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2,823,581

PHOTOGRAPHIC ENLARGING EASEL

Filed Jan. 16, 1956

2 Sheets-Sheet 1

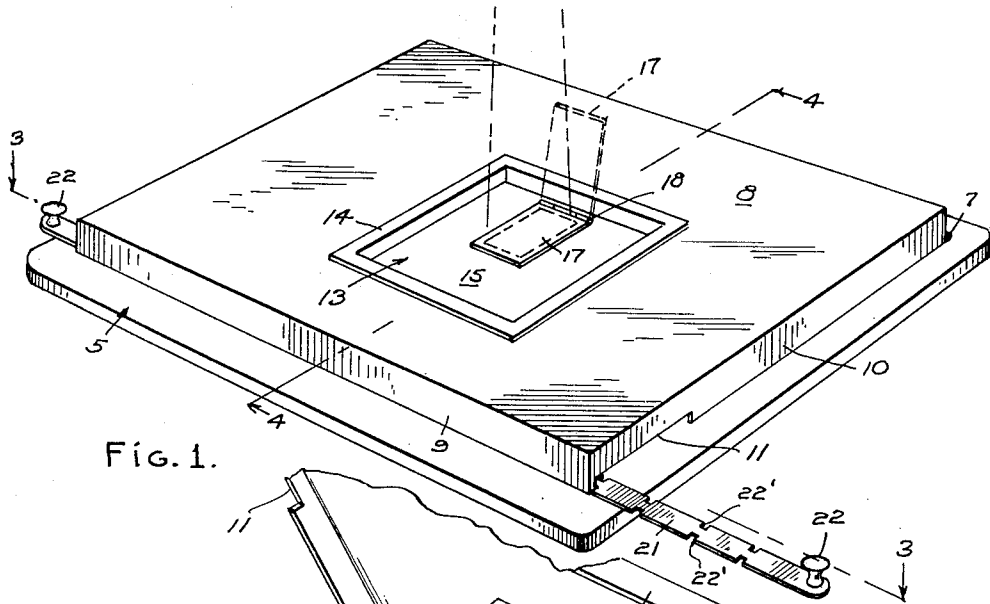


Fig. 1.

