

No. 756,402.

PATENTED APR. 5, 1904.

W. A. PETERS.

APPARATUS FOR CARRYING AND CHANGING PHOTOGRAPHIC PLATES.

APPLICATION FILED JAN. 16, 1904.

NO MODEL.

3 SHEETS—SHEET 1.

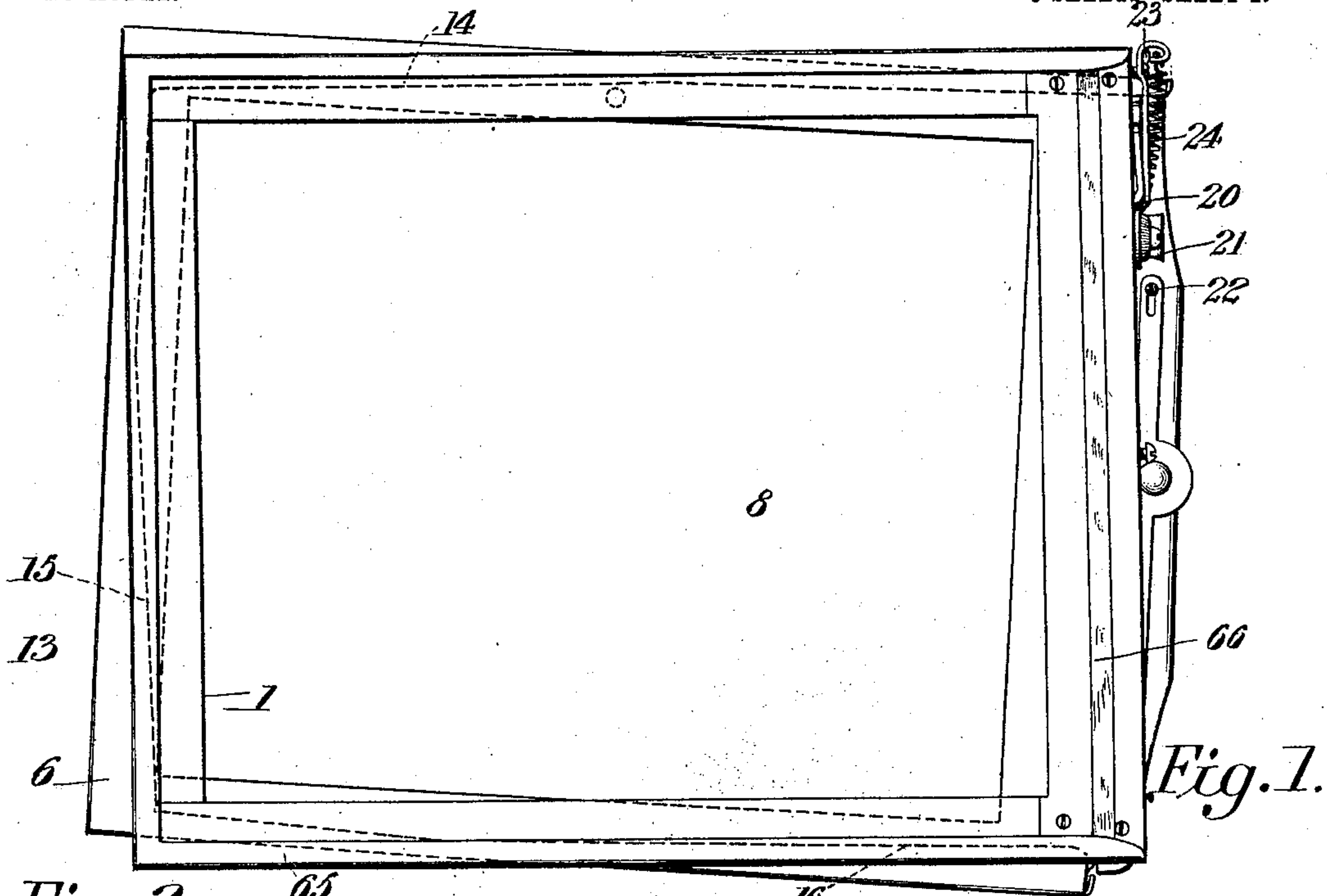
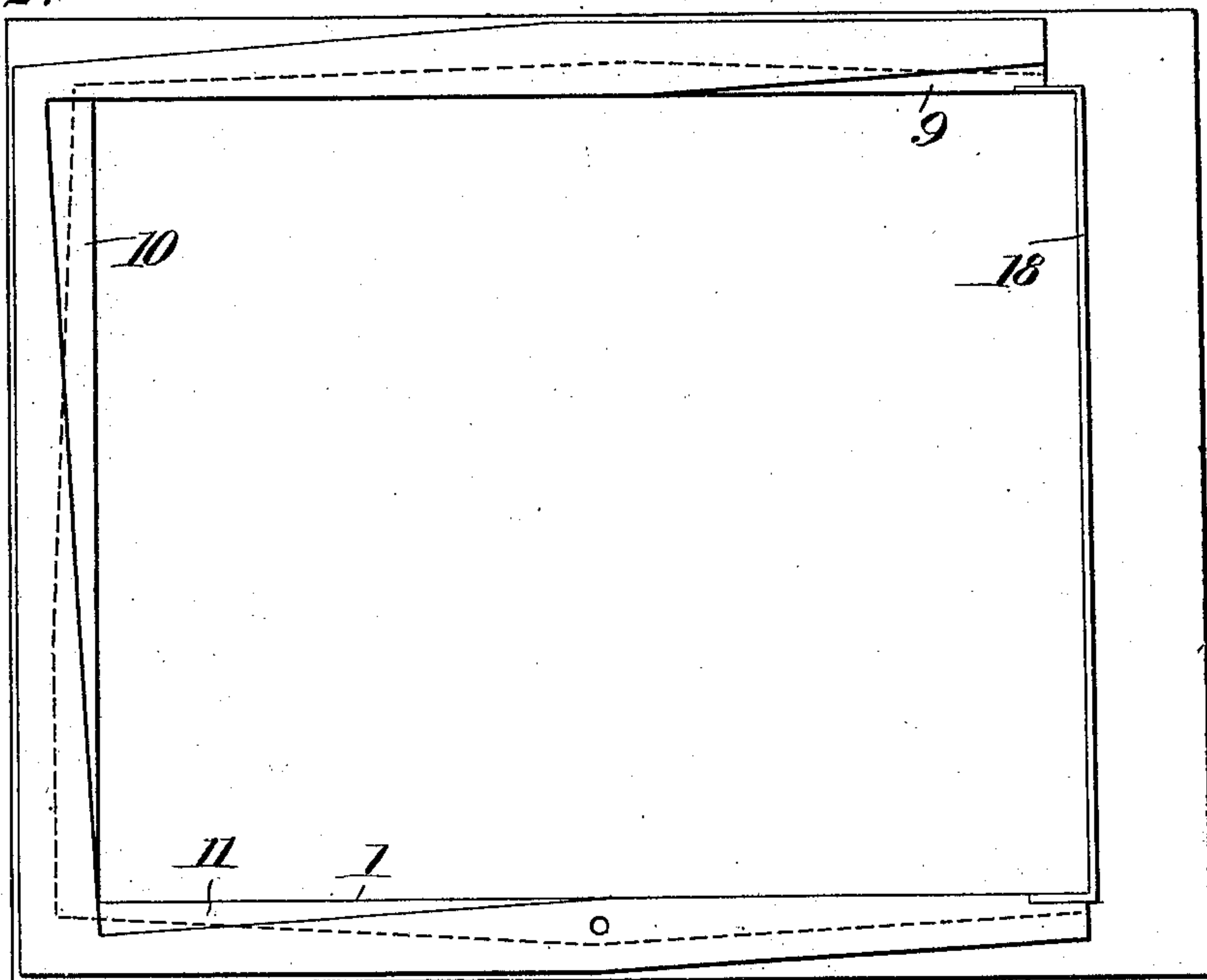


Fig. 2.



