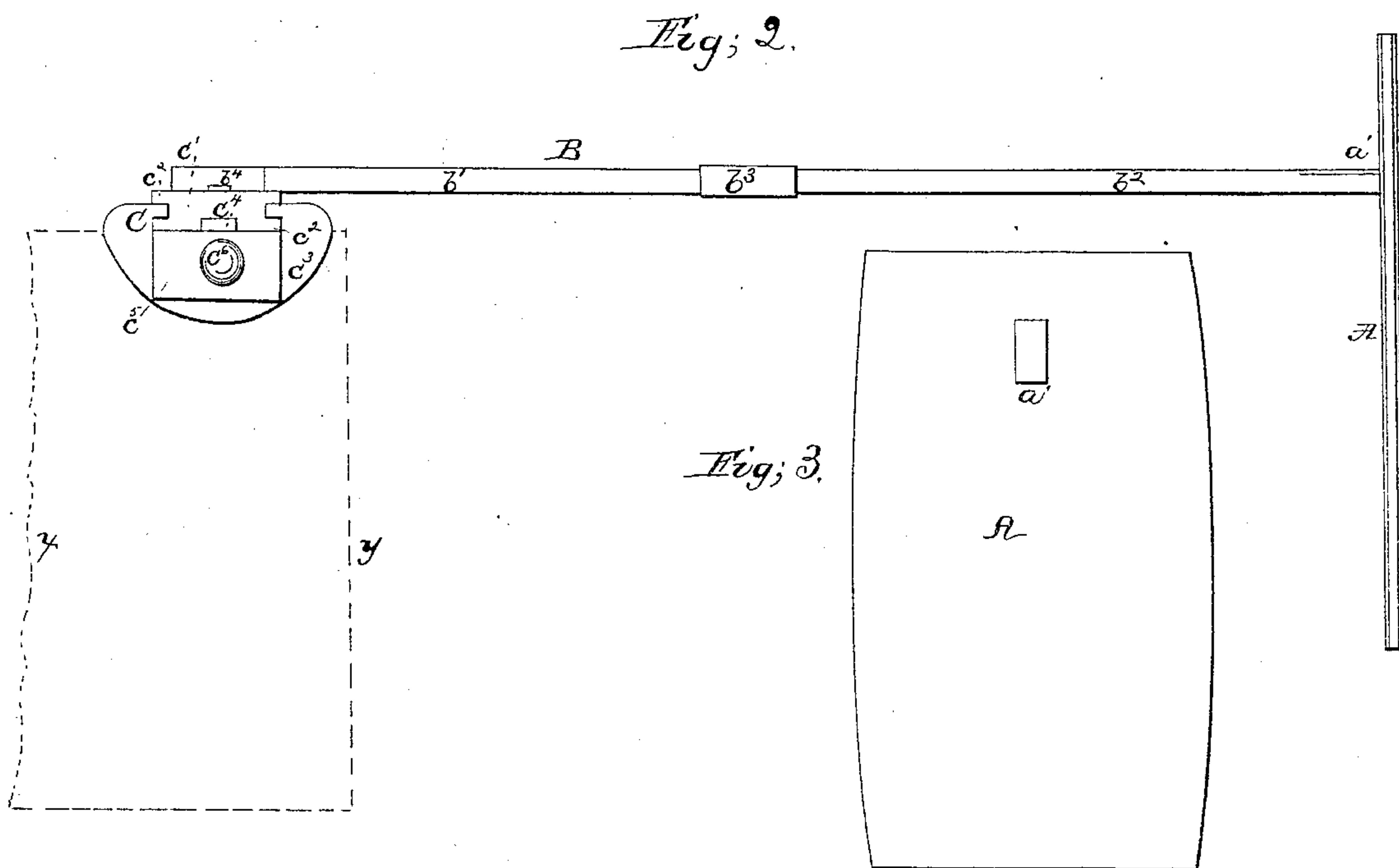
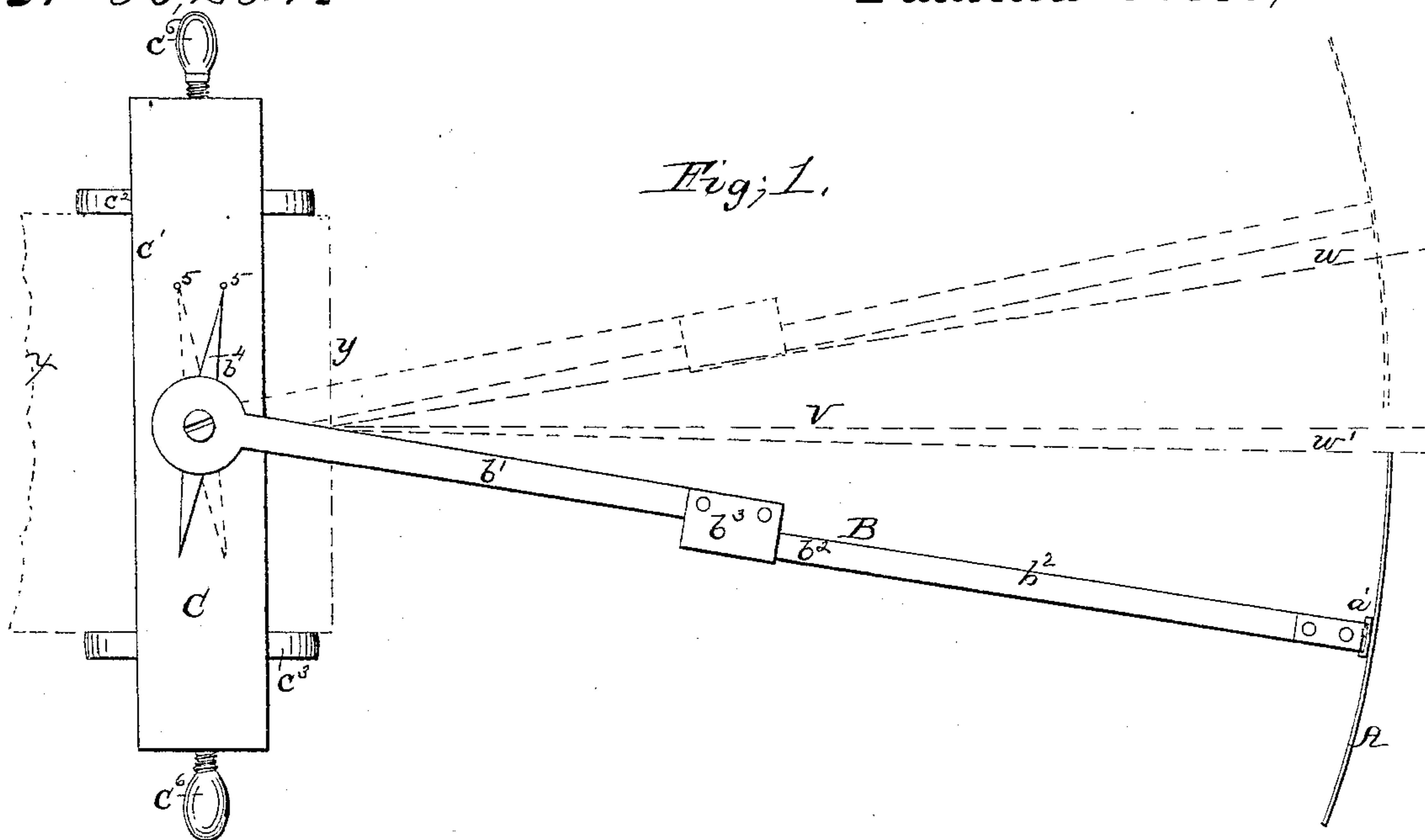


