

No. 625,379.

Patented May 23, 1899.

E. T. CARNS.
MAGAZINE CAMERA.

(Application filed Aug. 11, 1898.)

(No Model.)

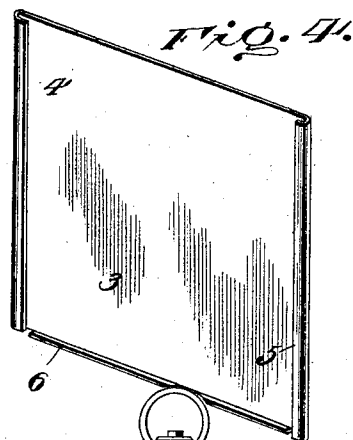
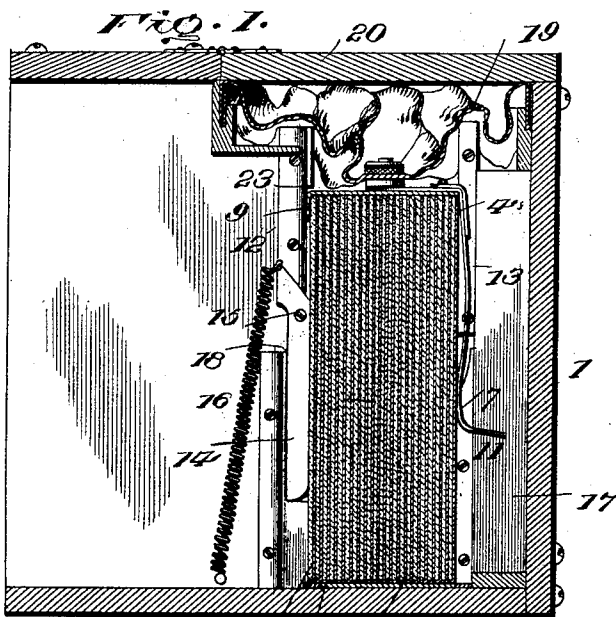


Fig. 3.

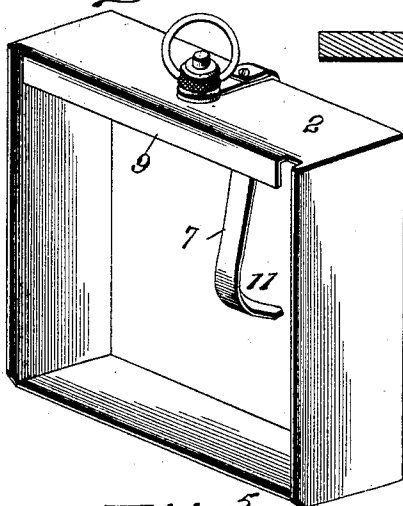


Fig. 2.

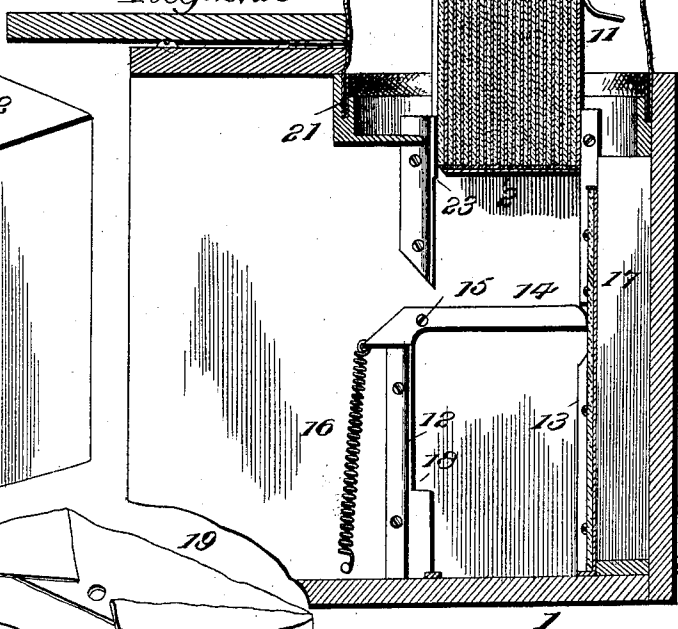
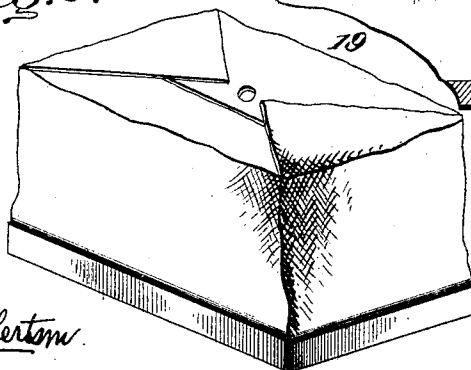


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN T. CARNS, OF PORTLAND, OREGON.

MAGAZINE-CAMERA.

SPECIFICATION forming part of Letters Patent No. 625,379, dated May 23, 1899.

Application filed August 11, 1898. Serial No. 688,371. (No model.)

To all whom it may concern:

Be it known that I, EDWIN T. CARNS, a citizen of the United States, residing at Portland, in the county of Multnomah, State of Oregon, have invented a certain new and useful Improvement in Magazine-Cameras, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to magazine-cameras; and the object in view is to provide a simple and reliable means whereby the photographic plates may be shifted successively into and out of position for exposure. The detailed objects and advantages of the invention will be clearly pointed out in the course of the subjoined description.

The invention consists in an improved magazine-camera embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims hereto appended.

