

Dec. 2, 1947.

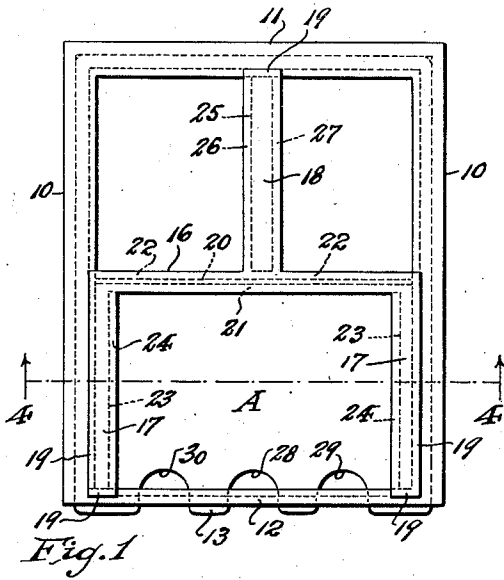
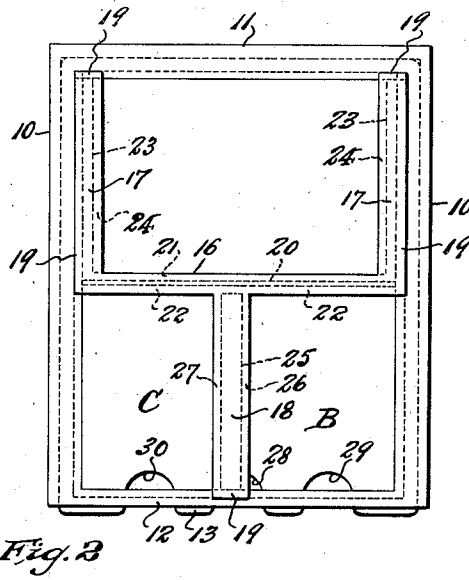
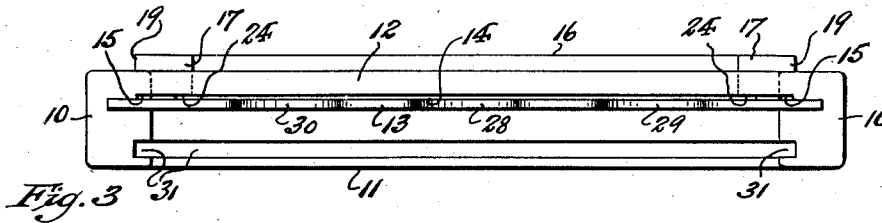
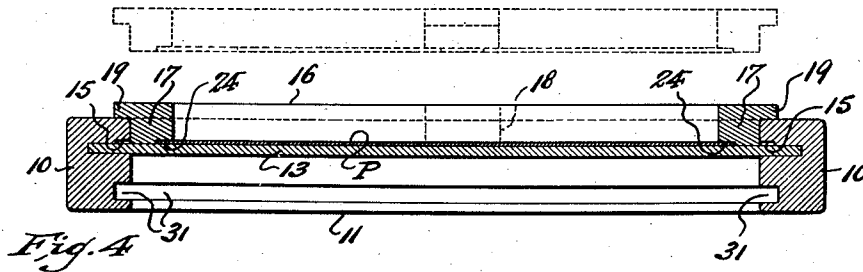
A. RAIFF ET AL