Witnesses  
*E. J. Stewart*  
*Dexter Morton*

William A. Peters, Inventor.  
by *Chas. Snow* Attorneys

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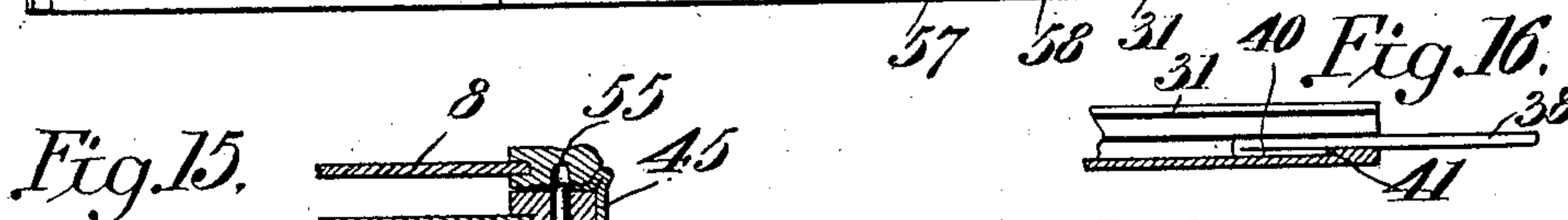
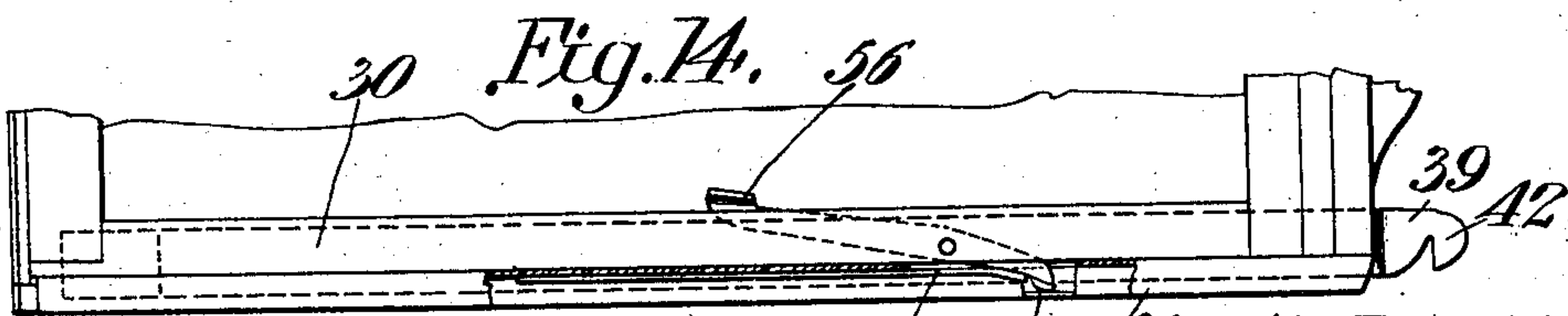
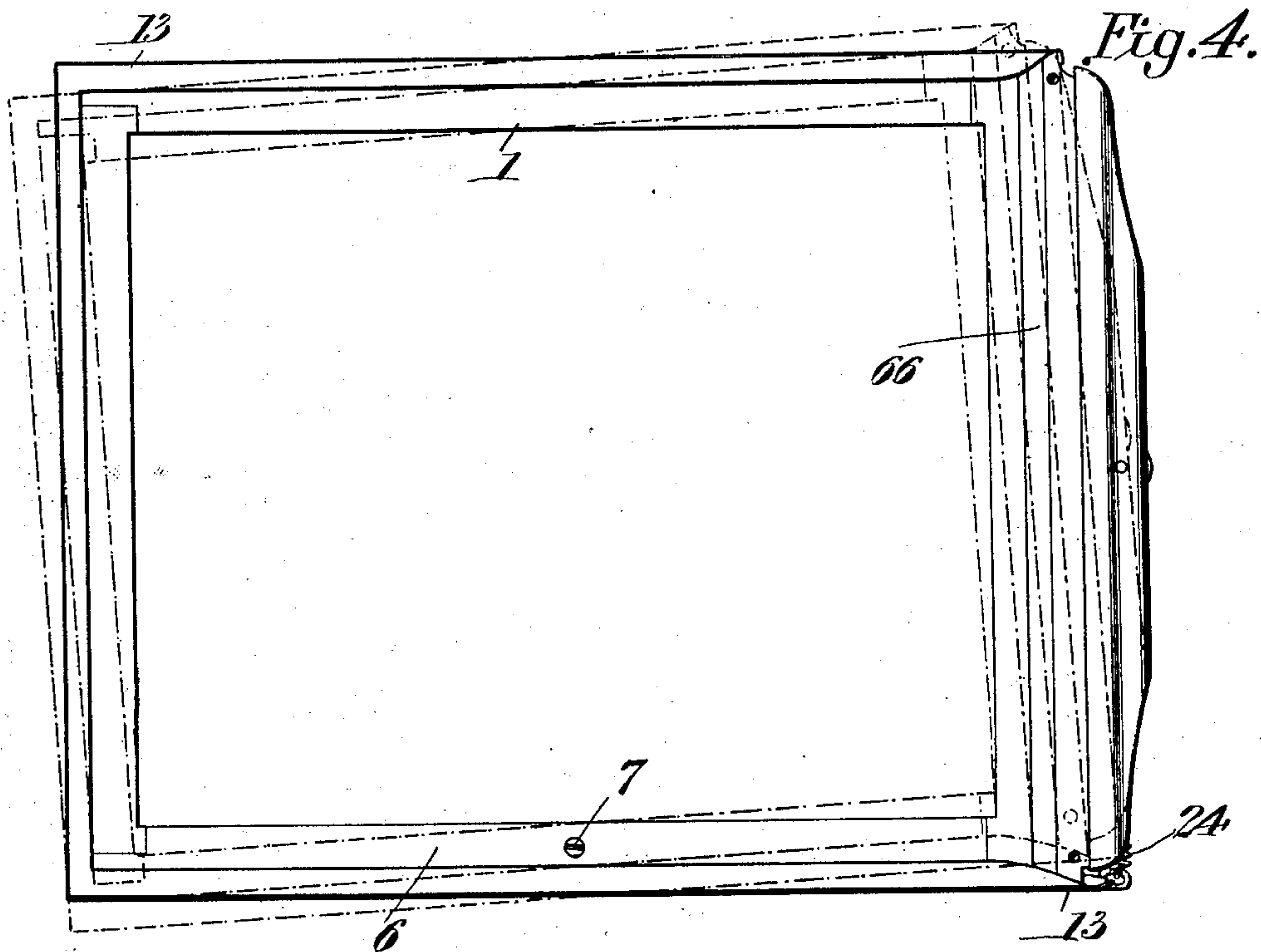
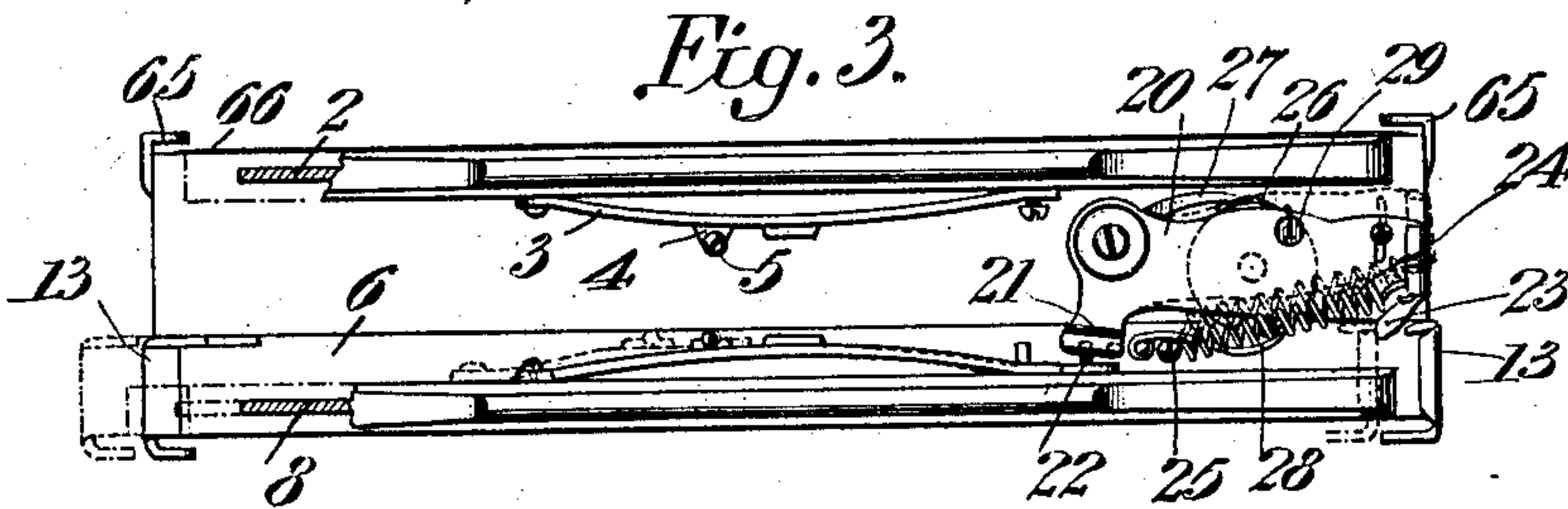
W. A. PETERS.

