

Feb. 17, 1942.

O. STEINER

2,273,385

MASKING MEANS

Original Filed Feb. 18, 1939

Fig. 1.

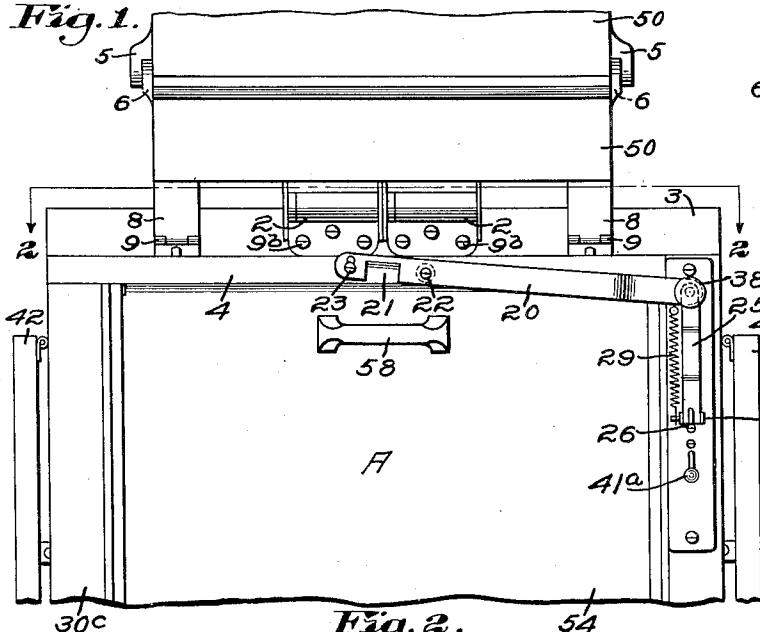


Fig. 3.

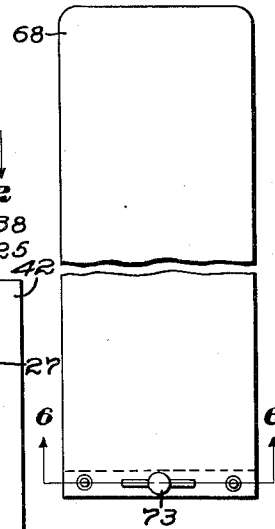


Fig. 2.

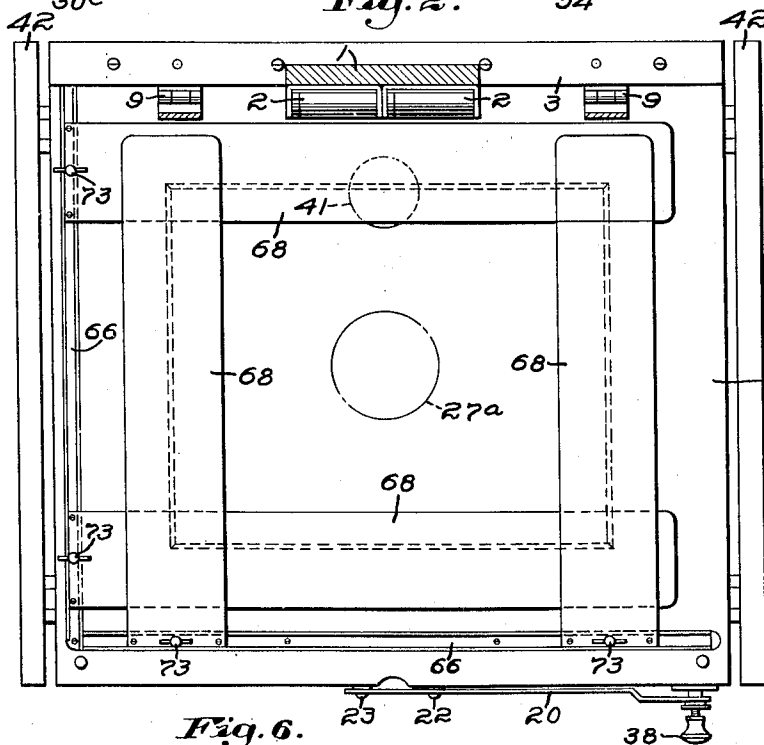


Fig. 4.

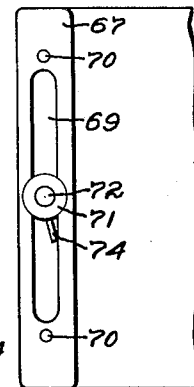


Fig. 5.

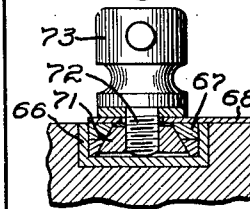
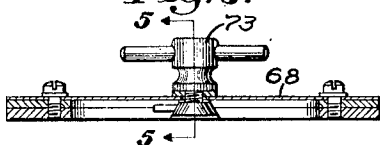


Fig. 6.