2,432,040

PHOTOGRAPHIC ENLARGEMENT PRINTING FRAME

Filed April 3, 1945

2 Sheets-Sheet 1



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PHOTOGRAPHIC ENLARGEMENT PRINTING FRAME

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2 Sheets-Sheet 2

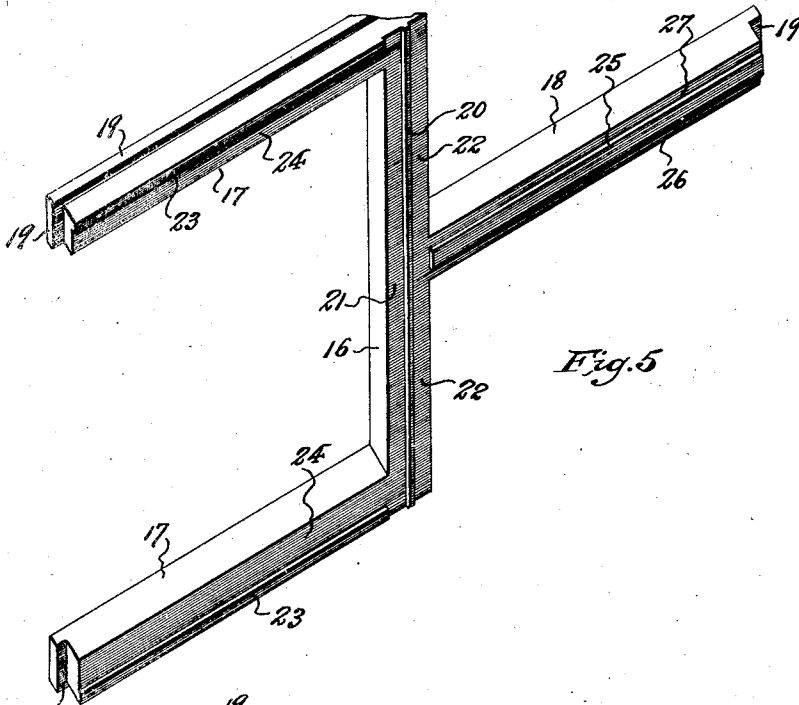


Fig. 5

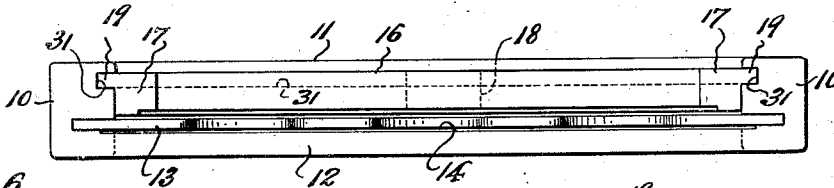


Fig. 6

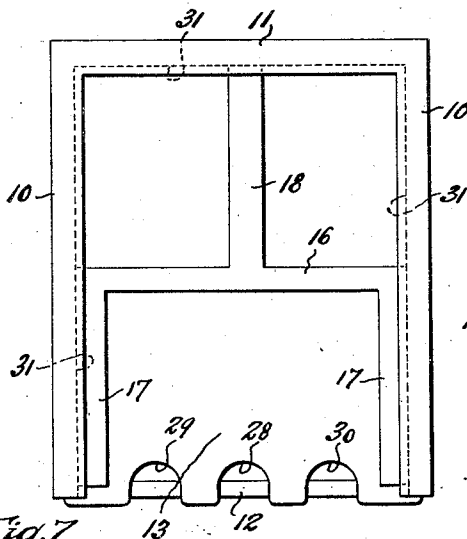


Fig. 7

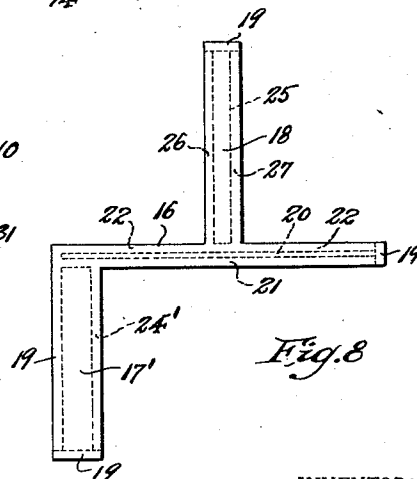


Fig. 8

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2,432,040

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4 Claims. (Cl. 88—24)

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This invention relates to a novel construction of frame or easel for holding sensitized paper subject to projection printing thereon of enlargements from photographic negatives.

The invention has for an object to provide an improved frame or easel adapted to receive and position sensitized paper in exposed relation to photographic enlarger apparatus, whereby a light projected image from a negative mounted in said apparatus may be properly focused upon the paper to print thereon a desired enlargement of the negative subject.

The invention has for another object to provide an improved frame or easel for purposes stated to which sheets of a selected size of sensitized paper to be printed may be quickly, easily and successively mounted in and removed therefrom, whereby to produce a desired number of enlarged prints from a given negative subject.

A further object of the invention is to provide a novel means for quickly and easily adjusting the frame or easel to accommodate the same for operative reception of various sizes of sensitized paper sheets, whereby to produce desired selected sizes of enlarged photographic prints; the adjusting means per se being of exceedingly simple character, and being removably related to the main body of the frame or easel, but capable of quick and easy assembly therewith in various positions according to the selected size of sensitized paper sheet desired to be accommodated by the frame or easel; said adjusting means being of such novel structure, and so related to the main body of the frame or easel, as to be self-sustained in operative assembled relation thereto, without necessity for use of manipulatable fastening, clamping or other devices.

Still another object of the invention is to provide in connection with the main body of the frame or easel novel provision for storing the adjusting means within the confines thereof and in retained but detachable out-of-service assembly therewith.