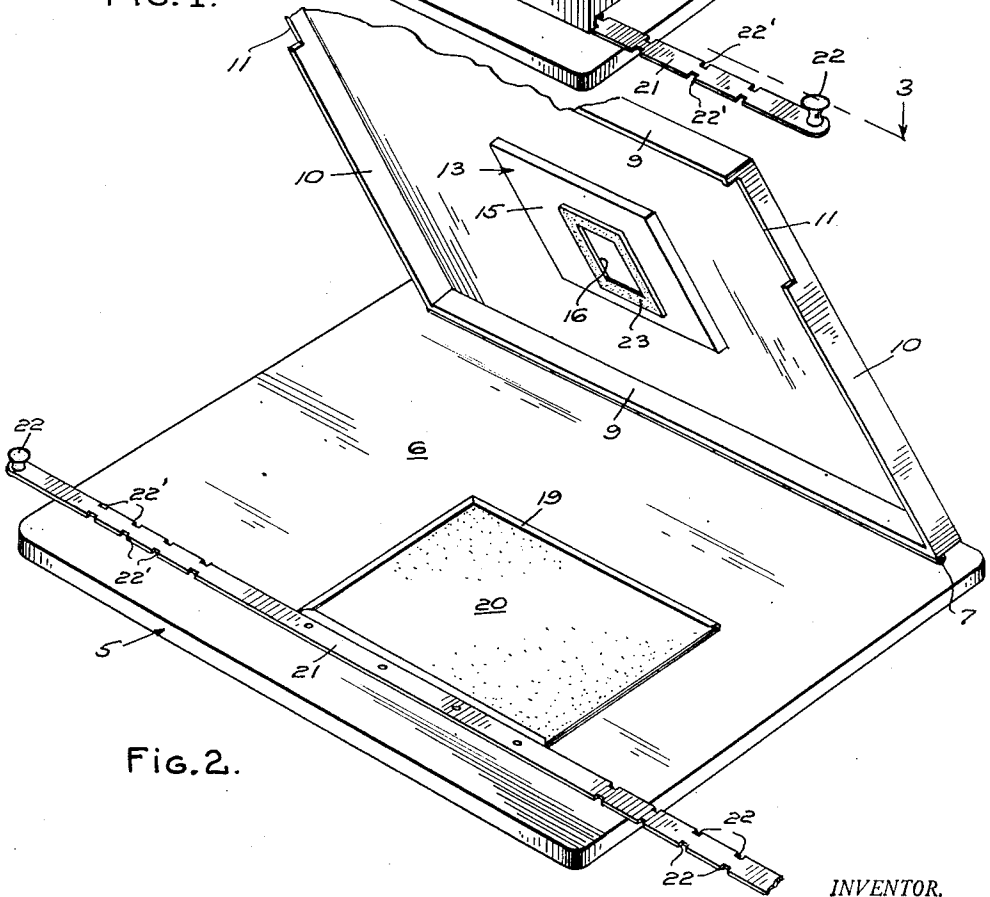


Fig. 2.

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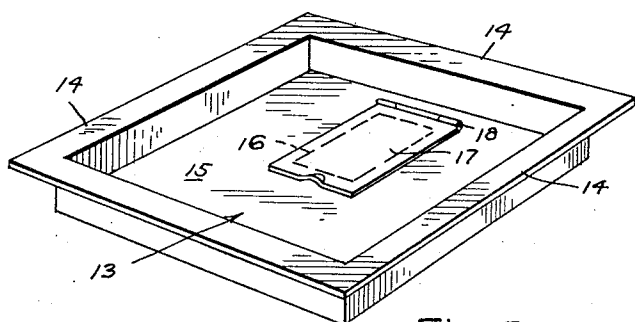
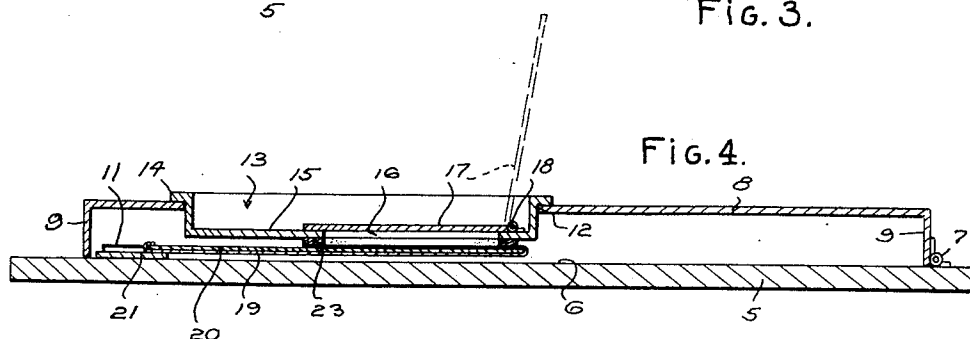
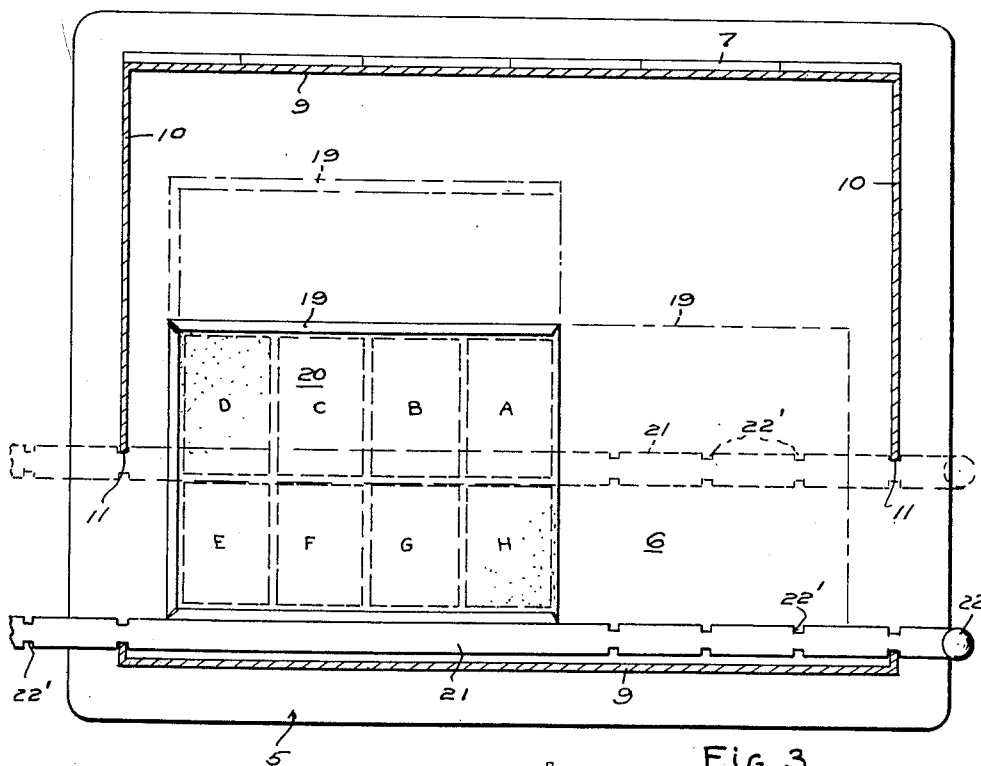
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2 Sheets-Sheet 2



