

C. W. EDDY.  
PHOTOGRAPHIC CAMERA.

Patented Oct. 29, 1889.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## PHOTOGRAPHIC CAMERA.

SPECIFICATION forming part of Letters Patent No. 413,801, dated October 29, 1889.

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*To all whom it may concern:*

Be it known that I, CHARLES W. EDDY, of Ware, in the county of Hampshire and State of Massachusetts, have invented a certain new and useful Improvement in Photographic Cameras, of which the following is a specification.

I will describe a photographic camera embodying my improvement in detail, and then point out the various novel features in the claims.

In the accompanying drawings, Figure 1 is a side view of a photographic camera embodying my improvement. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a front view thereof with the front piece removed. Fig. 4 is a view like Fig. 3, but showing the parts in different positions. Fig. 5 is a bottom view illustrating certain parts connected with the shutter mechanism, a plate or piece covering the same being removed to expose them.

Similar letters of reference designate corresponding parts in all the figures.

A designates the body of the camera. It is shown as consisting of a rectangular box, which may be of wood or any other suitable material. Its rear is closed by a box A', in which a number of plate-holders C' C<sup>2</sup> C<sup>3</sup> C<sup>4</sup> C<sup>5</sup> C<sup>6</sup> and a front cover D are arranged. This box may be made of any suitable material—as, for instance, wood—in rectangular form. The various plate-holders may be of sheet metal, and are provided with side flanges c, suitable for holding photographic plates. As here shown, they are secured at the lower ends to pivot-rods c' c<sup>2</sup> c<sup>3</sup> c<sup>4</sup> c<sup>5</sup> c<sup>6</sup>, which are journaled in the sides of the box A'. The front cover may also be made of sheet metal with its side and top edges turned over to cover the plate-holders when they are in an upright position. When the front cover is in an upright position to cover the plate-holders, it will fit snugly within the front of the box. The front cover is shown as secured at the lower end to a pivot-rod d, journaled in the sides of the box.

The pivot-rods of the plate-holders are shown as extended through one side of the box A' and bent upwardly and then inwardly. Their inwardly-bent upper extremities are adapted to engage with holes in the exterior

surface of the adjacent side of the box. It will be seen that the plate-holders are pivoted at different levels, and that the upper ends of their pivot-rods and the holes with which they engage are arranged at different levels. These pivot-rods may therefore be easily grasped to disengage them from or engage them with the holes. The pivot-rod of the front cover is also bent upward at one end to form a handle. It may engage with a hole in the same manner as the pivot-rods of the plate-holders; but in the present instance I have shown a catch B for securing the front cover in an upright position. This catch consists of a rod extended through the top of the box A' in the direction of the length of the camera and having its ends bent at right angles to its main portion. The outer end forms a handle, the inner end a catch. By rotating the rod in one direction the catch may be made to swing over the front cover to retain it in an upright position. The rod may be adjusted into position at right angles so as to remove the catch from the front cover, whereupon the latter may be swung into the body of the camera so as to rest upon the bottom of the latter. The plate in the front plate-holder will then be exposed, ready for use. After the use of this plate the front plate-holder may be swung downwardly onto the front cover. The second plate will then be exposed. All the plate-holders may successively be operated in the same manner. As they are swung downwardly in their plate-holders, the plate-holders will protect them from the light.

The box A' is detachably secured to the body A of the camera, in the present instance, by means of pins a, extending upwardly from plates secured to the bottom of the camera-body and projecting rearwardly beyond the same and by means of a spring-catch a', extending from the top of the camera-body rearwardly and provided with a hole adapted to engage with a pin a<sup>2</sup>, arranged on the top of the box A'. By lifting the catch a' it may be disengaged from the pin a<sup>2</sup>, whereupon the box A' may be swung backwardly and lifted off the pins a.

E designates a tube fastened to the front of the body of the camera and extending inwardly into the body of the camera. Its rear



portion is provided with longitudinal slots  $e$  at opposite points. Within this tube  $E$  a lens-tube  $F$  is fitted so that it may slide forwardly and backwardly. Pins  $f$  extend from opposite points of this lens-tube through the slots  $e$  of the tube  $E$ . The lens-tube  $F$  is preferably flanged at the ends, so that a packing of soft material  $g$  may be fitted between it and the tube  $E$  to effectually exclude light between the tubes.

$G$  designates a lever consisting of a rock-shaft portion  $g'$ , journaled within the body of the camera, an arm  $g^2$ , extending upwardly within the camera-body and having a flanged upper extremity engaging with the pins  $f$  of the lens-tube, and an arm  $g^3$ , affixed to the rock-shaft portion  $g'$  outside the camera-body. By oscillating the arm  $g^3$  the lens-tube may be shifted into different positions. The arm  $g^3$  may be resilient and provided with a pin  $g^4$  for engaging with a number of holes  $h^1 h^2 h^3 h^4 h^5 h^6$  in the exterior of one of the sides of the camera-body. By fitting the pin into different holes the lens-tube may be adjusted so as to set the plates in the different plate-holders. As these plates will be at different distances from the front of the camera-body, an adjustment of the lens-tubes such as I have provided will be necessary under ordinary circumstances. Obviously, the arm  $g^3$  may be manipulated for the purpose of focusing, because this construction does not make it necessary to adjust it merely in the manner first explained.

The shutter mechanism shown in the drawings is not claimed herein; but I reserve the right to claim and fully set forth that part of my invention in another application. The said shutter mechanism may be herein briefly described as follows:

The shutter  $I$  consists, essentially, of two similar end portions  $i^1 i^2$ , joined together as at  $i^3$ , and pivoted on the screw  $i$  to the cam-

era-body. An arm  $I^1$  is connected to the portion  $i^3$ , and a spring  $I^2$  engages said arm and also with a disk  $I^4$ , which is connected to the camera and has an arm  $i^5$  in engagement with a lever  $I^5$ , fulcrumed on a screw  $i^6$  and engaging at its free end with a projection  $I^6$  on the camera. Pins  $i^7 i^8$  are provided on the shutter to engage at certain times with catches  $i^9 i^{10}$ , which are arranged on a bar  $i^{11}$ , controlled by a spring  $i^{12}$ . A pin  $i^{13}$  on the bar  $i^{11}$  engages a bar  $I^8$ , which slides on a pin  $i^{14}$ , and an arm  $i^{15}$  is provided to move the bar to release the shutter. Covers  $A^2 A^3$  are provided to hide the parts above described, the front cover being secured by a catch  $A^4$ .

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a number of plate-holders pivoted in place at different levels at their lower ends, so as to be capable of swinging forwardly into a horizontal or rearwardly into a vertical position, substantially as specified.

2. The combination of a number of plate-holders respectively pivoted in place at their lower ends at different levels, and a front cover therefor also pivoted in place on a pivot-rod journaled in the box, substantially as specified.

3. The combination of a number of plate-holders respectively pivoted in place at their lower ends and having arms on the ends of their pivots serving as handles, substantially as specified.

4. The combination of a number of plate-holders pivoted in place at their lower ends and having arms on the ends of their pivots serving as handles and as catches for retaining them in position, substantially as specified.

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Witnesses:

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