Other objects of this invention, not at this time more particularly enumerated will be understood from the following detailed description of the same.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which:

Fig. 1 is a top plan view of the frame or easel according to this invention, with the adjusting means positioned and operatively assembled therewith to accommodate large size sensitized paper sheets; and Fig. 2 is a similar view, with

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the adjusting means positioned and operatively assembled with the frame or easel body to accommodate lesser sizes of sensitized paper sheets.

Fig. 3 is an elevational view, on an enlarged scale, of the paper receiving end of the frame or easel, with the adjusting means positioned and operatively assembled therewith as shown in Fig. 1; Fig. 4 is a cross-sectional view, taken on line 4—4 in Fig. 1, but drawn on an enlarged scale, said view showing, by broken lines, the adjusting means in removed relation to the main body of the frame or easel, subject to reassembly therewith in another selected position; and Fig. 5 is a perspective view of the adjusting means removed from the frame or easel body, this view being also drawn on an enlarged scale.

Fig. 6 is an end elevational view, on an enlarged scale, showing the adjusting means assembled with the main body of the frame or easel in out-of-service stored assembly therewith, said frame or easel being disposed in an inverted position; and Fig. 7 is a plan view of the same, drawn on a reduced scale.

Fig. 8 is a top plan view of a modified form of the adjusting means per se.

Similar characters of reference are employed in the above described views, to indicate corresponding parts.

Referring to the drawings, the main body of the frame or easel is of rectangular shape comprising parallel side bars 10, an upper end bar 11 and a lower end bar 12, all joined at their meeting ends in a suitable manner to provide a rigid peripheral frame structure. Said sides and top end bars are of equal and substantial width and thickness or height. Said lower bar 12 is disposed with its upper face flush with the top faces of the side and top bars, but is of less thickness or height, so as to provide open space beneath the same and intermediate the adjacent end portions of the side bars. Rabbeted into the inner face portions of the side and upper end bars 10 and 11, in downwardly spaced relation to but in parallel plane with the top faces of the side and end bars, is a flat paper supporting plate 13, which is coextensive with the open interior of the aforesaid frame structure. The spacing of said paper supporting plate 13 relative to the under face of the lower end bar 12 is such as to provide an intermediate opening or slit 14, somewhat exceeding in height the thickness of a sheet of sensitized paper, through which opening or slit 14 a sheet of such paper may be passed beneath said lower end bar 12 and onto the supporting surface of said plate 13 within said frame

structure. The marginal portions of the inner faces of said side and upper end bars 10 and 11, which are contiguous to the paper supporting surface of said supporting plate 13, are undercut to provide paper stopping and masking cavities 15 of desired width and of height substantially corresponding to the thickness of a sensitized paper sheet, whereby, when marginal portions of a sheet are entered therein, such marginal portions will be masked against light attack so as to remain unprinted, and thus furnish outlining border portions on the finished enlargement print, when the latter is produced.

Novel means is provided for adjustably pre-determining and limiting the sensitized paper receiving area of the supporting plate 13 within the frame structure and contiguous to the paper admission opening or slit 14, whereby to selectively accommodate large or lesser sizes of such paper sheets, according to a selected size of photographic enlargement desired to be printed. A preferred form of such adjusting means comprises a unitary subdivider member formed by a transverse rail piece 16 having at one side thereof stile pieces 17 respectively extending, in one direction, right angularly from its respective end portions, and a division piece 18 at the other side thereof extending, in the opposite direction, right angularly from an intermediate portion thereof. Said subdivider member thus formed is so dimensioned in external length and width as to correspond to the internal length and width of the main body of the frame or easel, so that it is insertable within the upwardly open interior of the latter above and so as to abut the paper supporting plate 13. Preferably, the thickness or height of the subdivider member exceeds the depth of the upwardly open interior of the main body of the frame or easel, so that the external sides and free ends of the stiles 17 and the free end of the division piece 18 may be provided with externally projecting ledge portions 19 adapted to lap the top face of the frame or easel body, whereby to enhance the stability of the subdivider member relative to the frame or easel body when it is operatively assembled with the latter.