APPARATUS FOR CARRYING AND CHANGING PHOTOGRAPHIC PLATES.

APPLICATION FILED JAN. 18, 1904.

NO MODEL.

3 SHEETS—SHEET 2.



Witnesses  
*E. Stewart*  
*Dexter Monton*

William A. Peters, Inventor.  
by *C. A. Snow & Co.* Attorneys

No. 756,402.

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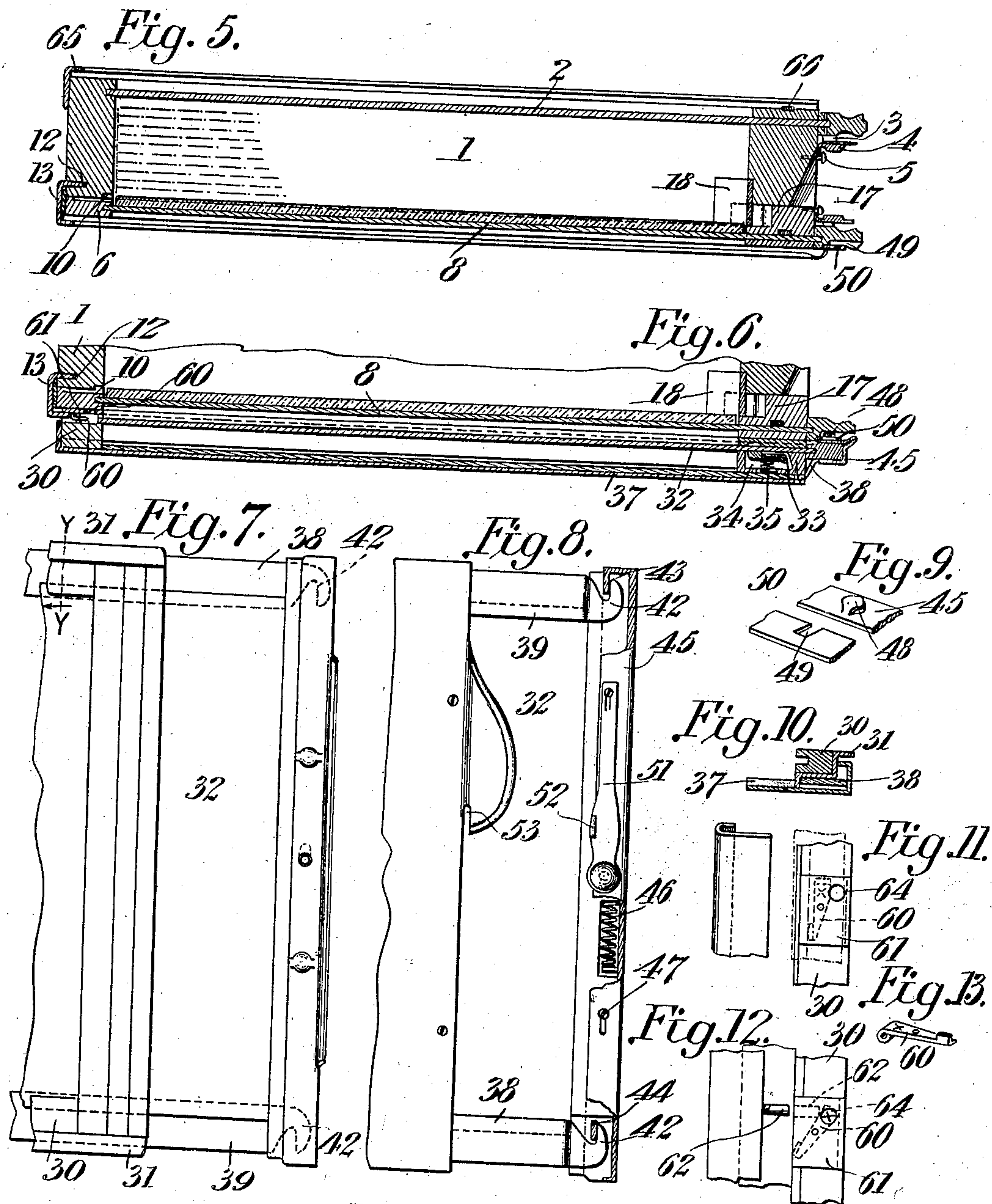
W. A. PETERS.

