(No Model.) 2 Sheets—Sheet 1.

P. E. RUDELL.

PHOTOGRAPHIC CAMERA.

No. 421,436. Patented Feb. 18, 1890.

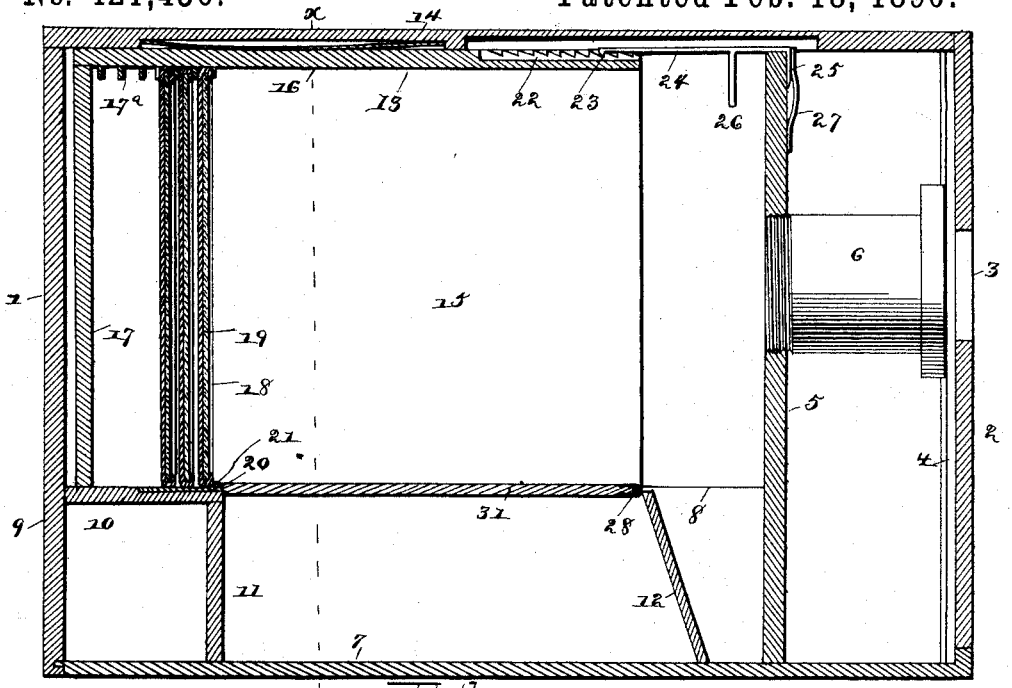

Fig 1

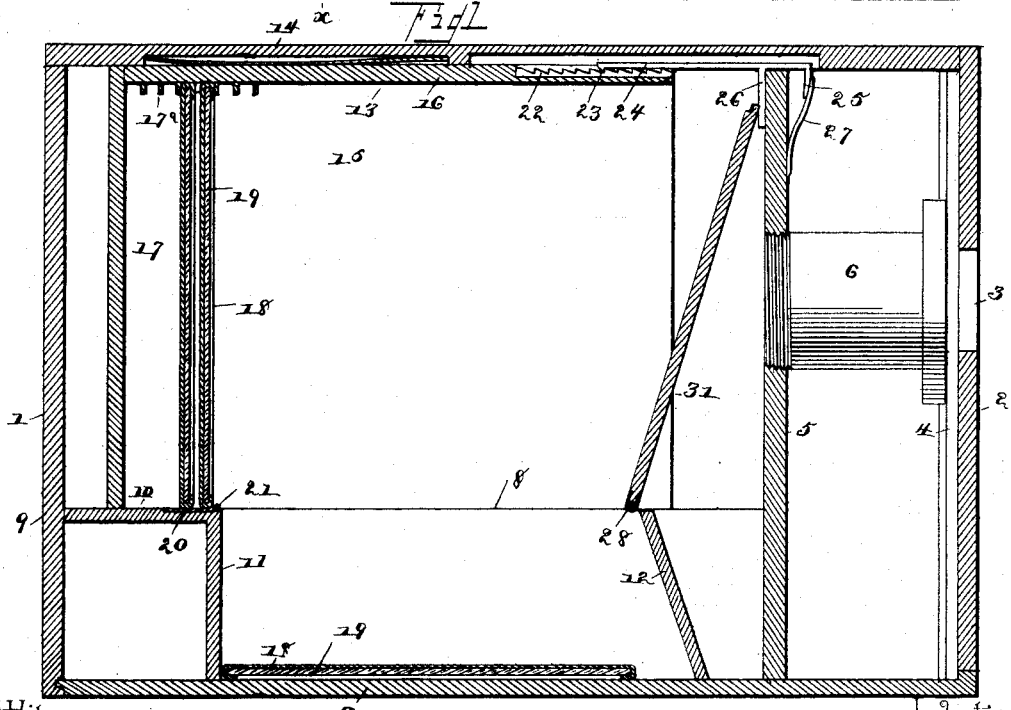

Fig 2

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Inventor
Peter E. Rudell.
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(No Model.) 2 Sheets—Sheet 2.

