E. A. VAN DORAN.

ATTACHMENT FOR ENLARGING CAMERAS.

APPLICATION FILED JAN. 13, 1916.

1,197,780.

Patented Sept. 12, 1916.

2 SHEETS—SHEET 1.

FIG. 7.

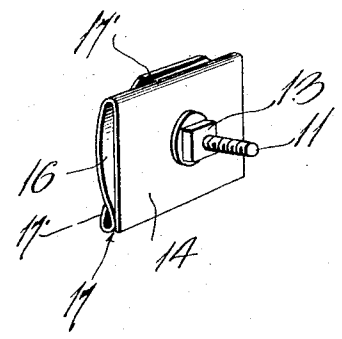


FIG. 1.

FIG. 5.

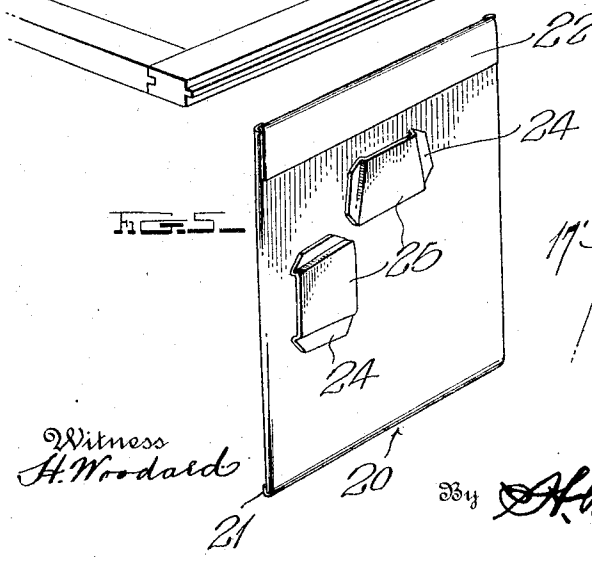
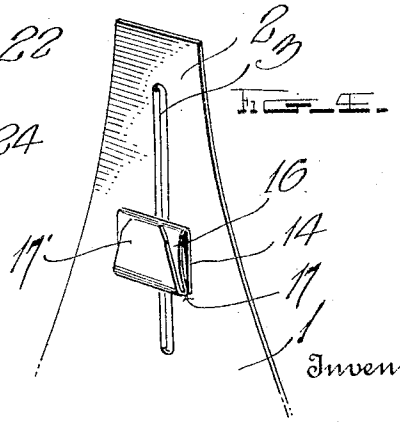


FIG. 6.



Witness
H. Woodard

Inventor
E. A. Van Doran

By H. B. Williamson & Co
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

FIG. 2.

