June 17, 1952 A. B. SIMMONS 2,600,809

ENLARGING EASEL

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FIG. 1.

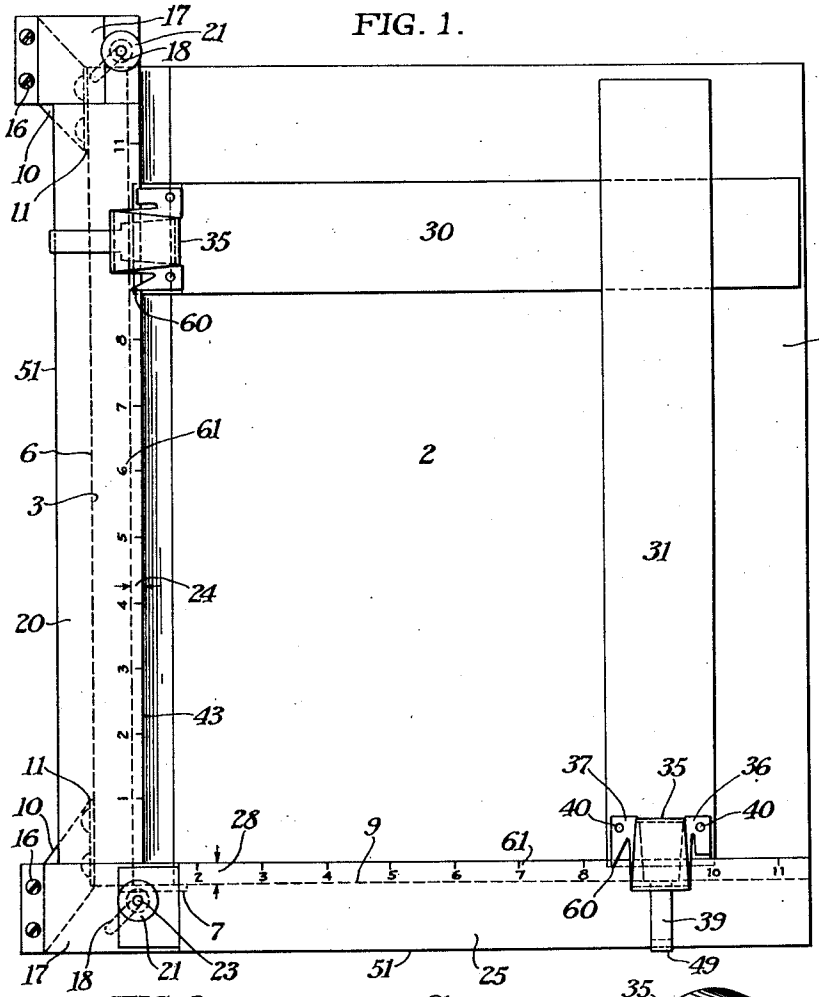


FIG. 5.

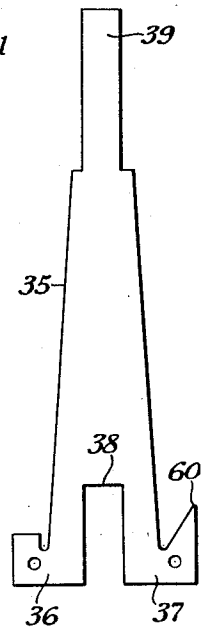


FIG. 2.

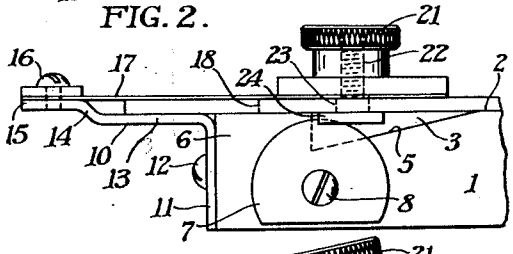


FIG. 3.

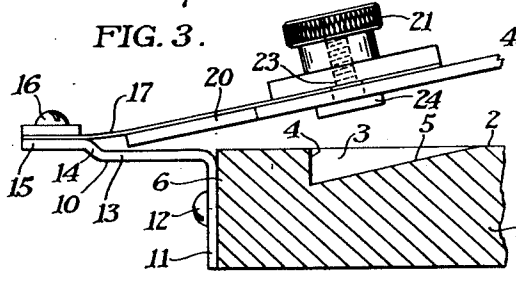
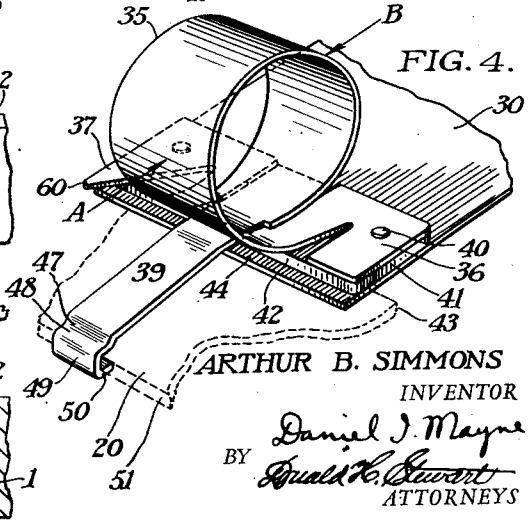


FIG. 4.



