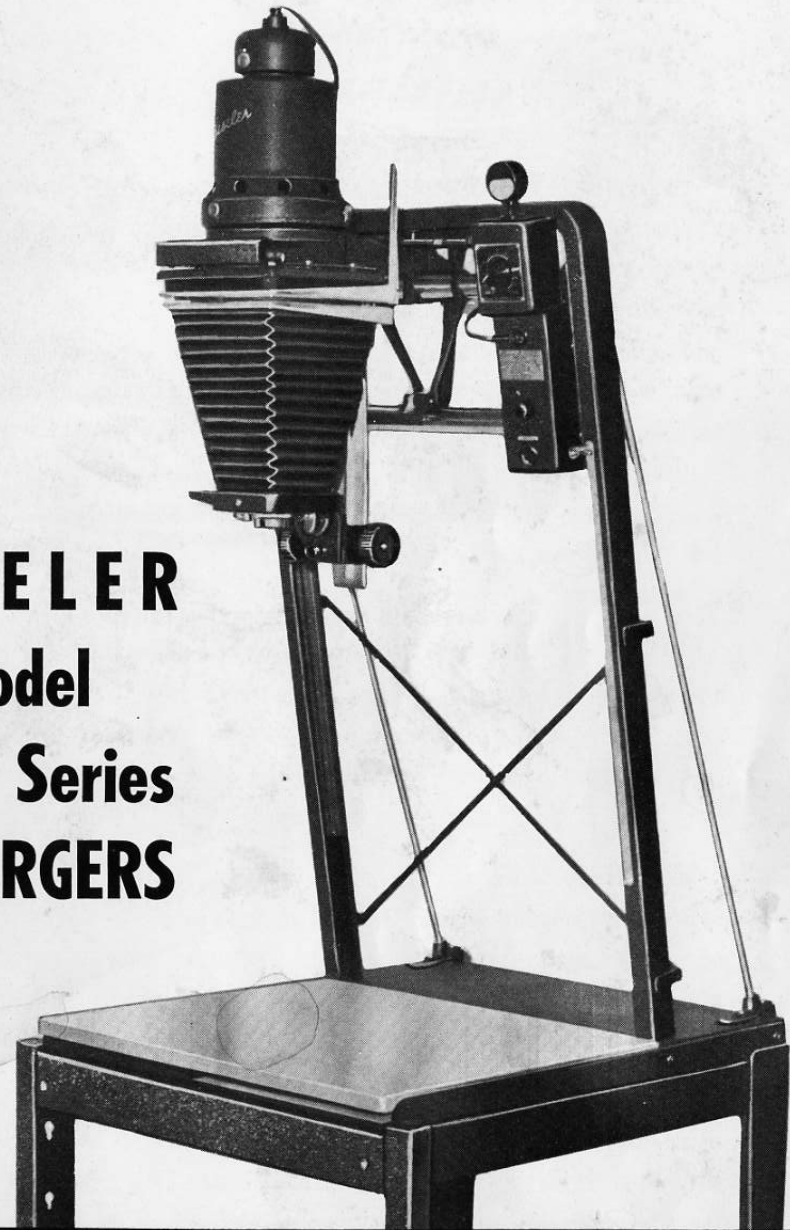




**CHARLES BESELER COMPANY**  
219 South 18th Street, East Orange, N. J. 07018

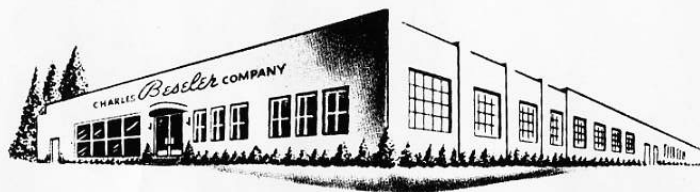
*How  
to  
Use  
the*  
**BESELER**  
**Model**  
**45M Series**  
**ENLARGERS**



**CHARLES BESELER COMPANY**

219 SOUTH 18th STREET

EAST ORANGE, N. J. 07018



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219 South 18th Street, East Orange, N. J. 07018

