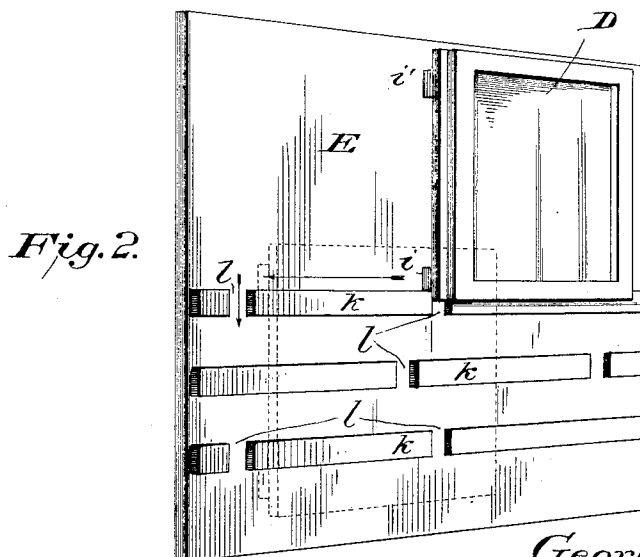
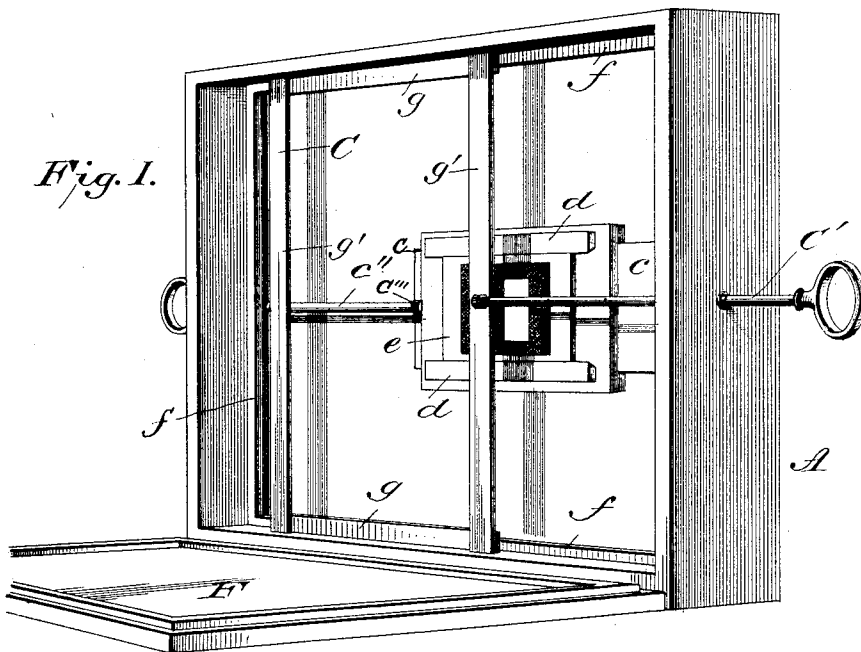


G. L. MINEAR.
PLATE ATTACHMENT FOR CAMERAS.

No. 481,802.

Patented Aug. 30, 1892.



Witnesses

L. S. Elliott.
E. M. Johnson

George L. Minear:

Inventor

— by *[Signature]*
Attorney

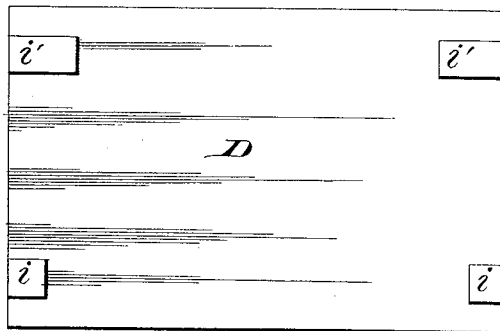
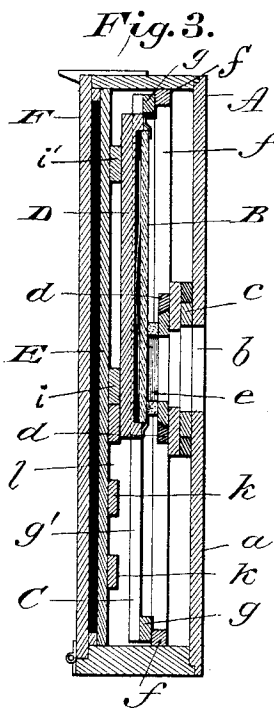
(No Model.)

2 Sheets—Sheet 2.

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by  Attorney

UNITED STATES PATENT OFFICE.

GEORGE LEMUEL MINEAR, OF OTTUMWA, IOWA.

PLATE ATTACHMENT FOR CAMERAS.

SPECIFICATION forming part of Letters Patent No. 481,802, dated August 30, 1892.

Application filed March 12, 1892. Serial No. 424,684. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LEMUEL MINEAR, a citizen of the United States of America, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Attachments for Photograph - Cameras; and I do hereby 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in photographic copying apparatus.