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ENLARGING EASEL

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2 Claims. (Cl. 88—24)

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This invention relates to photography, and more particularly to an enlarging easel for holding sheets of photographic material, such as light-sensitive paper, or film, in a plane and for masking the edges thereof. One object of my invention is to provide a simple and inexpensive easel on which sheets of photo-sensitive material may be laid with a simple means for masking the edges of the material. A further object of my invention is to provide a means tending to hold two of the masking strips accurately at right angles to the other two masking strips. A further object of my invention is to provide a simple type of spring clamp which not only holds the masking strips in their proper position, but which, likewise, provides a handle by which the clamping action can be released to facilitate sliding the masking strips. Other objects will appear from the following specification, the novel features being particularly pointed out in the claims at the end thereof.

Coming now to the drawings wherein like reference characters denote like parts throughout:

Fig. 1 is a top plan view of a typical easel constructed in accordance with and illustrating one embodiment of my invention;

Fig. 2 is a fragmentary enlarged end elevation of a portion of the easel shown in Fig 1;

Fig. 3 is a fragmentary end elevation, parts being shown in section and on an enlarged scale of a portion of the easel shown in Fig. 1;

Fig. 4 is a perspective view of a spring-clamping member showing the means for slideably mounting a movable masking member on a supporting masking member; and

Fig. 5 is a plan view of the spring clamp blank before the spring clamp is rolled up into its operative position shown in Fig. 4.

The improved enlarging easel comprises a base preferably having an L-shaped masking member attached to the base so that it may be swung at least partially from the base for inserting a sheet of photographic material beneath the L-shaped member. Each arm of the L-shaped masking member carries a slideably mounted masking member which is held at right angles to the member on which it is mounted. My invention is particularly directed to a simple assemblage of parts which will produce a masking frame on an enlarging easel, particular attention being directed to the means for releasably clamping the slideable masking member which not only acts as a clamp, but acts as a positioning member to accurately align the slideable masking members at right angles to the masking members on which they are mounted.

More specifically, the easel may consist of a board 1 having a flat upper surface 2 on which a sheet of material may be laid. In the present instance I provide a groove 3, best shown in

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Fig. 3, having a shoulder 4 and an inclined surface 5 along one edge 6 of the board 1. The purpose of this groove is to receive an edge of a sheet of sensitized material being laid upon the board, the shoulder 4 definitely locating the sheet of material in the proper position on the board.

At one end of the groove 3 there is a plate 7, which, as shown in Fig. 2, may be attached as by a screw 8 so that this plate covers a part of the end of the groove 3. Thus, the sheet of photographic material may be limited in two directions on the board; (1) that is, it may be limited in its movement toward the bottom edge 6 by means of the shoulder 4, and (2) it may be limited by means of the inner wall of the plate 7.

The end of the board 6 carries a pair of brackets 10, best shown in Figs. 2 and 3. These brackets carry a leg 11 which may be attached to the board 6 as by screws 12. The other end of this bracket extends outwardly at 13, upwardly at 14, and outwardly again at 15. On the outer end 15 there are screws 16 which attach flexible reeds 17 to the brackets 10; the other end of these reeds 17 carrying diagonal slots 18. These diagonal slots support a masking member 20, as shown in Figs. 2 and 3, and the masking member 20 is held by a pair of thumb screws 21 which are threaded at 22 to a bolt 23 having a head 24 on the lower side so that, by adjusting the masking strip 20 in the angular slots 18, the overhang 24, shown in Fig. 1, may be adjusted to control the width of the area masked off of a sheet of photosensitive material lying on the board (1). The masking strip 20 is L-shaped in that there is an arm 25 either fastened to the mask strip 20, or integral with it. Thus, the L-shaped member 20–25 may move to and from the board 2 on the flexible reeds 17 which serve as hinges. The margin 26 shown in Fig. 1, between the stop member 7 and the masking member 25, is controlled by sliding the L-shaped member as a unit in the diagonal slots 18.

Each of the L-shaped arms has similar masking members supported by these arms. The masking strip 20 carries a masking member 30, and the masking member 25 carries a masking member 31; the members 30 and 31 being slideably mounted on the L-shaped members in exactly the same way so that either one of these members may be individually slid on their supports to vary the size of the masked opening.