*D. Shive,*

*Camera Attachment,*

*N<sup>o</sup> 50,284.*

*Patented Oct. 3, 1865.*



*Witnesses;*  
*Benj. Morton*  
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# UNITED STATES PATENT OFFICE.

DAVID SHIVE, OF PHILADELPHIA, PENNSYLVANIA.

## DUPLICATING-DEFLECTOR FOR PHOTOGRAPHIC PURPOSES.

Specification forming part of Letters Patent No. 50,284, dated October 3, 1865.

*To all whom it may concern:*

Be it known that I, DAVID SHIVE, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Duplicating-Deflector for Photographic Purposes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view, and Fig. 2 a side elevation of the said device; like letters of reference indicating the same objects when in the different figures.

To make two or more photographic impressions of the same person or object in different positions or attitudes on the same plate has, of late, attracted the attention and puzzled the brains of photographers both in this country and Europe.

A number of devices have been suggested and used, but all of them have proved to be very deficient and objectionable, because of their showing a line or break between the different impressions, and thereby indicating the manner of production, and, of course, destroying the illusion intended. With the use of all or any of the said devices it is by the merest accident that the defect referred to can be avoided; and to remedy it, in a measure, columns or curtains have been placed before the camera, so as to show in the center of the picture or between the figures and hide the line or break that would otherwise appear upon its irregular surface.