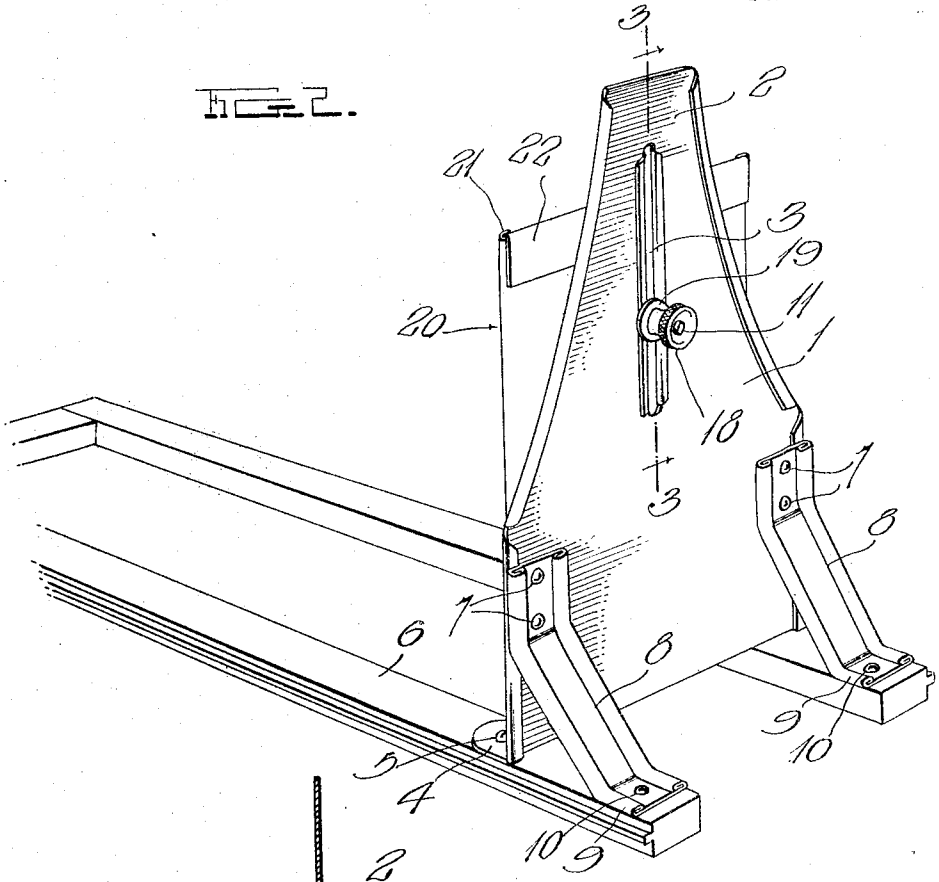


FIG. 3.

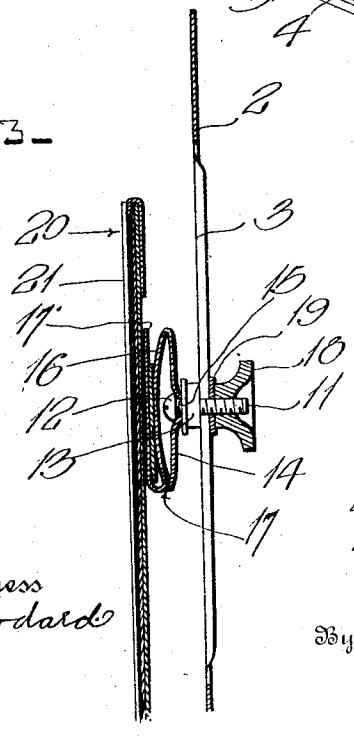
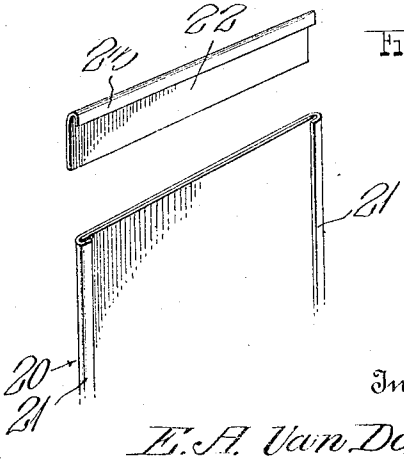


FIG. 6.



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E. A. Van Doran

By H. B. Williamson & Co
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EUGENE A. VAN DORAN, OF HIAWATHA, KANSAS.

ATTACHMENT FOR ENLARGING-CAMERAS.

1,197,780. Specification of Letters Patent. Patented Sept. 12, 1916.

Application filed January 13, 1916. Serial No. 71,954.

To all whom it may concern:

Be it known that I, EUGENE A. VAN DORAN, a citizen of the United States, residing at Hiawatha, in the county of Brown and State of Kansas, have invented certain new and useful Improvements in Attachments for Enlarging-Cameras; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates generally to certain new and useful improvements in photographic apparatus and more particularly to an attachment for enlarging cameras.

One object of the invention is to provide an adjustable easel to be attached to the extension bed of an enlarging camera.

Another object of the invention is to provide a device of this character which will be of simple, strong and durable construction, cheap to manufacture, efficient and reliable in operation, and well adapted to the purpose for which it is designed.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts which will be hereinafter fully described and claimed.

In the accompanying drawings in which similar reference numerals designate like parts throughout the several views: Figure 1 is a perspective view of the extension bed of an enlarging camera showing the front side of a device constructed in accordance with this invention applied thereto; Fig. 2 is a similar view showing the rear side of the device; Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a detail perspective view of the upper end of the supporting plate and hook member carried thereby; Fig. 5 is a similar view of the rear side of a sensitized paper receiving frame; Fig. 6 is a similar view of the upper end of this frame showing the removable strip detached; and Fig. 7 is a similar view of the hook member adapted to be secured to the support.

The preferred form of the present invention comprises an upright support in the form of a substantially flat metal plate 1, the upper end 2 of which is reduced in width and provided with a vertically extending slot 3. Extending forwardly from the lower edge of the plate 1 at the ends thereof are apertured lugs 4 through which extend suitable screws 5 which secure said plate to the extension bed 6 of an enlarging camera. Secured at their upper ends to the back of the plate 1 in any suitable manner, but preferably by rivets 7, are diagonal braces 8. These braces 8 are provided at their lower ends with apertured lugs 9 through which extend suitable screws 10, the latter being engaged with the extension bed 6 to anchor said braces 8 to the same. Thus it may be seen that the supporting plate 1 is conveniently and securely attached to the extension bed.