## *Introduction*

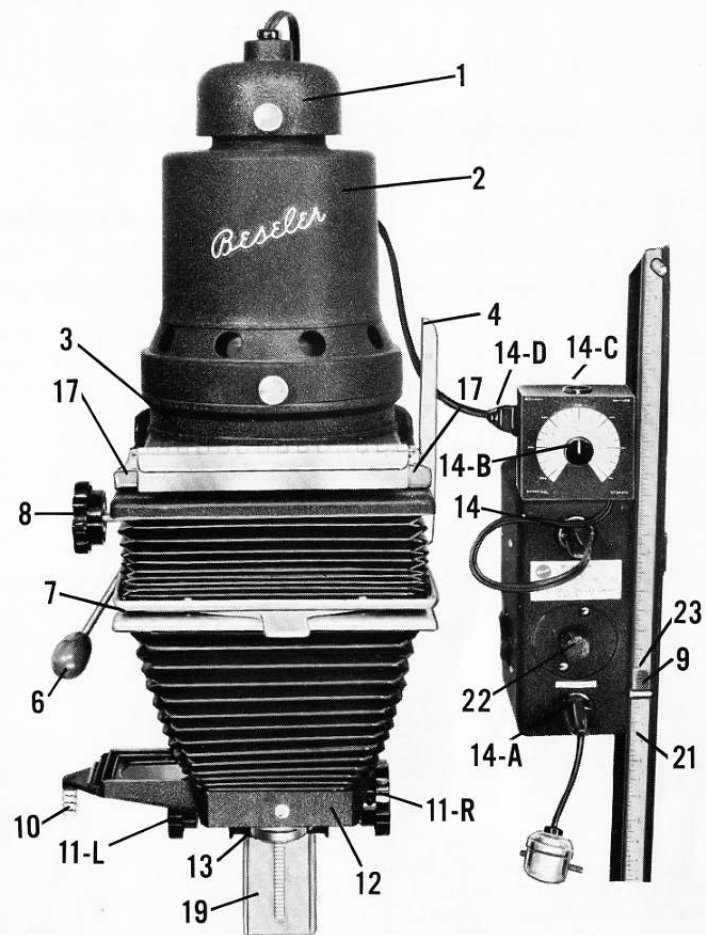
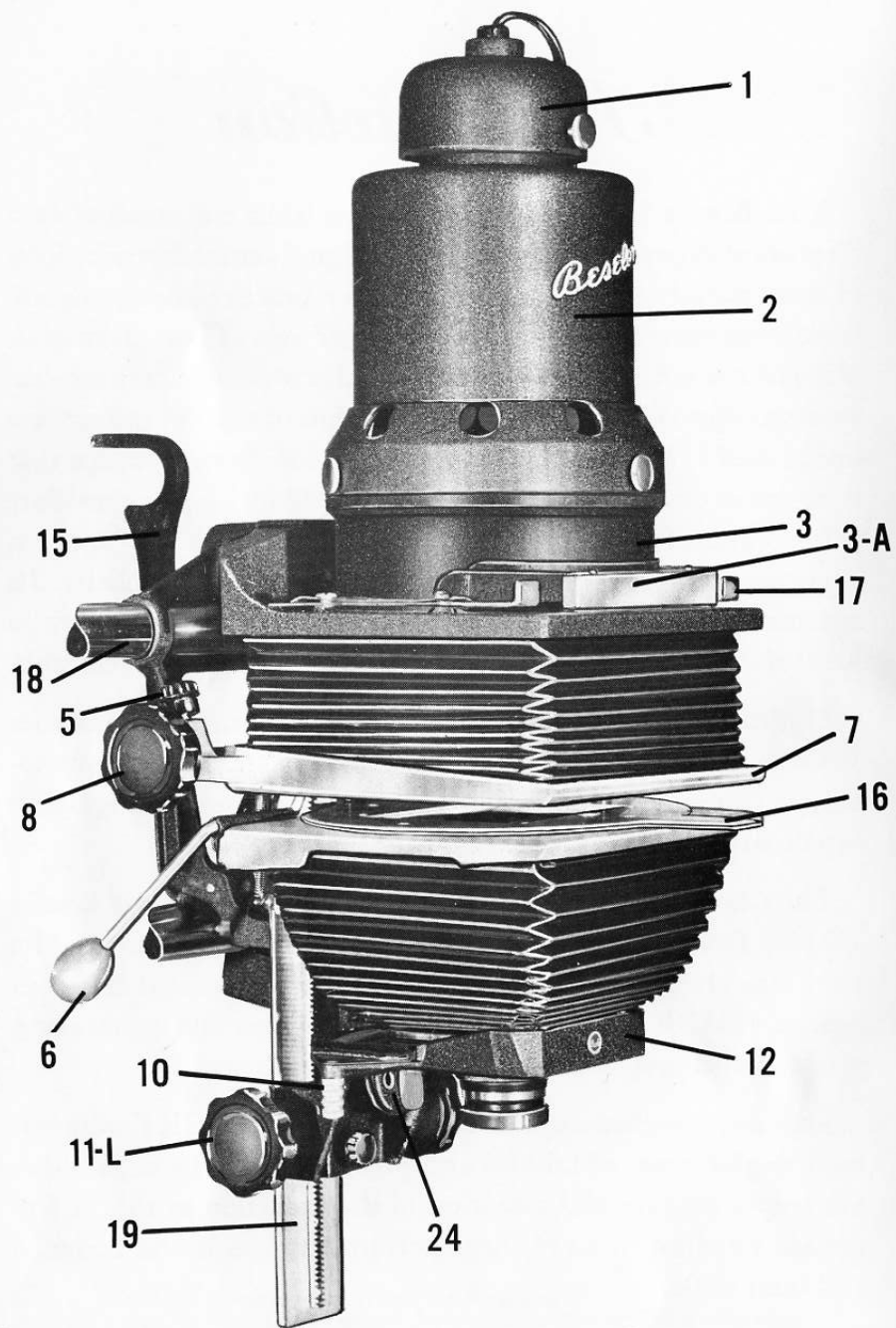
Your Beseler Model 45MCR Enlarger is the end result of over 85 years of experience in equipment design. It embodies principles of construction and function in enlarger practice that recognize basic requirements for efficient enlarger use. These principles, altho new to enlarger design, are old and proven in scientific fields. Its skyscraper construction, with four points of support rather than one as used in other types, assures the freedom from vibration that is so important in enlarging work. Its ability to accommodate various sizes of negatives without the need for accessory spacers, condensers, etc., bows to the need for dark-room simplicity. Its automatic mechanism is modern and its dependability proven in hosts of other devices that formerly depended on manual controls.