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PHOTOGRAPHIC ENLARGING EASEL

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2 Claims. (Cl. 88—24)

This invention relates to photographic enlarging easels and has particular reference to an easel constructed in a manner to permit the printing of a plurality of predetermined sizes of images upon a single relatively large sensitized sheet.

The invention contemplates a novel form of easel wherein a bar is provided with a carrier for a sheet of sensitized paper and with the bar being shiftable in a step by step relation to an overlying cover for shifting the sensitized sheet progressively beneath an exposure opening carried by an adaptor pan that is detachably engaged within an opening of the cover.

The device contemplates an enlarging easel wherein a cover is disposed in hingedly connected engagement with a base plate and with the housing being provided with an opening formed therein and with the opening being covered and uncovered by a valve plate, the upper surface of which constitutes the area upon which the image to be printed is focused and with a sheet of sensitized paper being supported upon the base plate and in underlying relation to the cover and the adaptor and with means projecting from the opposite ends of the housing whereby the sheet of sensitized paper may be shifted in a predetermined step by step motion for accurately shifting and positioning the sensitized paper beneath the masking opening and whereby multiple prints may be made upon the sheet in accordance with the size of the masking opening.

In the practice of photography, it is often necessary to make multiple reproductions or prints of an image from an original. Since the reproductions must necessarily be made in a darkroom, the apparatus employed must be capable of being easily manipulated by touch alone successively to make a plurality of spaced exposures of an original film or plate on a sheet of sensitized paper.

It is contemplated that the easel of this invention shall be variable to the extent that the adaptor pan and a notched operating bar is employed to shift the sensitized paper in a predetermined degree of movement in an extremely simple and accurate manner and with the adaptor pan having a predetermined size of masking opening being employed in combination with a particular shifting bar and with the shifting bar and the adaptor pan being cooperative for a specified print or prints of the enlarged image.

Other objects and advantages of the invention will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a perspective view of an enlarging easel having a covering housing in the closed position and with the device being in an operative arrangement for printing.

Figure 2 is a perspective view of the easel with its cover in an elevated position and illustrating the manner of disposing a sheet of sensitized paper upon the base

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plate preparatory to shifting the cover to the covering position,

Figure 3 is a horizontal section taken substantially on line 3—3 of Figure 1,

Figure 4 is a transverse section taken substantially on line 4—4 of Figure 1 and,

Figure 5 is a perspective view of an adaptor pan embodied in the device.

Referring specifically to the drawings, the numeral 5 designates a base plate which may be formed of wood, metal or any other desirable material. The base plate as shown, is generally rectangular in shape and is provided with an upper smooth face portion 6. Hingedly connected to the base plate at 7, is a relatively shallow cover or housing 8 entirely open upon its bottom. The cover 8 is provided with side flanges 9 and end flanges 10. Each of the end flanges adjacent the forward edge of the housing are provided with elongated notches 11 for a purpose to be presently described. The cover 8 is provided with a square or rectangular opening 12 into which is detachably engaged a recessed adaptor pan 13, having marginal flanges 14 and a recessed bottom 15. The flanges 14 in use, overlie the upper surface of the cover 8 to properly dispose the bottom 15 in a recessed position below the bottom surface of the cover. The bottom 15 is provided with a rectangular opening 16 constituting the masking opening for a predetermined size of enlargement. The opening 16 is covered and uncovered by a plate valve 17, hingedly connected at 18 to the bottom 15. The plate 17 thus successfully prevents the passage of light rays through the opening 16 during the focusing operation of the enlarger (not shown). The upper surface of the plate 17 is preferably formed white in order to constitute a focusing surface for the image to be enlarged preparatory to the actual printing upon a sensitized sheet. Substitute adaptors 13 having predetermined sizes of masking openings 16 are employed to accommodate enlargements of various sizes.