Referring to Fig. 4, the means for mounting these masking members is the rolled-up spring clamp designated broadly as 35. In Fig. 5, there is shown a preferred form of this spring clamp as it is blanked out. It will be noticed that at one end there is a pair of spaced arms 36 and 37 with a slot 38 between the arms. At the opposite end there is a single arm 39 which is of substantially the same width as the slot 38, so that

when this blank is rolled up into the form shown in Fig. 4, the single arm **39** projects through the opening **38** and the spaced arms **36** and **37** extend on each side of the single arm; these two arms being attached as by rivets **40** to a shoe **41** and to the masking strip **30**, as shown in Fig. 4. The shoe **41** is a rectangular block of metal having a straight edge **42** adapted to contact with the inner edge **43** of the L-shaped mask member arm **20**. This block is accurately aligned at right angles to the mask member **30**. The extreme edge **44** of the arm **30** projects a short distance from the block **42** to lie under the supporting L-shaped member arm **20**. Arm **39** is formed downwardly at **47**, outwardly at **48**, downwardly at **49**, and finally inwardly at **50** to provide a hook having comparatively small surface contact with the outer edge **51** of the L-shaped mask member. When positioned, as shown in Fig. 4, the arm **39**, which is resiliently guided by the slot **38**, always tends to hold the shoe **42** tightly against the edge **43** of the masking arm and thus hold the masking strip **30** accurately at right angles to the masking member **20**. However, in order to slide the masking member **30** to any desired position, the rolled-up portion of the spring clamp **35** serves as a handle, both to move the strip and to release the clamping action between the shoe **42** and the arm **49**. By applying pressure to each side along the lines as shown by the arrows A—B, relatively slight pressure will separate the shoe **42** and the hook **49** a distance sufficient to permit this clamp to slide freely on the supporting masking member. Immediately when the pressure is released, the natural spring in the rolled-up portion **35** will cause the hook **49** and the shoe **42** to approach each other and thereby clamp the strip **30** in its adjusted position. Since the shoe **42** is many times as wide as the hook **49**, it is self-centering in that the tendency of the spring is to bring the entire surface of the shoe **42** into frictional engagement with the edge **43** of the L-shaped mask member and, consequently, to position the mask member **30** accurately at right angles thereto.

Since each of the clamping members is exactly alike, they be designated by like reference characters in the drawings.

It will be noticed that this preferred embodiment of my invention is very simply constructed and yet the parts are rugged and tend to maintain an accurate masking device. The flexible reeds **17**, which serve as hinges, do not have the play which the ordinary hinge must necessarily include because of the hinge pintle, and, consequently, the diagonal slots **18** are always held rigidly relative to each other, except that the reeds **17** may both flex together to serve as hinges, thus permitting the L-shaped member to be raised from the surface **2** of the board for the insertion and removal of a sheet of paper. It is preferable to provide a point **60** on one arm **37** of the rolled-up spring clamp **35**, since this point can then serve to indicate the setting of the masking member on a suitable scale **61**. This point may project beyond the shoe **42**, as indicated in Fig. 1.

The operation of loading the above-described easel is extremely simple. One L-shaped masking member arm **25** is raised from the board **1** causing the reeds **17** to flex and lifting the masking arms **30** and **31** as the L-shaped masking members **20** and **25** move upwardly. A sheet of material is then inserted with one edge in contact with the shoulder **4**, and a second edge in

contact with the plate **8**. The mask may then be gradually lowered and the sheet is held without slippage, since the masking members are preferably made of metal which flexes at least to a limited extent so that the inner edges of the sheet of photographic material are engaged before the outer edges and the movable masking members **30** and **31** contact with the material. The setting of the masking members **30** and **31** can be arranged to provide the desired masked margin for the sheet, before the sheet is entered, or afterwards, since the masking members may slide on the L-shaped masking members whether the L-shaped masking members are raised from the board or are in contact therewith.

It will thus be seen that I have provided a simple and inexpensive type of enlarging easel in which the parts are largely made from blanked-out metal and in which the parts are relatively rugged for a device of this type. It is obvious that various changes will readily suggest themselves to those skilled in the art, and I consider, as within the scope of my invention all such changes as may come within the scope of the appended claims.

Having thus described my invention, what I claim is new and desire to secure by Letters Patent of the United States is:

1. In an easel for masking sheets of photographic material of the type including masking members, a base, a masking member carried by the base, a second masking member slideably mounted on the first masking member, the sliding connection comprising a shoe having a straight edge on the second masking member adapted to engage an edge of the masking member carried by the base, and means for releasably holding the shoe in frictional engagement with the first-mentioned sliding member comprising a looped spring-metal clamp having two spaced arms at one side of the loop affixed to the shoe and a third arm on the other side of the loop passing between the spaced arms, and including means for engaging an opposite side of the first-mentioned masking strip to resiliently grip the opposite side of the strip and whereby pressure on opposite sides of the looped spring may release the second-mentioned masking strip for sliding, said first-mentioned masking member being L-shaped, and brackets carried by the base, spring-metal strips attached to the brackets and having diagonal slots therein, one arm of the L-shaped mask carrying bolts passing through the diagonal slots whereby nuts on the bolts may be turned to slide the L-shaped member on the hinges.

2. The easel for masking sheets of photographic material defined in claim 1 characterized in that the end of the masking member which is slideably mounted on the first masking member extends beyond the shoe to form a lower flange tending to retain the slideably mounted masking member on the first mentioned masking member.

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