Optically, as well as mechanically and electrically, your Beseler 45MCR Enlarger is the proper companion to your fine photographic equipment and it is a compliment to your photographic capabilities.

The Charles Beseler Company, manufacturers of your Beseler 45MCR Enlarger was founded in 1869—almost a century ago! Its work has always been engaged in precision apparatus and your Beseler 45MCR Enlarger reflects the precision and painstaking production efforts that typify Beseler practice.

Like any other fine apparatus, your Beseler 45MCR Enlarger is built to give years of faithful and precise service. Its capabilities ask only your care and attention to its protection so that it will remain steadfast in its brilliant performance, as it was designed and built to do.

In 1869: One of America's Earliest Photographic Manufacturers . . .  
In 1957: The World's LARGEST Manufacturer of Opaque and Overhead Projection Apparatus  
In 1958: The World Leader in Enlargers



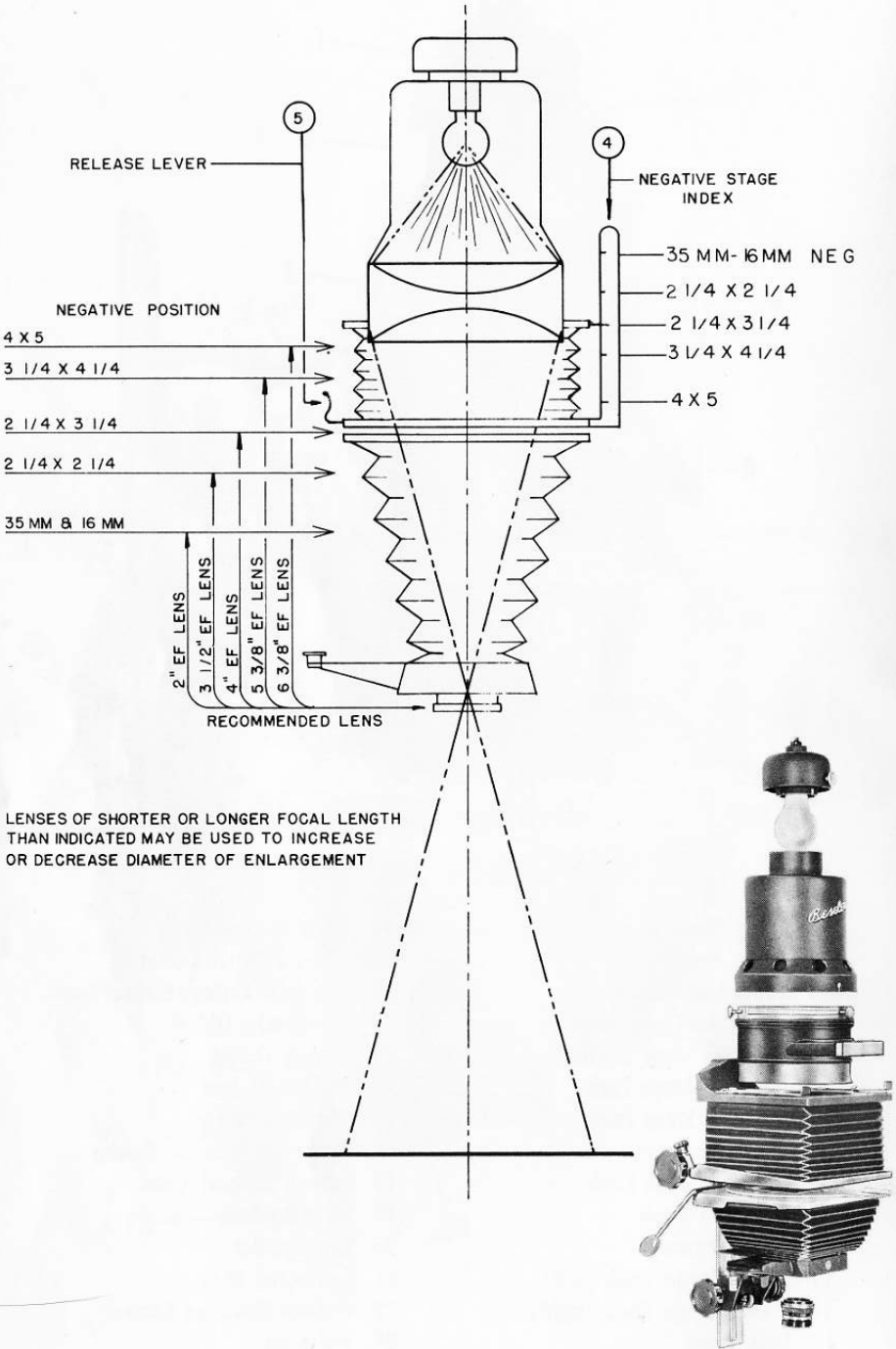
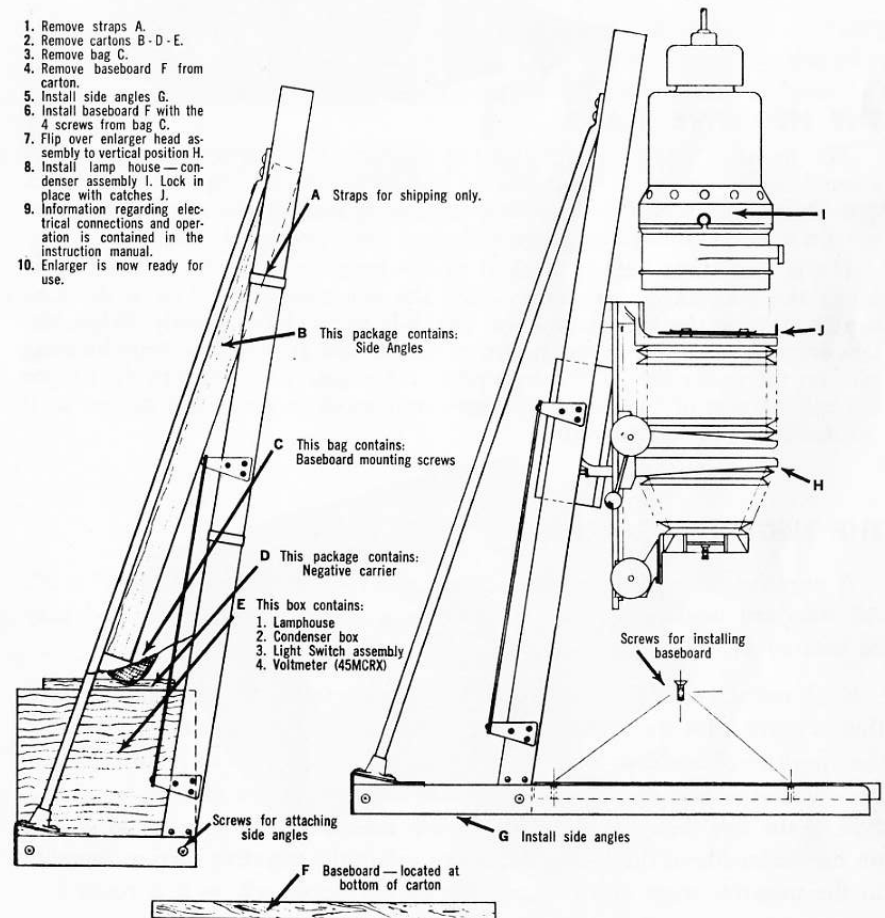
- |                               |                                     |
|-------------------------------|-------------------------------------|
| 1. Lamp House Cap             | 14. "Resistol" Outlet               |
| 2. Lamp House                 | 14-A. Lamp Switch Outlet            |
| 3. Condenser Housing          | 14-B. Resistol Voltage Control Knob |
| 3-A. Bescolor Compartment     | 14-C. Voltmeter Outlet              |
| 4. Negative Stage Guide       | 14-D. Lamp Outlet                   |
| 5. Negative Stage Lock        | 15. Horizontal Arm                  |
| 6. Negative Stage Lever       | 16. Negative Carrier                |
| 7. Negative Stage             | 17. Condenser Housing Clamp         |
| 8. Negative Stage Knob        | 18. Lateral Support Tube            |
| 9. Elevation Knob             | 19. Focusing Rack                   |
| 10. Filter Drawer             | 20. Carriage Bar                    |
| 11-L. Lens Stage Knob (left)  | 21. Calibrated Strip                |
| 11-R. Lens Stage Knob (right) | 22. Manual Elevation Control        |
| 12. Lens Stage                | 23. Red Area                        |
| 13. Lens Stage Brake          | 24. Lens Stage Adjusting Screw      |