On its under face, the rail piece 16 of the subdivider member is provided with a downwardly offset rib 20 extending longitudinally therealong intermediate its lateral margins; said rib 20 serving both to provide a paper stop and to offset the undersurface of said rail piece 16 from the opposed surface of the paper supporting plate 13, whereby to provide, respectively along opposite lateral marginal portions of said rail piece undersurface, outwardly open masking cavities 21 and 22 of desired width, in which marginal portions of a sensitized paper sheet may be entered and thereby masked against light attack for print border provision. On their underfaces, the stile pieces 17 of the subdivider member are each provided with a downwardly offset rib 23 extending longitudinally therealong contiguous to their outer lateral margins; said ribs 23 likewise serving both to provide a paper stop and to offset the undersurfaces of said stile pieces from the opposed surface of the paper supporting plate 13, whereby to provide along the inner lateral marginal portions of each stile piece outwardly open masking cavities 24 of desired width, in which marginal portions of a sensitized paper sheet may be entered and thereby masked against light attack for print border provision. Similarly, on its underface, the division piece 18 of the subdivider member is provided with a downwardly

offset rib 25 extending longitudinally therealong intermediate its lateral margins; said rib 25 providing both a paper stop and defining opposite outwardly open masking cavities 26 and 27, by which entered marginal portions of a sensitized paper sheet may be masked against light attack for print border provision.

In the use of the frame or easel of this invention, if it is desired to obtain a comparatively large size print, the subdivider is inserted within the frame structure with its stile pieces 17 directed toward the paper receiving end of said frame structure (as shown in Fig. 1), whereby a comparatively large internal area A of said subdivider member is opposed to the lower end bar 12 of the frame or easel body and to the paper admission opening or slit 14 underlying the latter. When the frame or easel body and subdivider member are thus assembled, a sensitized paper sheet P (see Fig. 4), sized to fit said internal area A, is inserted through the paper admission opening or slit 14 onto the paper supporting plate 13, until its upper edge is stopped against the rib 20 of the rail piece 16, and so that its upper marginal portion is entered in the masking cavity 21 of said rail piece, its side marginal portions entered in the masking cavities 24 of the stile pieces 17, and its lower marginal portion masked by the lower end bar 12 of the frame or easel body. The paper thus operatively assembled with the frame or easel may thereupon be subjected to the printing effect of a photographic enlarger in the well known manner. Exposure having been made, the paper sheet may be quickly and easily withdrawn, and a new sheet substituted. Such operations being repeated until a desired number of enlargement prints are obtained. To give convenient access to the paper sheets, whereby to facilitate manipulation thereof in entering the same in and removing the same from the receiving area A, the free marginal end portion of the paper supporting plate 13 is provided with a central indented finger access opening or notch 28.

If it is desired to obtain prints of lesser size, the subdivider member is lifted out of the frame or easel body, turned end for end, and then reinserted in body, with its division piece 18 directed toward the paper receiving end of the latter (as shown in Fig. 2), whereby lesser internal areas B and C of said subdivider member are opposed to the lower end bar 12 of the frame or easel body and to the paper admission opening or slit 14 underlying the latter. The internal areas B and C may be selectively used according to the size of print desired. If the larger of these two areas, viz. the area B, is to be used, the paper is inserted therein until stopped by the rib 20 of rail piece 16 and marginally masked at its upper end by the masking cavity 22, at one side by the masking cavity 15 of an adjacent frame side bar 10 and at the other side by the masking cavity 26 of the division piece 18, and at its bottom lower end by the frame lower end bar 12. To give convenient access to the receiving area B, the free marginal end portion of the paper supporting plate 13 is provided with an indented finger access opening or notch 29 to extend within the confines of said area B. If the smaller of the two aforesaid areas, viz. the area C, is to be used, the paper is inserted therein until stopped by the rib 20 of the rail piece 16 and marginally masked at its top upper end by the masking cavity 22, at one side by the masking cavity 15 of an adjacent frame side bar 10 and at the other side by the

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masking cavity 27 of the division piece 18, and at its lower end by the frame bottom end bar 12. To give convenient access to the receiving area C, the free marginal end portion of the paper supporting plate 13 is further provided with an indented finger access opening or notch 30 to extend within the confines of said area C.

If it is desired to obtain a print corresponding in size to the internal area of the frame or easel, then the subdivider member is removed, whereupon a paper sheet of such size may be passed through the paper admission opening or slit 14 onto the supporting plate surface, and so that marginal portions of the thus entered paper are lodged in the masking cavities 15 and beneath the lower end bar 12.

From the above it will be observed that the novel subdivider member, which is separable from the frame or easel body, may be quickly and easily assembled with said body, so as to provide a selected one of variously sized paper holding areas in position for use, and that when operatively assembled with the frame or easel body, said subdivider member holds its place and relation thereto without necessity for use of manipulatable fastening, clamping or other devices, or movable parts. As a consequence of this, not only is the frame or easel very convenient for the intended purposes, but there are no parts likely to become lost or disorganized.