Shiftable disposed upon the base 6 is a carrier 19 for the reception of a sensitized sheet of material 20, preferably of recognized standard dimensions. The carrier 19 is rivetted or otherwise connected with a shifting and spacing bar 21. The bar 21 projects through the slots 11 and is provided at its opposite ends with knobs 22, through the medium of which the bar is easily shifted in sliding engagement upon the surface of the base 6. Means are provided to accurately move the carrier and the bar in a predetermined step by step relation to the masking opening 16. This means comprises a plurality of notches 22 formed in the bar adjacent its opposite ends and with the notches being equidistantly spaced and upon opposite edges of the bar. The notches 22 are dimensioned to have engagement with the opposite ends of the slots 11 and whereby the bar is accurately moved in step by step relation with respect to the cover. The purpose in having the notches upon the opposite edges of the bar is to facilitate the printing of multiple rows of enlargements upon a standard sheet of sensitized material. It is obvious of course that the arrangement of the bar 21 and its carrier 19 and the opening 16 of the adaptor 13 is such that the sensitized sheet 20 will always be disposed in underlying relation to the opening 16. With the bar and its carrier disposed in the position of Figures 1-3, the sensitized sheet will be disposed in a position wherein a plurality of spaced apart prints may be accurately made along the length of the sheet 20, and with the bar and the carrier 19 shifted to the dotted line position of Figure 3, a second row of prints will be made along the length of the sheet 20. As before pointed out, it is contemplated that a common carrier 19 be employed for a standard size sheet of sensitized material, the material being slipped in edgewise under the marginal flanges of the carrier,

thus greatly facilitating the loading of the device in a darkroom. The bar 21 and its spaced notches 22 and the adaptor 13 are furnished in mating relation and in accordance with the size of enlargement to be made and the number of spacing motions to be made with respect to the bar 21 and the sheet 20. It being determined of course that the particular size enlargement desired, an adaptor 13 and a mating bar 21 are selected after which the adaptor is disposed within the opening 12 of the cover 8, and the selected bar 21 is provided with a sheet of sensitized material within the darkroom and then engaged upon the base 6, as shown in Figure 2. Since the sensitized sheet is disposed as close to the opening 16 as is possible, in order to avoid any distortion or prints that are out of focus, there has been provided a band of felt or similar material 23 around the opening 16, under which the sensitized sheet will slide without injury to the sheet.

The operation of the device is as follows:

Assuming the base 5 to be resting upon a flat surface and directly under a conventional photographic enlarging machine, the operator determines the size of prints to be prepared and the number of prints possible within the area of the sensitized sheet. An adaptor and a mating bar 21 are then selected, after which the carrier 19 is loaded with a sensitized sheet 20. The bar 21 and its carrier 19 are then laid upon the base 6 at which time the cover 8 is lowered to its operative position of Figure 1. With the valve plate 17 closed as at Figure 1, the operator then proceeds to focus the image upon the white upper surface of the plate. If multiple images are to be made, such as that indicated in Figure 3, where the sheet is capable of receiving 8 individual prints, the bar 21 and its carrier is shifted to the left until the outer-most notch at the right hand end engages the marginal end of the slot 11, at which time the inner-most notch at the opposite end will engage its respective end wall of the slot. In this position, an area A of the sensitized sheet will be disposed directly beneath the opening 16. After the focusing of the plate 17 has been made, obviously in a darkroom, the operator then swings the plate 17 upwardly and makes the necessary exposure through the opening 16 to the sensitized sheet. The plate 17 is then closed again, and the operator by grasping both knobs 22 moves the bar and its carrier one notch to the right bringing into position the area B of the sheet 20. A second exposure is then made for the next print and so on until four prints of identical size have been made longitudinally of the sheet 20. Assuming 8 prints are to be made upon the sheet as indicated at Figure 3, the bar is then shifted rearwardly upon the base 6 engaging the opposite notches over the end flanges 10 at the opposite end of the slots 11. A step by step motion is then imparted to the bar for making the four additional exposures. The use of the bar with the notches permits of its operation by substantially a touch method, since the operator merely moves the bar enough to disengage the notch and promptly engages it against the end of the slot and slides it in the proper direction to cause the next notch to engage its associated flange 10. In this manner the several prints are made in accurately spaced relation in a step by step manner that requires no difficult adjustments or adjustments that require visual observation. Where prints are to be made having larger dimensions, an adaptor 13 having the required masking opening 16 is selected and this adaptor is then engaged within the opening 12. Obviously a mating bar 21 will be selected having notches that are spaced in accordance with the masking opening 16 in the particular adaptor 13. The bar 21 may be controlled in a clockwise manner or anti-clockwise manner as the operator may desire.