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Fig 3

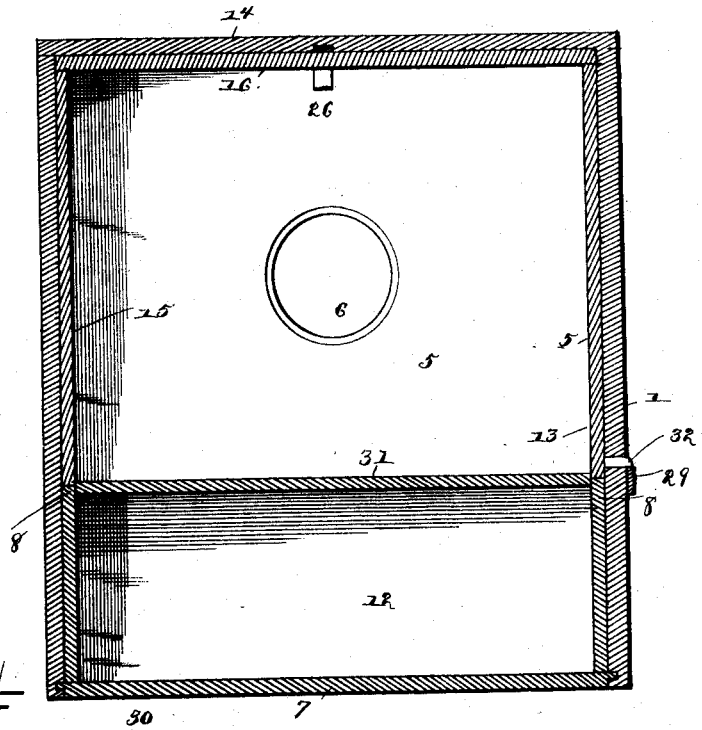
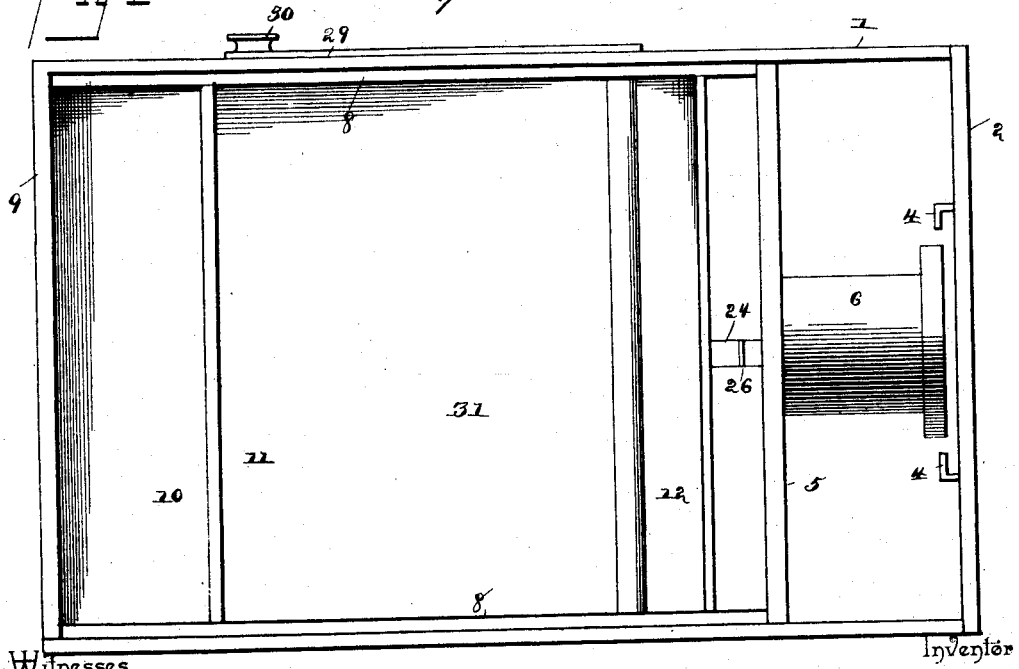


Fig 4



Witnesses

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UNITED STATES PATENT OFFICE.

PETER E. RUDELL, OF NEW YORK, N. Y.

PHOTOGRAPHIC CAMERA.

SPECIFICATION forming part of Letters Patent No. 421,436, dated February 18, 1890.

Application filed July 3, 1889. Serial No. 316,457. (No model.)

