(No Model.)

A. W. CLARK.

PHOTOGRAPHIC VIGNETTER.

No. 413,611. Patented Oct. 22, 1889.

Fig. 1.

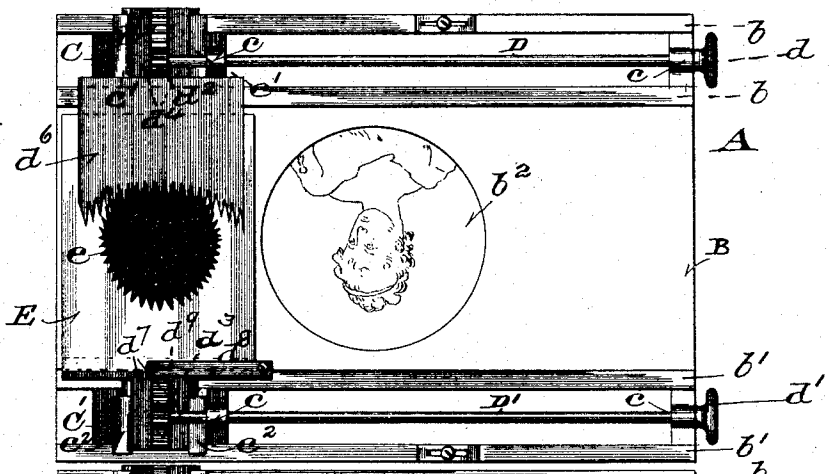


Fig. 2.

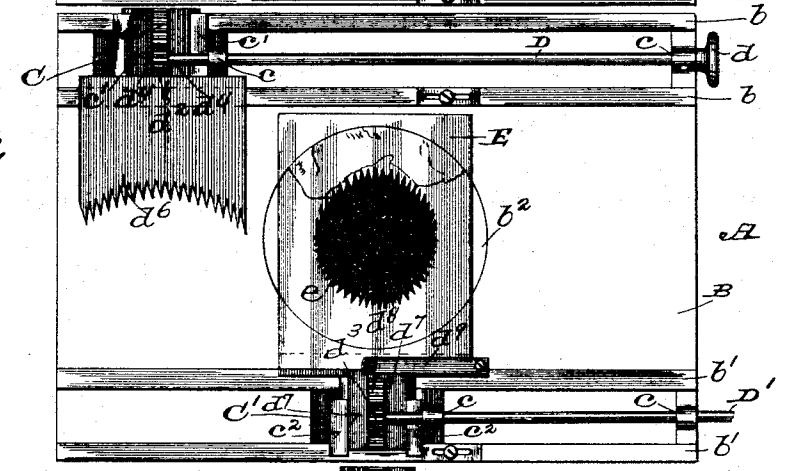
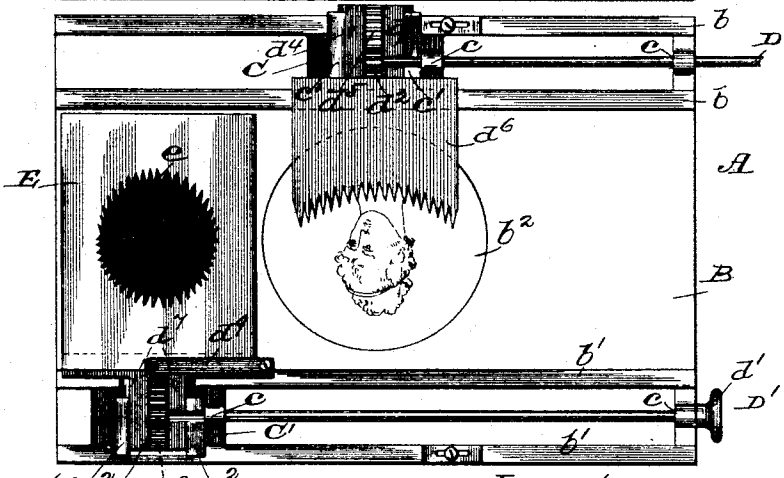


Fig. 3.



Attest; C² d³ d⁸ C²

M. J. Lorraney
S. W. Clampett.

Inventor;
Aaron W. Clark,
by C. D. Moody atty

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

AARON W. CLARK, OF ST. LOUIS, MISSOURI.

PHOTOGRAPHIC VIGNETTER.

SPECIFICATION forming part of Letters Patent No. 413,611, dated October 22, 1889.

Application filed February 28, 1889. Serial No. 301,542. (No model.)

To all whom it may concern:

Be it known that I, AARON W. CLARK, of St. Louis, Missouri, have made a new and useful Improvement in Photographic Vignetters, of which the following is a full, clear, and exact description.

The improvement relates to that class of vignetters which produce the vignette effect upon the negative. Although associated with the camera, it can be used or not, as desired, enabling a vignetted or a plain picture to be taken, as may be preferred; also, either a light or a dark vignette can be produced.