It will be apparent from the foregoing that an extremely simple and most effective means has been provided for making enlargements from an original film or plate. It only necessitates that the operator select the

particular adaptor having the required masking opening and a mating bar having the properly spaced notches in accordance with the width of the masking opening. The prints are sharp and clear and due to the felt strip around the masking opening 16, there is no leakage of light to the adjacent area of the sheet 20. The device permits a very accurate spacing of the prints upon a standard sheet of sensitized material in a minimum of time and without the use of complicated mechanism such as has heretofore been employed. The device is economical, is strong, durable and results in a very considerable saving of time in preparing photographic enlargements.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A photographic enlarging easel of the character described and wherein multiple spaced apart images are printed upon a relatively large sheet of sensitized paper in a step by step manner, comprising a base plate and an overlying elevated cover hinged thereto to swing in a vertical plane, the cover having marginal walls that have resting engagement upon the base plate, opposite end walls of the cover being notched adjacent their forward ends, the cover being provided with a rectangular opening, a recessed adaptor pan engaging the opening, the adaptor pan having a bottom wall that is provided with a masking opening, a valve plate hingedly connected to the bottom wall to overlie the masking opening, an operator bar disposed upon the base plate and with its opposite ends projecting through the slots, the bar being shiftable in parallel relation to the base plate, means formed on the bar for engagement with the opposite ends of the slots whereby to accurately position the bar in a step by step longitudinal movement with respect to the cover, a carrier for a sensitized sheet of material and with the carrier being connected to the bar to be shifted therewith, the carrier and a sensitized sheet being disposed in underlying relation to the masking opening and whereby the sensitized sheet may be shifted in a step by step motion beneath the masking opening for the production of multiple prints in spaced apart relation, the recessed pan disposing the masking opening closely adjacent the sensitized sheet, the upper surface of the valve plate constituting a focusing surface from an enlarging device, the adaptor pan being provided with marginal flanges that overlie the cover, the bottom wall of the adaptor being disposed below the upper wall of the cover and parallel with the base plate, a protective strip of felt secured to the under surface of the bottom and surrounding the masking opening, and whereby to engage the sensitized sheet to prevent scratching, the said valve plate being swingable to and from covering relation to the masking opening as individual prints are made upon the sensitized sheet.

2. A photographic enlarging easel of the character described and wherein multiple spaced apart images are printed upon a relatively large sheet of sensitized paper in a step by step manner, comprising a base plate and an overlying elevated cover hinged thereto to swing in a vertical plane, the cover having marginal walls that have resting engagement upon the base plate, opposite end walls of the cover being notched adjacent their forward ends, the cover being provided with a rectangular opening, a recessed adaptor pan engaging the opening, the adaptor pan having a bottom wall that is provided with a masking opening, a valve plate hingedly connected to the bottom wall to overlie the masking opening, an operator bar disposed upon the base plate and with its opposite ends projecting through the slots, the bar being shiftable in parallel relation to the base plate, means formed on the bar for engagement with the opposite

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ends of the slots whereby to accurately position the bar in a step by step longitudinal movement with respect to the cover, a carrier for a sensitized sheet of material and with the carrier being connected to the bar to be shifted therewith, the carrier and a sensitized sheet being disposed in underlying relation to the masking opening and whereby the sensitized sheet may be shifted in a step by step motion beneath the masking opening for the production of multiple prints in spaced apart relation, the recessed pan disposing the masking opening closely adjacent the sensitized sheet, the upper surface of the valve plate constituting a focusing surface from an enlarging device, the operator bar being formed flat and with its opposite edges inwardly from its opposite ends being identically notched and with the notches in each group being identically spaced apart, the said notches at each extremity of the bar being proportioned to have simultaneous notched engagement with the end walls at the opposite ends of the slots, the said sensitized sheet carrier being horizontally shiftable in a step

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by step movement a distance corresponding to the spacing of the notches for progressively exposing a sensitized longitudinal area of the sheet beneath the masking opening, the bar being bodily shiftable from one end of the slots to the other whereby the sensitized sheet may be disposed beneath the masking opening for exposing a second longitudinal area of the sheet in a step by step manner.

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