## Instructions for operating the Beseler 45 MCR Enlarger

### GETTING READY

The Beseler Model 45MCR Enlarger is shipped in a single carton, partially assembled and ready for use immediately after it is unpacked and prepared as follows:

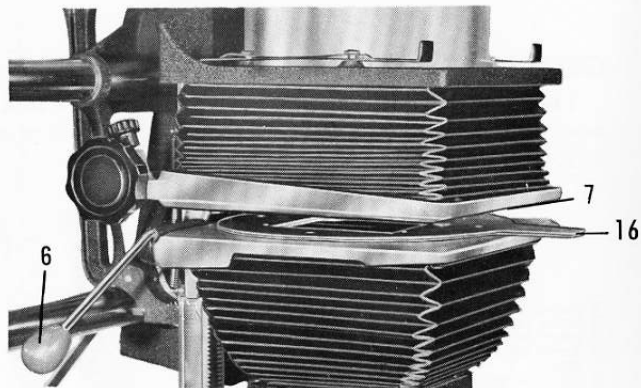
1. Remove straps A.
2. Remove cartons B - D - E.
3. Remove bag C.
4. Remove baseboard F from carton.
5. Install side angles G.
6. Install baseboard F with the 4 screws from bag C.
7. Flip over enlarger head assembly to vertical position H.
8. Install lamp house - condenser assembly I. Lock in place with catches J.
9. Information regarding electrical connections and operation is contained in the instruction manual.
10. Enlarger is now ready for use.