Another novel feature of the frame or easel of this invention is the provision of means for storing the separable subdivider member therein, when the same is not in use. To this end the side and upper end bars 10 and 11 are provided at their inner faces and underneath the paper supporting plate 13 with receiving channels or ways 31. These channels or ways are adapted to slidably receive the ledge portions 19 of the subdivider member, whereby to support and store the latter within the frame structure and beneath the paper supporting plate 13. This is shown in Figs. 6 and 7.

In Fig. 8 is shown a modified form of the subdivider member; wherein but one stile piece 17' is provided to extend right angularly from one end of the transverse rail piece 16. When a subdivider member of this form is employed and positioned to oppose a comparatively large area A to the frame bottom end bar 12 and to the paper admission opening or slit 14, one side marginal portion of the paper will engage in a masking cavity 15 of the frame side bar 10 which opposes the single stile piece 17', while the other side marginal portion of the paper will engage in the masking cavity 24' of said stile piece 17'; otherwise the relation of the paper to the subdivider member is the same as already above described. It will also be understood that more than one division piece 18 may be provided, if desired.

Having now described our invention, we claim:

1. A device for the purposes described comprising a rectangular frame body having a paper supporting plate coextensive with the interior thereof and spaced below the plane of the top face thereof, said frame body having a paper admission opening contiguous to the top surface of said supporting plate, and means to predetermine and limit areas of the frame body interior and said supporting plate which are accessible to paper inserted through said admission opening, whereby to selectively accommodate various sizes of paper sheets, said means comprising a separable subdivider member adapted to be re-

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movably inserted and variously disposed within the frame body to overlie said supporting plate in selected positions according to a given size of paper sheet desired to be accommodated, said subdivider member comprising a rail piece to fit transversely within the frame interior, at least one stile piece extending right angularly from an end of said rail piece in one direction, and at least one division piece extending right angularly from an intermediate point of said rail piece in the opposite direction.

2. A device for the purposes described comprising a rectangular frame body formed by side bars, an upper end bar and a lower end bar rigidly joined at their meeting ends, a paper supporting plate rabbeted into the inner faces of said side and upper end bars to be coextensive with the interior of said frame body and spaced below the plane of the top face thereof, said lower end bar being spaced above the top surface of said supporting plate to provide an intermediate paper admission opening, and means to predetermine and limit areas of the frame body interior and said supporting plate which are accessible to paper inserted through said admission opening, whereby to selectively accommodate various sizes of paper sheets, said means comprising a separable subdivider member adapted to be removably inserted and variously disposed within the frame body to overlie said supporting plate in selected positions according to a given size of paper sheet desired to be accommodated, said subdivider member comprising a rail piece to fit transversely within the frame interior, at least one stile piece extending right angularly from an end of said rail piece in one direction with its free end abutting one end bar of the frame body, and at least one division piece extending right angularly from an intermediate point of said rail piece in the opposite direction, with the free end thereof abutting the other end bar of the frame body.

3. A device for the purposes described comprising a rectangular frame body formed by side bars, an upper end bar and a lower end bar rigidly joined at their meeting ends, a paper supporting plate rabbeted into the inner faces of said side and upper end bars to be coextensive with the interior of said frame body and spaced below the plane of the top face thereof, said lower end bar being spaced above the top surface of said supporting plate to provide an intermediate paper admission opening, and means to predetermine and limit areas of the frame body interior and said supporting plate which are accessible to paper inserted through said admission opening, whereby to selectively accommodate various sizes of paper sheets, said means comprising a separable subdivider member adapted to be removably inserted and variously disposed within the frame body to overlie said supporting plate in selected positions according to a given size of paper sheet desired to be accommodated, said subdivider member comprising a rail piece to fit transversely within the frame interior, at least one stile piece extending right angularly from an end of said rail piece in one direction, with its free end abutting one end bar of the frame body, and at least one division piece extending right angularly from an intermediate point of said rail piece in the opposite direction, with the free end thereof abutting the other end bar of the frame body, the side and upper end bars of the frame body having undercut masking and paper stop cavities entering the inner faces thereof contiguous to the top surface of said supporting plate, and said

rail, stile and division pieces of the subdivider member having offset projecting portions on the undersides thereof to provide paper stop and masking cavities entering side faces thereof contiguous to the top surface of said supporting plate.

4. A device for the purposes described as defined in claim 3, wherein said subdivider member is provided with externally projecting ledge portions to lap the frame body when said member is superposed upon the supporting plate, and at least the opposite sides of said frame body having open channeled ways entering the inner faces thereof so as to be disposed in spaced parallel plane below the underside of said supporting plate, said channeled ways being adapted to slidably receive said ledge portions of said subdivider member, whereby to support said member in stored assembled relation to the frame body when not in use.

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