In carrying out the invention a frame, which may be termed a "block," is introduced crosswise into the camera, between the ground glass and the lens-tube, and preferably about two and three-fourths inches from the lens-tube. This frame is used to support the vignetting devices, so that they can be independently adjusted laterally and vertically, and should have an opening through it opposite the lens-tube and of sufficient size to enable the pictures to be taken.

The vignetting devices referred to consist of two vignetting-masks, one of which is designed to produce a vignette effect upon the background and the other upon the subject of the picture, substantially as hereinafter described and claimed, aided by the annexed drawings, forming part of this specification, and which consist of Figures 1, 2, and 3, all being front elevations of the vignetter, but showing the vignetting-masks in respectively different positions.

The same letters of reference applied to the several figures denote the same parts.

A represents the improved vignetter, which consists of the frame or block B, to which are attached the slides *b b* and *b' b'*, provided for the blocks C and C' to slide horizontally, respectively, between. Attached to the blocks C C' are the bearings *c* for the rods D D', respectively. The said rods are each shouldered down to a journal which works, respectively, in the bearings *c*, so that the rods, while free to rotate therein, cannot be moved longitudinally without moving the blocks C C' with them.

In Fig. 1 the blocks C C' are represented as being pushed close against one side of the camera, and while in said position the rods D D' extend in one direction from the said bearings across the camera toward and through the opposite side thereof, where they terminate, respectively, in the knobs *d d'*. The other and inner ends of the said rods terminate, respectively, in the pinions d^2 d^3, to which they are rigidly attached. A horizontal longitudinal movement given to the rods D D' causes a corresponding horizontal movement of the blocks C C', respectively. Attached to the block C are the vertical slides *c'*, provided for guiding between them the block d^4 in its vertical movement. Attached to the block d^4 is the rack d^5, adapted to engage with the pinion d^2. The rack d^5 is attached, also, to the crescent-edged mask d^6, so that when the rod D is rotated the mask d^6 is raised or lowered. The crescent-edged mask d^6 is preferably made of metal, with points respectively parallel and about one-quarter of an inch long, as shown. Attached to the block C' are the vertical slides c^2, provided for guiding between them the block d^7 in its vertical movement. Attached to the block d^7 is the rack d^8, adapted to engage with the pinion d^3. The upper end of the block d^7 is provided with the spring d^9 or other suitable means adapted to clasp and hold in a desired position the glass plate E, on which is formed, by painting or otherwise, the oval-shaped mask *e*, so that the said glass plate and the mask *e* may be raised or lowered by rotating the knob *d'*. b^2 is the opening through the frame or block B opposite the lens-tube, to enable the pictures to be taken.

The improved vignetter is operated in the following manner: By rotating the knob *d'* adjust the oval-shaped mask *e* so that the shadow thereof falls in the desired position on the ground-glass plate. Then place before the lens a white screen, or turn the camera so as to face the background or some object you wish to photograph. Then place the shield with the sensitive plate in position, draw the slide, uncap the lens, and expose the sensitive plate, by which operation a vignetted background surrounding the shadow of the oval mask *e* is impressed on the sensitive plate. Then replace the slide and withdraw the shield and sensitive plate. Arrange the sitter so as to cause the head and bust to fall right in the shadow of the oval mask *e*, which is

cast on the ground glass. Then push the said oval mask e aside from the opening b^2 and focus the picture sharp on the ground glass. Then by means of the knob d adjust the crescent-edge mask d^6 until the shadow of the said mask covers the lower part of the figure or bust. Direct the eyes of the sitter, replace the sensitive plate, expose, and develop in the usual way, and the result will be a splendid negative nicely vignetted.

In order to make black vignettes, use a black background, and by means of the mask d^6 shadow as much of the bust as you do not wish to take and proceed in the usual manner, and the result will be a negative on a black ground. The shade of the halo around the head depends mainly upon the shade of the background used and partially upon the strength of the light employed in taking the picture. The plate E may be of glass or other suitable transparent material.

A bellows can be attached to each side of the vignetter to enable it to be moved toward and from the lens.

I claim—

1. In combination with a camera, the herein-described photographic vignetter, the same consisting of the two masks and their support, said support having an opening opposite the lens, said masks being independently adjustable vertically and laterally upon said support, and one of said masks consisting of a transparent plate having an opaque vignetter arranged centrally thereupon, and the other of said masks being opaque and having a serrated edge, substantially as and for the purpose set forth.

2. The combination of the two masks and their support, said support having an opening b^2, said masks being independently adjustable laterally upon said support, and one of said masks consisting of a transparent plate having an opaque vignetter, and the other of said masks being opaque and having a serrated edge, substantially as described.

Witness my hand this 18th day of February, 1889.

AARON W. CLARK.

Witnesses:
A. S. HINTON,
B. H. EDMONDSON.