To all whom it may concern:

Be it known that I, PETER E. RUDELL, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Photographic Camera, of which the following is a specification.

This invention relates to photographic cameras; and it has for its object to construct a camera in which a number of plates may be conveniently carried, exposed successively one at a time, and in which each plate, having been exposed, may be dropped into a suitable compartment, where it may be safely stored until it shall be convenient to remove it, thus leaving the next plate in position ready for the next exposure.

The invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a longitudinal vertical sectional view of my improved camera, showing the same with one of the plates in position ready for exposure. Fig. 2 is a longitudinal sectional view showing the operating-lid in a raised position and the exposed plate dropped into the bottom drawer or compartment. Fig. 3 is a vertical transverse view taken on the line x x of Figs. 1 and 2. Fig. 4 is a bottom view of my improved camera with the detachable slide removed.

Like numerals of reference indicate like parts in all the figures.

1 designates the rectangular box or casing of my improved camera, the front end of which 2 is provided with an opening 3, adjacent to which the said front end is provided on its inner side with vertical flanges 4 to receive a slide of the usual construction. The camera-box is provided near its front end with a vertical transverse partition 5, in which the links 6 are mounted in the usual manner. The bottom of the camera-box is formed by a removable slide 7, through which access may be had to the interior. The sides of the camera-box are provided at their lower ends with horizontal longitudinal flanges 8 8, extending from the rear end 9 of the box to the transverse partition 5. Said flanges are connected at their rear ends by a horizontal shelf 10, from the front edge of which a horizontal partition 11 extends to the lower edges of the flanges 8 8. The latter are connected near their front ends by a transverse inclined partition 12, which is inclined from its upper edge in a downward and forward direction to a point within a short distance of the lower edge of the partition 5.

13 designates a longitudinally-sliding box, which is mounted upon the flanges 8 8, between the upper edges of said flanges and the under side of the top 14 of the camera-box. The said sliding box is composed of the side pieces 15 15, top 16, and rear end 17, the bottom and front end being open, as shown. The top 16 of the said sliding box is provided on its under side at its rear end with a series of transverse lugs or flanges 17^a, serving to space the frames or holders 18, in which the dry-plates 19 are mounted. The upper side of the shelf 10 is provided with a flat longitudinally-arranged spring 20, the front end of which is slightly bent in an upward direction, so as to form a hook 21, which assists in retaining the plate-holders in position until, after exposure, it shall be desired to drop them into the bottom compartment of the camera.

To the upper side of the top 16 of the longitudinally-sliding box 13 is secured a ratchet-bar 22, the ratchets of which are of a size corresponding with the distance between the transverse flanges 17^a, which serve to space the plate-holders. Said ratchet-bar is engaged by a hook or pawl 23, formed at the rear end of a plate 24, which is provided at its front end with flanges 25 and 26, extending downwardly, respectively, in rear and in front of the partition 5 of the camera-box. To the front side of said partition is secured a flat spring 27, which bears against the front side of the flange 26, so as to force the plate 24, having the hook 23, normally in a rearward direction and into engagement with the ratchet-bar 22. It will be seen that pressure in a forward direction against the rear side of the flange 25 will force the plate carrying the pawl in a forward direction, thus carrying forwardly the box 13, with the dry-plates mounted therein, at the rate of one tooth or space of the ratchet-bar for each operation of the pawl or plate.

28 designates a shaft mounted transversely in the sides of the camera-box at the upper rear edge of the partition 12. Said shaft carries at its outer end a spring-lever 29, having a knob or handle 30, and upon the shaft 28, between the sides 15 of the box 13, is mounted a plate 31, which may be said to constitute the bottom of the sliding box 13, or the top of the compartment bounded by the flanges 8 8, the partitions 11 12, and the sliding bottom of the camera-box. One of the sides of the camera-box is provided with a beveled stud 32, adapted to be engaged by the spring-lever 29, when the latter is turned so as to adjust the lid 31 in a horizontal position, as shown in Fig. 1 of the drawings.