APPARATUS FOR CARRYING AND CHANGING PHOTOGRAPHIC PLATES.

APPLICATION FILED JAN. 16, 1904.

NO MODEL.

3 SHEETS—SHEET 3.



Witnesses  
*E. J. Stewart*  
*Dexter Morton*

William A. Peters, Inventor.  
by *C. A. Snow & Co.* Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM A. PETERS, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR OF TWO-FIFTHS TO EDWARD L. COOK, OF JOHNSTOWN, PENNSYLVANIA.

## APPARATUS FOR CARRYING AND CHANGING PHOTOGRAPHIC PLATES.

SPECIFICATION forming part of Letters Patent No. 756,402, dated April 5, 1904.

Application filed January 16, 1904. Serial No. 189,361. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. PETERS, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Apparatus for Carrying and Changing Photographic Plates, of which the following is a specification.

This invention relates to apparatus for carrying and changing photographic plates, and has reference more particularly to apparatus of the type in which a plurality of plates are carried in a light-tight casing or magazine from which they may be separately removed in daylight and introduced into a plate-holder for exposure in a photographic camera in the usual manner, each plate being returned after exposure to the magazine before another is removed therefrom.

The principal object of the invention is to provide an improved apparatus of the type specified which shall be characterized by great compactness, simplicity of construction, and easy of manipulation.

Further objects will appear as the invention is more fully disclosed in the following specification and the accompanying drawings, forming a part thereof, in which I have illustrating a preferred form of embodiment of the invention, it being understood that various changes in the form, proportions, and exact mode of assemblage of the elements exhibited, as well as in other minor details of construction, may be made without departing from the spirit of the invention or sacrificing the advantages thereof.

In its entirety the invention includes improvements in the casing forming the plate-magazine, the mechanism for removing the plates one by one from the magazine and hereinafter referred to as the "discharging" mechanism, a novel form of plate holder or receiver for use in combination with the magazine and discharging mechanism, and various details of construction which serve to prevent accidental exposure of the plates, to facilitate the successful operation of the apparatus, or to indicate the number of plates that have been removed from the magazine, as well as the number still remaining therein for exposure.