To entirely remove all these difficulties and readily produce a perfect blending or uniformity of shade in the separately-made parts of the background of such pictures is the object of my invention.

It consists, substantially as hereinafter described and specified, of a deflector consisting of dead-black card-board, or other material that will in like manner neither reflect nor pass the light, attached in a vertical position, by means of a vibratile arm, to the forward end of a camera, so as to be two or three feet, more or less, therefrom, the said arm being capable of being readily adjusted to any suitable angle with an imaginary vertical plane passing in the central line or axis of the lens, so that the said deflector will cut off, obstruct, or deflect cer-

tain portions of the rays of light coming from that side of the said vertical plane.

In the drawings, A is the deflector, and B the adjustable arm, attached to a removable clamp, C, whereby it can readily be secured upon the forward end of a camera, the latter being indicated by the dotted lines *xy* in both figures.

The deflector A is, in this instance, made of card-board paper cut, when of full size, about sixteen inches long, ten inches wide across its middle, and nine and a quarter inches wide at each end—its side-edges being cut in the form of a curve, as seen in Fig. 3. The inner side is covered with black velvet and the outer side painted dead-black; but dead-black paint will answer for both sides.

The arm B is made of two pieces of hard wood, *b'b<sup>2</sup>*, joined together by means of a metal sleeve, *b<sup>3</sup>*, but may be made in one piece, if desired. Its outer end is fitted with a metal plate, bent upward, so as to receive and support the deflector A by entering it at *a'*. The inner end of the arm B is pivoted to the middle of the clamp C, so as to allow the former to be turned horizontally, as occasion may require. An index-piece, *b<sup>4</sup>*, is fixed at right angles to this part of B, so as to turn with it.

The clamp C is also made of wood, and consists of a narrow strip, *c'*, having parallel edges, which are grooved at *c<sup>2</sup> c<sup>2</sup>*, so as to carry two clamping-pieces, *c<sup>3</sup> c<sup>3</sup>*, which are attached by the grooves and appropriate tongues, so that they can be readily slid along the under side of *c'*, each clamp being also provided with a fixed tongue, *c<sup>4</sup>*, which slides in a corresponding groove in the under side of *c'*, so as to keep it vertical and steady. A small block, *c<sup>5</sup>*, is fixed at each end of *c'*, in which a tightening-screw, *c<sup>6</sup>*, works and bears against its respective clamping-piece *c<sup>3</sup>*.

Operation: The clamp C, being placed across the upper side of the forward end of the camera, is fixed firmly thereon by means of the clamping-pieces *c<sup>3</sup> c<sup>3</sup>*, and screws *c<sup>6</sup> c<sup>6</sup>*, so that the pivot of the arm B will be directly over the axial line of the lens, as seen in Fig. 1, the dotted line *v* in the figure indicating the said axial line. In taking a duplicate picture, the object is to be placed at any suitable distance from the camera and from the axial line of the lens, as heretofore. The operator now turns



the arm B so as to bring the deflector A on the opposite side of the axial line  $v$ , and but a short distance from it. (See Fig. 1.) Supposing the rays of light proceeding from the object to the lens to be represented by the faint lines  $ww$ , it will be seen that nearly all the direct rays of light on the deflector's side of the axial line  $v$  are cut off or obstructed by the deflector A, and consequently that only about one-half of the intended duplication will be produced in the picture in the camera; and after this operation is perfected, the object or person is removed to the other side of the axial line in like manner, and the deflector then turned to the opposite side of it accordingly, and the picture completed.

In order to effect accuracy in the distance of the deflector A from either side of the axial line  $v$ , two small pins, 5 5, are fixed accordingly in the clamp C, so as to indicate the proper position of the point of the index-finger  $b^4$  for either side.

It will be understood that the curved edges of the deflector A are intended to correct or straighten the blending line or lap of the background of the two impressions in the picture,

and thus to produce more perfect uniformity in the shade of the same.

This invention will produce a picture having two or more impressions of the same object or person in different positions or attitudes on the same plate, that will render it impossible for any one to show where one impression ends and the other begins, and consequently, the blending of the background being perfect, all intervening of columns or curtains as heretofore is entirely avoided. Its construction is exceedingly simple, and it can be applied and operated without any difficulty, and with certainty in the desired results.

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

The deflector A, arm B, and clamps C, constructed and arranged so as to operate, when applied to a camera, substantially as and for the purpose described.

DAVID SHIVE.

Witnesses:

BENJ. MORISON,  
B. F. SHATTUCK.