The object of the invention is to provide an improved attachment for photographic cameras, by means of which a number of pictures can be made on a single plate without having to remove the plate from the camera during the operation and without focusing it more than once, a single lens being employed and the attachment adapted to be used in connection with an ordinary camera; and the invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view, the board upon which the plate-holder slides being removed. Fig. 2 is a detail perspective view of the board which carries the plate-holder, which is shown in position thereon. Fig. 3 is a detail perspective view of the parts organized in a position for use. Fig. 4 is a rear elevation of the plate-holder.

A designates the box or attachment, which is adapted to be applied to the rear end of a camera in the usual manner, the front plate *a* thereof fitting snugly against the camera to exclude light. The plate *a* is provided centrally with an aperture *b*, in the rear of which is a casing to receive an apertured slide *c*, adapted to be moved over the aperture by a rod *c''*, which is attached to the slide *c* in any suitable manner, preferably by an upwardly-projecting fixture *c'''*, attached to the end of the slide. The casing which carries the slide *c* is provided with strips *d d*, having oppo-

sitely-beveled edges, as shown in Figs. 1 and 3, for the reception of a slide *e*, which has a suitable packing adapted to contact with the face of the sensitized plate B. The part of the structure so far described is employed with the ground glass for focusing the picture, and after it has been focused the device is attached to the camera-box and retained in its proper position with relation to the lens thereof.

The casing A on the inner edges of the vertical and horizontal sides thereof has strips *f*, against which bears a movable frame C, consisting of transverse bars *g* and vertical bars *g'*, said frame being moved or reciprocated in the casing A by properly manipulating the rod C', said rod being provided with gage-marks, so that the distance which the frame is moved can be accurately ascertained. This frame is adapted to receive the plate-holder D, the vertical edges of which are cut away to receive the bars *g'* of the frame C. The rear side of the plate-holder D has suitably attached thereto blocks *i* and *i'*, the blocks *i'*, located near the upper edge thereof, being of greater length than the blocks near the lower edge.

E designates a board of substantially the same size as the inner portion of the casing A, and said board is provided with a series of horizontal strips *k*, which are arranged parallel with each other and spaces left between them. These strips have cut-away portions *l l*, which provide each strip with spaces through which the blocks *i i* on the plate-holder pass. It will be noted that these openings or spaces are not only of the same width as the blocks, but are spaced the same distance apart, so that when the plate-holder is moved upon one of the strips *k* to bring the blocks *i i* in line with the spaces *l l* said plate-holder will automatically fall to rest upon the strip beneath.

F designates a cover, which is secured to the plate-holder and serves to retain the sensitized plate in proper position.

In operation the device hereinbefore described is attached to the rear end of the camera in the usual manner, and before the plate-holder is placed in position a ground glass is used for properly focusing the camera, after which the plate-holder D is placed upon the board E, so that it will rest upon

the upper strip *k* thereof and locate the lower corner of the sensitized plate adjacent to or in line with the aperture covered by the slide *c*. The case or box *A* being tightly closed, the slide *c* is manipulated to expose a part of the plate and then moved to shut off the aperture, after which the rod *C'* is operated to bring another portion of the lower part of the sensitized plate in line with the aperture to be exposed, and so on until the blocks *i i* on the plate-holder enter the cut-away portions of the strip, when the plate-holder will drop down and rest upon the adjacent strip in position to be operated for another line of exposures, and so on. It will be noted that while the copies are being made the felt strip or packing on the slide *c* will prevent light getting to the unexposed portions of the plate.

By means of the device hereinbefore described a number of copies can be made on a single sensitized plate, from which prints can be taken.

The device is particularly adapted to making what is known as "stamp-photographs," and by means of the attachment they can be made with an ordinary camera.

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

1. An attachment for photograph-cameras, consisting of a movable frame carrying a plate-holder which is provided on its rear side with blocks *i' i*, a board *E*, supported within a casing, said board having strips with spaces between them through which the blocks are adapted to pass, and a frame having a marginal packing which is adapted to bear against the sensitized plate carried by the plate-holder, substantially as shown, and for the purpose set forth.

2. An attachment for photograph-cameras, consisting of a casing or frame *A*, constructed substantially as shown and provided with a board or plate *E*, having horizontal strips be-

tween which are spaces, a plate-holder having on its rear side blocks which are adapted to support the plate-holder upon the strips and pass through the spaces between the strips, for the purpose set forth.

3. A camera attachment consisting of a frame *A*, having an aperture and movable slide adapted to cover said aperture, a light-excluding packing surrounding the aperture, and a movable slide carrying a plate-holder, the plate carried thereby being adapted to bear against the packing, substantially as shown, and for the purpose set forth.

4. An attachment for photographic cameras, consisting of a frame *A*, having an aperture with a slide operated by a rod, a plate-holder having blocks *i i* on its rear side, said plate-holder being supported by a board or plate *E*, having horizontal strips with spaces between through which the blocks *i i* can pass, said plate-holder being adapted to be moved by a horizontally-sliding frame operated by a rod, the plate-holder being held against vertical movement until the slide which moves the same reaches the limit of its movement in one direction, substantially as shown, and for the purpose set forth.

5. In an attachment for cameras, the combination of a horizontally-movable frame carrying a plate-holder with blocks *i i* and *i' i'* on the rear side thereof, a support for said plate-holder, having parallel strips with spaces between them, and cut-away portions in the strips through which the blocks *i i* pass for adjusting the plate-holder vertically, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE LEMUEL MINEAR.

Witnesses:

WILLIAM R. CARSON,
M. M. DOUD.