Extending through the slot 3 in the plate 1 is a threaded bolt 11, the forward end of which is provided with the usual head 12. Threaded on the bolt 11 adjacent the head 12 is a nut 13, between which and the head 12 is firmly clamped a plate 14, the latter being provided with an aperture 15 through which the shank of said bolt 11 extends. The upper end of this plate 14 is bent upon itself, and this downwardly bent portion 16 is soldered as at 17, or otherwise secured, at its lower end to the lower edge of said plate 14. The lower end of this portion 16 is then bent upwardly to form an upwardly extending hook 17′, said hook 17′ being beveled from its lower to its upper end for a purpose to be described. Threaded to the rear end of the bolt 11 is a thumb nut 18 which, when tightened, bears tightly against the back of the plate 1 and holds the bolt 11 carrying the hook 17 in any desired position. A washer 19 may, if necessary, be inserted on the shank of the bolt 11 between the plate 1 and the thumb nut 17.

The bromid or other sensitized printing paper on which the image is focused when the picture is being printed, is clamped in a frame composed of a flat rectangular metal plate 20 which is bent upon itself at three of its edges to provide flanges 21. These flanges 21 are spaced forwardly from the plate 20 and form guides in which the paper slides. They also act in the capacity of a mat for printing a white border around the picture, as will be understood without further description. The top or open end of the frame is provided with a detachable metal strip 22 bent upon itself at one of its edges to provide a flange 23. After the sensitized paper is inserted in the frame, this strip 22 is positioned in place, the flange 23 extend-

ing over and contacting with the paper while the strip contacts with the back of the frame.

Secured at their ends in any suitable manner, to the back of the frame or plate 20 are straps 24, the intermediate portions of which are bowed outwardly to provide loops 25 which are wider at their lower ends than at their upper ends to adapt them for engagement with the aforementioned hook 17'. These straps 24 are arranged at right angles to each other and are parallel to the edges of the frame. By this arrangement, it may be seen that the frame may be supported in either horizontal or vertical position.

While only one of the frames has been described, it is to be understood that a frame for each size print may be provided, each frame being of the same construction as the one herein described and shown.

It is not thought necessary to describe the details of the operations of enlarging or reducing other than to say that the extension bed of the camera is moved backwardly or forwardly until approximately the desired sized image is thrown upon the plate 20. The image is then sharply focused on the frame and the latter is moved up or down or adjusted angularly to properly center it. The sensitized paper is then inserted in the frame in the manner hereinbefore described and is exposed in the usual way well known in the art.

From the foregoing description, it may be seen that the objects of the invention have been effectively carried out, a very simple and efficient device having been provided which is designed to meet all the requirements relative to the art of enlarging and reducing. However, it is to be understood that as various changes in form and proportion may be resorted to without departing from the spirit of this invention, I do not wish to be limited to the construction herein shown and described other than that set forth in the appended claims.

I claim as my invention:

1. A device of the class described comprising an upright support, a vertically adjustable hook secured to said support, and a sensitized paper receiving frame having loops on its back for engagement with said hook.

2. A device of the class described comprising an upright support having a vertical slot therein, a bolt extending through said slot, a hook secured to one end of said bolt, a nut threaded on the other end of said bolt, and a sensitized paper receiving frame having loops on its back for engagement with said hook.

3. A device of the class described comprising an upright support, a vertically adjustable upwardly extending hook secured to said support, a rectangular sensitized paper receiving frame, and a pair of straps arranged at right angles to each other and parallel to the edges of said frame, said straps being secured at their ends to the back of said frame and having their intermediate portions bowed outwardly to provide loops to be engaged by said hook.

4. A device of the class described comprising a flat upright plate having a vertically extending slot therein, lugs extending forwardly from the lower edge of said plate, diagonal braces secured to the back of said plate, a vertically and angularly adjustable hook secured in said slot, and a sensitized paper receiving frame having loops on its back to be engaged by said hook.

5. A device of the class described comprising an upright support, a hook secured to said support, a frame composed of a flat plate having three of its edges bent upon themselves to provide guides for receiving three of the edges of a sheet of sensitized paper, a removable strip contacting with the back of said plate and having one of its edges bent upon itself to provide an additional flange, said additional flange contacting with the fourth edge of said sensitized paper, and a strap secured to the back of said plate for engagement with said hook.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EUGENE A. VAN DORAN.

Witnesses:
WILLIAM F. MEANS,
WILLIAM A. MCKEE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."