LENSES OF SHORTER OR LONGER FOCAL LENGTH THAN INDICATED MAY BE USED TO INCREASE OR DECREASE DIAMETER OF ENLARGEMENT

When the desired negative is placed into its proper negative carrier (16) and the enlarging lens is inserted into the lens stage (12), your Beseler Model 45MCR is ready.

**IMPORTANT:** Examine the carton and its packing material carefully before disposing of it! The negative carrier, lamp switch and sectional baseboard are packed within supporting dividers in the carton.



### THE NEGATIVE STAGE

The negative stage consists of a flat platform that divides the upper and lower bellows (#7). It is opened by pulling down the negative stage lever #6. Depressing this lever to its lowest position permits the negative stage to remain open. The negative stage will close when lever #6 is released.

If the lens stage (#12) is close to the negative stage, it is necessary to lower the lens stage in order to open the negative stage. This is done by simply turning the lens stage knob (#11-L or #11-R) slightly. When the lens stage is open, insert the negative carrier into it, with the four locating pins on the under side. These pins place the negative carrier into the proper optical position of the negative stage—and serve to guide the carrier as it is rotated to the desired point.

### THE NEGATIVE CARRIER

A negative carrier is available for any size film from 16 MM to 4" x 5". All standard negative carriers are of the glassless, dustless type, and may be rotated in the negative stage.

Each negative carrier consists of two flat metal discs, with an aperture that is correct for its negative. Two guide pins at each of the two sides of the aperture of one disc locate the negative precisely into its position. Four holes in the second disc accommodate these guide pins so that the combination of the two discs forms a flat, smooth assembly. The four locating pins on the underside of the lower disc act to retain the negative carrier assembly in the negative stage and to guide the carrier accurately as it is rotated.

A handle is conveniently placed on the negative carrier to facilitate its rotation and is notched to facilitate quick separation.

Stripfilm is easily moved in the negative carrier by releasing the tension in the negative stage. This is done by pulling down Negative Stage Lever #6.

A Rapid Shift type negative carrier, glassless, is also available, #1670 RN. This unit incorporates "arms" at each side to hold the curled negative. It is available in any one film aperture size from 16mm to 2 1/4" x 3 1/4".

A Universal glass type negative carrier, #1645 UN, is available for all negatives up to 4" x 5".

### NEW—"NEGAFLAT" Glassless 4 x 5 negative carrier #9750.

For printing wet negatives as well as dry negatives.

Provides the flatness of a glass type carrier without the cleaning problems. Negative is placed in the nest (1) and is gripped on the edge by the clamp jaws (2), which are opened and closed with the lever (3) mounted in handle.

These jaws, when closed, gently hold the negative taut and flat.

4 x 5 film pack is accommodated as well as sheet film. The size of the opening is controlled by a simple slide lock.