Inventor:
Oscar Steiner,
by Emory Brock, Treasurer, Miller and Associates.
Attys.

UNITED STATES PATENT OFFICE

2,273,385

MASKING MEANS

Oscar Steiner, Irondequoit, N. Y., assignor to
The Folmer Graflex Corporation, Rochester,
N. Y., a corporation of Delaware

Original application February 18, 1939, Serial No.
256,018. Divided and this application August
28, 1940, Serial No. 354,554

3 Claims. (Cl. 95—77)

This application is a division of my co-pending application Ser. No. 256,018, filed February 18, 1939, now Patent No. 2,224,839, dated December 10, 1940, for apparatus for making photographic contact prints.

This invention particularly relates to masking means for contact printers for photographic purposes, and also to enlarging easels, used to hold the photographic paper and providing means for obtaining a white border when projection prints are made.

In order that the principle of the invention may be readily understood, I have disclosed a single embodiment thereof in the accompanying drawing, wherein—

Fig. 1 is a front elevation of the upper part of a contact printer for photographic purposes with the platen top fully opened and showing the platen top hinge springs;

Fig. 2 is a section on the line 2—2, Fig. 1, very clearly showing the position of the masking blades, plates or members;

Fig. 3 is an enlarged detail in plan, partly broken away, of one of the said masking blades, plates or members;

Fig. 4 is a bottom plan view of part of one of the masking blades, plates or members, showing the locking means therefor;

Fig. 5 is a section taken through the construction shown in Fig. 6 on the line 5—5 of said figure; and

Fig. 6 is a longitudinal section through one of the masking blades, plates or members on the line 6—6, Fig. 3, showing the construction of the locking means therefor.

The upper portion only, of a contact printer is shown in Fig. 1. It may be of any suitable construction, but in the disclosed embodiment of the invention the casing thereof is indicated generally at A. Preferably it has a top platen bar 1 pivoted at 2 to bar hinge block 3. The platen top is indicated at 4, and thereabove are positioned the forward platen casting 5 and the rear platen casting 6, which are connected by a hinge. The rear casting 6 has connected thereto a platen hinge arm 8 hinged at 9 to the platen top 4. The platen bar hinges 2, 2 are attached to the hinge block 3 by screws 9b, 9b.

The platen bar 1 has attached thereto a hinged latch having a hook to engage a rocking bar 20 having a notch 21 to receive the said hook of the latch. The bar 20 is pivoted on a screw 22 and its movement is limited by a screw or pin 23. Pivoted to the bar 20 is an upright bar 25 connected to a switch arm or lever 26 by a

pin 37. The large electric lamp is indicated at 27a, it being controlled by a suitable circuit. A tension coiled spring 29 is connected to said bar 20, and tends to rock said bar 20 clockwise about its pivot 22. Said bar 20 has a knob 38 for manual operation thereof so as to cause the lamp to be illuminated even though the top platen is raised. Such act is sometimes necessary for adjustments in the placing of negatives under the masking blades, plates or members, to which my invention is particularly directed.

A second or red lamp is preferably provided, controlled by suitable switches, and a pivoted arm for one of them is indicated at 41a. To either side of the printer is pivoted a folding shelf 42. The top of the printer is provided with a glass plate and a flexible blanket or pressure pad 50 is employed for the purpose of holding the paper and the negative in contact above and against the said glass plate. A handle 53 is attached to a side panel of the housing.

My invention is in no wise limited to the said construction of parts.

Referring especially to Fig. 2, it will be seen that the entire top of the printer is exposed, the platen bar 1 having been raised all the way up and represented as cut off in this view. The platen top 4 is provided with grooves or channels receiving removable channel bars 66, 66 (shown best in enlarged section in Fig. 5), in which slide shoes 67, 67 carrying four masking blades, plates or members 68, 68. The said blades may be made of any suitable material but are preferably of thin or sheet steel. They have riveted to their lower faces the said guide shoes 67 respectively. One of the said guide shoes is clearly shown in Fig. 4 and the cross sectional form thereof is shown in Fig. 5. In each guide shoe 67 is provided an elongated opening 69. Each shoe is fastened to the corresponding blade with rivets 70, 70. In the centre of each shoe 67 is fitted a tapered member or cone 71 which is engaged by a screw 72 attached to knob 73 and prevented from turning in the shoe 67 by a pin 74, clearly represented in Fig. 4.