The parts of the camera-box should be so proportioned that when the lid or plate 31 is in a raised position its upper edge shall strike against the rear side of the flange 25 of the longitudinally-sliding pawl-plate, thus forcing the latter in a forward direction against the tension of the spring 27.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood by those skilled in the art to which it appertains. In order to place the dry-plates in the camera-box, the latter is first inverted and the bottom slide 7 removed, thus giving access to the interior. When the camera-box is inverted, the plate 24, having the pawl 23, will by its own weight drop out of engagement with the ratchet-bar, thus enabling the sliding box 13 to be manipulated without reference to said pawl. The said sliding box is first moved in a forward direction and the dry-plates are then successively adjusted between the flanges 17^a, the box 13 being gradually moved in a rearward direction. The spring-plate 20, having the hook 21, may be readily depressed, so as to admit of the adjustment of the plate-holders. When the desired number of plates have been placed in position, the spring-lever 29 is manipulated so as to adjust the lid 31 in a horizontal position, in which it is retained by the lever 29 being placed in engagement with the beveled stud 32. The slide 7 is then returned and the camera may now be inverted, ready for use. The front plate is now in position for exposure. When exposure has taken place, the spring-lever 29 is released from the stud 32 and manipulated to throw the lid 31 in an upward direction and into engagement with the flange 25 of the pawl-plate 24. The latter being thus forced in a forward direction moves the box 13 forwardly the space of one tooth of the ratchet-bar, thus causing the forward plate contained in the box 13 to drop forwardly and downwardly into the compartment bounded by the flanges 8 and partitions 11 12. The lid 31 is now restored to its normal horizontal position, and the next plate will thus be in position for exposure, while the exposed plate is safely stored in the bottom compartment of the camera until it shall be found convenient to remove and develop the same. The plates may be removed and developed one by one, or all at the same time, whichever shall be found most convenient.

The camera-box may, when desired, be provided with a suitably-constructed indicator, by means of which it may be seen at any time how often the device has been manipulated, thereby indicating the number of dry-plates still remaining in the box ready for exposure.

Between the under side of the top of the camera-box and the top of the sliding box 13 is interposed a leaf-spring 35, which serves to bear frictionally against the said box 13, and thereby retain the latter safely in any position to which it may have been adjusted.

While I have herein described what I consider to be the preferable construction of my improved camera-box, I would have it understood that I do not limit myself to the precise details of construction herein set forth, but reserve the right to make any alterations and modifications which may be resorted to without departing from the spirit of my invention.

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

1. In a photographic camera, the combination, with the camera-box, of an interiorly-located longitudinally-sliding box or receptacle adapted to hold a supply of dry-plates, and a hinged or vibrating door adapted when open to form a stop for the lower edges of the plates, and adapted when closed to actuate the mechanism for moving the sliding box or receptacle in a forward direction, so as to cause the said dry-plates to be successively exposed, substantially as set forth.

2. In a photographic camera, the combination, with the camera-box, of an interiorly-located longitudinally-sliding box or receptacle having a longitudinal ratchet-bar on its upper side, a longitudinally-movable pawl-plate adapted to engage the said ratchet-bar, a spring arranged to force the said pawl-plate normally in a rearward direction, and mechanism by means of which the said pawl-plate may be intermittently actuated so as to move the sliding box or receptacle in a forward direction, substantially as set forth.

3. In a photographic camera, the combination of the camera-box, an interiorly-located longitudinally-sliding box or receptacle, a longitudinal ratchet-bar mounted on the upper side of the latter, a longitudinally-movable pawl-plate engaging the said ratchet-bar and having downwardly-extending flanges, a spring arranged to press in a rearward direction against the front flange, and a hinged plate forming the bottom of the longitudinally-sliding box and adapted to press forwardly against the rear flange of the pawl-plate, substantially as and for the purpose set forth.

4. The combination of the camera-box, the interior longitudinal flanges at the lower edges of the sides of said box, the transverse partitions connecting the said flanges, the horizontal shelf at the rear ends of said flanges, the longitudinally-sliding box or receptacle having flanges at the rear end of its top to separate the plate-holders, the longitudinal ratchet-bar on the upper side of said box or receptacle, the pawl-plate having downwardly-extending flanges, the spring arranged to force said pawl-plate in a rearward direction, the hinged plate adapted to separate the longitudinally-sliding receptacle from the bottom compartment of the camera-box, and means for retaining the said hinged plate in position, substantially as set forth.

5. The combination of the camera-box, the longitudinally-sliding receptacle for a series of dry-plates, a horizontal shelf forming the bottom of the rear end of said receptacle and having a flat spring provided with an upturned hook, a hinged plate adapted to form the bottom of the front end of the sliding receptacle, and a pawl-plate engaging a ratchet-bar upon the sliding receptacle and adapted to be actuated by the said hinged plate, substantially as and for the purpose set forth.

6. The combination of the camera-box, the transverse partition having the lens, the longitudinally-sliding box or receptacle, the ratchet-bar on the upper side of the same, the pawl-plate having flanges extending downwardly in front and in rear of the lens-holding partition, a spring secured to the latter and adapted to force the pawl-plate in a rearward direction, a transverse shaft having a spring-lever adapted to engage a beveled stud on one side of the camera-box, and a plate attached to the said shaft within the camera-box, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

PETER E. RUDELL.

Witnesses:
GEO. B. KETCHUM,
CHAS. T. LEVINESS.