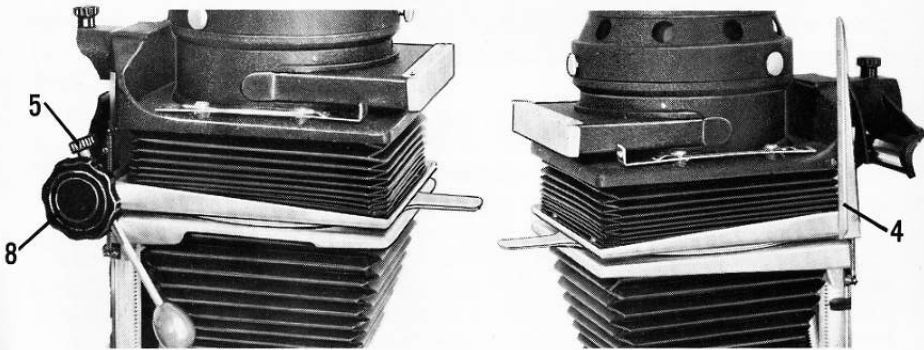


## USING VARIOUS SIZE NEGATIVES

Any size negative, from 8MM (Minox) to 4" x 5" may be used in the Beseler 45MCR Enlarger without changing the condenser unit or altering its position in any way. This is accomplished by locating the negative stage in its proper focal plane position for the size of the negative used.

This is done by raising or lowering the negative stage so that it rests at the correct point within the cone of light that emanates from the enlarger head and condensers. This point is one that provides complete light coverage of the negative area, with the proper flatness of field and the avoidance of "hot spots".

First insert the negative carrier into the negative stage. Then, release the negative stage lock by loosening lock #5. Simultaneously, raise or lower the negative stage to its correct position by rotating knob #8. When the



proper position is reached as indicated on guide #4, tighten knob #5 and the negative is in its optically correct position for use. Five positions are indicated on guide #4, but any size negative may be used within its range:—

4" x 5" position.....	4" x 5" negatives
3 1/4" x 4 1/4" position.....	3 1/4" x 4 1/4" negatives 9 x 12 CM negatives
2 1/4" x 3 1/4" position.....	2 1/4" x 3 1/4" negatives 6 x 9 CM negatives
2 1/4" x 2 1/4" position.....	2 1/4" x 2 1/4" negatives 2" x 2" negatives Bantam negatives Vest Pocket negatives 1/2 Vest Pocket negatives
35 MM position.....	35 MM. B & W negatives 35 MM. Kodachrome Transparencies 1" x 1" negatives 16 MM. negatives Minox negatives

## LENSES AND THE LENS STAGE

Any lens of focal length from 2" to 6 3/8" may be used in the Beseler 45MCR Enlarger without the need of negative spacers, or special lens boards. The standard 4" square lens board supplied with the Beseler 45MCR will accommodate any of these lenses and will operate perfectly with its corresponding negative. A special 1" lens is available for "Minox."

The lens board is inserted into the lens stage #12 by simply inserting the back edge into the rear lens retainer. A soft, springy resistance will be felt, caused by a hidden spring that holds the lens firmly in proper position when its lens board is permitted to slide back into the forward retainer. Removal of the lens board is accomplished by simply pressing it back against its retainer spring and letting the front edge drop out of the forward retainer.

The lens stage can be pivoted, as illustrated, to permit distortion correction. A spring loaded detent assures return to proper position. The lens stage can be adjusted by loosening the lens stage adjusting screws #24.

Standard lenses are available for every size negative. Recommended focal lengths are as follows:—

Negative Size	Lens
4" x 5".....	6 3/8" focal length
3 1/4" x 4 1/4".....	5 3/8" focal length
2 1/4" x 3 1/4".....	4" focal length
2 1/4" x 2 1/4".....	3 1/2" focal length
35 MM.....	2" focal length
16 MM or 8 MM (Minox).....	1" focal length

Baseboard Magnifications on the Beseler 45MCR Enlarger are:—

Negative Size	Focal Length		Approximate Magnification	
	Lens	f:	Maximum	Minimum
4" x 5"	6 3/8"	4.5	3 1/2X	1X
4" x 5"	5 3/8"*	4.5	5X	1X
3 1/4" x 4 1/4"	5 3/8"	4.5	5X	1X
2 1/4" x 3 1/4"	4"	4.5	7X	1.5X
2 1/4" x 3 1/4"	3 1/2"	4.5	8X	2.5X
2 1/4" x 2 1/4"	3"	4.5	9X	2X
35 MM (1" x 1 1/2")	2"	4.5	15X	4.5X
16 MM	1"	4.5	32X	12X
Minox	1"	4.5	32X	12X

\*Not quite adequate for complete coverage and for some magnifications may result in slight vignetting at the corners.