When the knob 73 is turned in a clockwise direction, inasmuch as screw 72 is provided with a right hand thread and the tapered member or cone 71 is also provided with a right thread, the cone 71 will be caused to rise in the elongated opening 69 which is shaped to fit the cone 71 and has a like taper. The shoe 67 will thus be caused to expand, thereby locking the masking blade assembly to the masking blade bars, track or channel 66. If the knob 73 is turned in a con-

traclockwise direction, its cone 71 is allowed to move downward, thereby permitting the sides of the channels 65, 66 to contract. Thus, the masking blade assembly can be slid along or lifted out of the track or channel at will together with the channel bars. As clearly shown in Fig. 2, there are two of these channel bars or tracks 65, at right angles to each other, and each receives an end of two of the masking blades, which are four in number, and are positioned for operation as there shown.

This novel construction provides means for permitting the entire removal of the masking blades, plates or members from the top of the printer if desired, thus leaving the entire area free and clear with no projections of any kind to interfere when working with extremely large negatives or paper, the upper edges of the tracks or channels 65, 66 being flush with the face of the top 4. While masking devices have, of course, been heretofore employed, they have generally, as placed upon the market, had some permanently attached brackets or members of one kind or another that interfered with an absolutely clear top when the masking blades themselves were removed.

A switch is closed through pivoted arm 41a, which action illuminates the red lamp. The top platen bar 1 is raised all the way up. The negative is placed on the glass plate and photographic paper is placed in contact with the negative. The masking blades 68, 69 are adjusted for the proper area of picture. These masking blades, which are thin, lie between the negative and the photographic paper. The top platen bar 1 is brought down carrying with it platen castings 5, 6 and pressure pads 53, 53, which contact with the photographic paper, placing the latter in firm contact with the negative, and the negative in turn in firm contact with the glass plate. After the printing has been done the latch is released from the bar 22 and the platen top bar 1 opened for the removal of the paper and negative, or of the paper alone if a number of prints are to be made from the same negative.

Having thus described one illustrative embodiment of the invention, it is to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

I claim:

1. Apparatus for printing for photographic purposes from negative, comprising a housing or enclosure having illuminating means and a top adapted to have secured thereto at one edge the platen means, a glass-like plate upon said top to receive the negative and sensitized paper, said top having formed therein, and terminating flush with the surface of said top, grooves adjacent to and parallel with two edges of said plate which are at substantially right angles to each other, removable channel bars, substantially U-shaped in cross section, in said grooves respectively for receiving each two masking blades or members, the latter each having at one end thereof guide shoes adapted to be received directly in the said channel bars, and means carried by said blades and co-acting with said guide shoes to tighten the said blades in said channel bars by expanding said guide shoes against opposite walls of said channel bars or to loosen them therein for removal therefrom or

adjustment therealong, said means carried by each of said blades including a screw extending through the blade, and a nut-like member carried by said screw and having a tapered surface to engage the said guide shoe and expand the same against said channel walls, the said blades with such securing and adjusting means and said channel bars being readily removable from the said top, thereby leaving the latter flush and entirely unobstructed.

2. Apparatus for printing for photographic purposes from negatives, comprising a housing or enclosure having illuminating means and a top adapted to have secured thereto at one edge the platen means, a glass-like plate upon said top to receive the negative and sensitized paper, said top having formed therein, and terminating flush with the surface of said top, grooves adjacent to and parallel with two edges of said plate which are at substantially right angles to each other, removable channel bars, substantially U-shaped in cross section, in said grooves respectively for receiving each two masking blades or members, the latter having at one end thereof guide shoes adapted to be received directly in the said channel bars, and means carried by said blades and co-acting with said guide shoes to tighten the said blades in said channel bars by expanding said guide shoes against opposite walls of said channel bars or to loosen them therein for removal therefrom or adjustment therealong, the said means carried by each of said blades including a screw received in a lengthwise extending slot in the blade and shoe, and a nut having a tapered face upon the under side of said blade upon said screw, said shoe having a tapered face to be engaged by the tapered face of said nut and expand the same against said channel walls, the said construction also permitting, upon the loosening of said nuts, the quick removal of the entire series of blades and the channel bars and the securing and adjusting means from the said top, thereby leaving the same flush and unobstructed.

3. A photographic printer having a top to receive the negative and sensitized paper, said top having formed therein, and terminating flush with the surface of said top, grooves adjacent to and parallel with two edges of said top which are at substantially right angles to each other, removable channel bars having spaced lateral walls in said grooves respectively for receiving each one or more masking blades or members, the latter each having at one end thereof guide shoes adapted to be received directly in the said channel bars, and means carried by said blades and co-acting with said guide shoes to tighten the said blades in said channel bars by expanding said guide shoes against opposite walls of said channel bars or to loosen them therein for removal therewith or therefrom or therealong, said means carried by each of said blades including a screw extending through the blade, and a nut-like member carried by said screw and having a tapered surface to engage the said guide shoe and expand the same against said channel walls, the said blades with such securing and adjusting means and said channel bars being readily removable from the said top, thereby leaving the latter flush and entirely unobstructed.

OSCAR STEINER.