In the accompanying drawings, Figure 1 is a longitudinal section through the camera-box, showing the improved plate-shifting mechanism. Fig. 2 is a similar view showing the plate-holder elevated and the plate thrust back by the spring-actuated levers. Fig. 3 is a detail perspective view of the plate holder or carrier. Fig. 4 is a detail perspective view of one of the plate-holders proper. Fig. 5 is a similar view of the opaque sack or hood.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

Referring to the drawings, 1 designates a camera-box of suitable size, and 2 a carrier which is movable vertically in the box 1 and adapted to contain a series of plate-holders 3, each adapted to carry a single photographic plate. Each of the holders 3 comprises an imperforate and continuous box 4, preferably formed of thin sheet metal and having the opposite side edges thereof bent to engage over the side edges of the plate, (indicated by 5,) the bottom edge of the holder also being bent to extend beneath and support the bottom edge of the plate, as shown at 6.

The carrier 2 may be made of any suitable size, according to the number of plates to be contained therein.

The carrier 2 is in the form of a rectangular metal frame open at front and back and provided at the back with a leaf-spring 7 for advancing the plates and plate-holders successively toward the front of the carrier, while at the front of the carrier and at the top thereof is a depending flange 9, serving to limit the forward movement of the plates in a manner that will be readily understood, at the same time positioning the front plate in proper focus behind the lens. The lower end of the back spring is deflected rearwardly, as indicated at 11, so as to engage over the top edge of the plate which has just been exposed as the carrier is depressed into the camera-box, the position referred to being illustrated in Fig. 2.

The carrier 2 slides vertically between oppositely-arranged cleats 12 and 13, secured to the inner surface of the sides of the camera-box. The forward cleats 12 are cut away about centrally of their height, and secured within said cut-away portions are two levers, the same being fulcrumed at 15 intermediate their ends and having connected to their forward or shorter arms spiral springs 16, which serve to elevate the rear ends of the levers and cause them to press rearwardly the foremost plate when the carrier is elevated, the said plate being carried backward until it rests against vertically-extending cleats 17, arranged just in rear of the plane of movement of the carrier 2. When the levers 14 are moved into a vertical position by the descent of the carrier 2, they fold into recesses 18 in the forward cleats 12, where they are out of the way of the carrier in its movements.

19 designates a light-proof or opaque hood formed of flexible material and adapted to extend sufficiently above the camera-box when the upper door 20 thereof is thrown open to admit of the necessary upward movement of the carrier for shifting the plates. The hood 19 is connected at its lower edge to a rectangular metal frame 21, which fits into grooves in the top edge of the camera-box, being retained therein in any convenient manner. When not in use, the hood may be pressed downward and folded so as to lie beneath the door at the top of the box. Secured to the top of the carrier and arranged

above the hood is a thumb-piece, loop, or ring 22, whereby the carrier may be elevated and depressed.

In operation after an exposure has been made the carrier is elevated in the manner described, and as it rises the top edge of the forward plate-holder engages against shoulders 23, formed by notching or recessing the forward cleats 12, as shown. In the further upward movement of the carrier the forward plate is thus held in the position where it was exposed. After the carrier has been raised the levers 14, actuated by the springs, serve to press said forward plate rearwardly until it rests against the rear set of cleats. The carrier is now depressed, whereupon the back spring of the carrier engages over and behind said last-exposed plate, thereby moving said plate into the carrier in rear of the other plates and at the same time serving to press all of the plates in the carrier forward until the forward plate occupies a position in which it is ready for exposure. The operation above described is repeated as often as there are plates in the carrier, thus exposing the plates successively to the action of the lens.

It will of course be understood that the carrier may be manufactured in any size, so as to carry any desired number of plates. By making the carriers quite thin films may be substituted for plates, thus increasing the capacity of the camera. These and other changes in the form and proportion and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination with a camera-box having grooves therein, of a slidable carrier mounted therein and adapted to carry a series of plates, means for shifting said plates in the carrier, a light-tight flexible hood or sack for permitting the sliding of the carrier, and a frame inserted in said grooves and carrying and holding said hood or sack in place, substantially as described.

2. The combination with a camera-box, of a sliding carrier mounted therein, means for catching and holding the forward plate during the sliding of the carrier, pivoted levers for carrying the said plate rearward and across the plane of movement of the carrier when the latter is slid outward and springs actuating said pivoted levers, substantially as described.

3. The combination with a camera-box, of a carrier slidingly mounted therein and adapted to receive a number of plates, a back spring attached to said carrier and having its free end deflected rearwardly, pivoted levers arranged at each side of the camera-box and within the same and adapted to press the forward plate to a position in rear of the plane of movement of the carrier, and springs for actuating said levers, substantially as described.

4. The combination with a camera, of a sliding carrier mounted therein and adapted to contain a series of plates, cleats between which the said carrier moves, means for moving said carrier, pivoted levers for pressing the forward plate successively to a position in rear of the plane of movement of the carrier and shoulders on the forward cleats for engaging the forward plate or holder, substantially as and for the purpose specified.

5. The combination with a camera-box, of a carrier slidingly mounted therein, cleats between which said carrier moves, the forward cleats being provided with recesses, levers fulcrumed intermediate their ends and adapted to move the plates successively rearward to a position in rear of the plane of movement of the carrier, the said levers being also arranged to fold into the recesses in the forward cleats, and springs for actuating said levers, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, this 30th day of June, 1898.

EDWIN T. CARNS.

Witnesses:

A. OHLHOFF,
W. G. HORNBERG.