In the drawings, Figure 1 is a plan view of the apparatus with the top slide removed and the discharger in position for discharging a plate into a plate-holder. Fig. 2 is a bottom plan view of the magazine with the discharger detached therefrom. Fig. 3 is an end view of the magazine and discharging mechanism. Fig. 4 is a bottom plan view of the magazine and discharger, the position of the discharger for discharging a plate being indicated in dotted lines. Fig. 5 is a longitudinal section through the magazine and discharger. Fig. 6 is a detail view in section taken longitudinally of the discharging mechanism and showing the discharger with a plate-holder in position beneath the discharger for the reception, of a plate. Fig. 7 is a detail view, in top plan, of the end of a plate-holder, showing the construction of the slide and the means employed for limiting its movement. Fig. 8 is a detail view showing the end of the plate-holder in bottom plan, parts being broken away to show the internal construction of the catch mechanism at the end of the slide. Fig. 9 is a detail view showing interlocking members upon the plate-holder slide and the discharger-slide to prevent relative lateral movement of the said slides. Fig. 10 is a detail view in section on the line *y y* of Fig. 7. Figs. 11, 12, and 13 are detail views showing the construction and operation of an indicator provided on the plate-holder to show automatically when the plate held therein has been exposed. Fig. 14 is a detail view, partly in plan and partly in section, showing the construction of the catch by means of which a plate is held in the plate-holder. Fig. 15 is a detail view showing the means for connecting the slides of the discharger and the plate-holder for simultaneous longitudinal movement. Fig. 16 is a detail view showing the operation of one of the sliding strips which normally limit the range of movement of the plate-holder slide.

Referring to the drawings, in which corresponding parts are designated by similar characters of reference throughout, 1 designates the side wall of the plate casing or magazine, which is preferably made of wood and is approximately of the thickness shown in Figs. 5 and 6. The magazine or casing is of rec-



tangular form, as shown in Figs. 1 and 2, and is adapted in dimensions to plates of a certain size, the magazine shown being arranged for plates of the four-by-five size. The magazine is provided at the top with a light-proof slide, arranged for longitudinal movement in grooves formed in the walls of the magazine, as usual. In order to hold the slide 2 in closed position and to prevent its accidental movement outward and the consequent admission of light to the interior of the magazine, a suitable automatic catch is provided at the front end of the slide for engagement with a stud or lug upon the adjacent portion of the front wall of the magazine. In the form of the invention illustrated the catch upon the slide 2 consists of a spring 3, secured upon the slide and having at the side thereof a lug 4, which is adapted for engagement with the head of a stud or screw 5, fixed in the front wall of the magazine, as shown. The inner surfaces of the walls of the magazine are smooth and are disposed perpendicular to the plane of movement of the slide. At the bottom of the magazine a discharger is secured, by means of light-proof connections, in such manner that it is susceptible of a limited oscillatory movement for purposes which will presently appear. The discharger consists, essentially, of a substantially rectangular frame 6, pivotally mounted at one side, as shown at 7. The frame 6 when in the position shown in Fig. 4 registers exactly with the bottom of the magazine, so that plates may pass freely downward by the action of gravity from the magazine into the discharger. The frame 6 of the discharger is provided with grooves in which a slide 8 is arranged for longitudinal movement, and the depth from the upper surface of the frame 6 to the upper surface of the slide is approximately equal to the thickness of a single photographic plate. The depth may be slightly less than the thickness of a plate; but it must never exceed the thickness of the thinnest plate to be used in connection with the apparatus. When the discharger occupies the position shown in solid lines in Fig. 4, the plates in the magazine will rest upon the slide 8 of the discharger, as shown in Fig. 5; but if the discharger be shifted into the position shown in dotted lines in Fig. 4 the lowermost plate will be given a slight oscillatory movement in a horizontal plane and will no longer register with the plates above it. Instead the plate will occupy the position indicated in Fig. 1 by dotted lines. The plates above the bottom plate will then be supported, not upon the discharger-slide, but upon portions of the frame 6 of the discharger which then occupy the position shown in Fig. 1, and afford three separate supporting-surfaces corresponding to three of the edges of the lowermost plate left within the magazine. In order to facilitate the movement of the discharger from the po-

sition shown in solid lines in Fig. 4 to the dotted-line position, the walls of the magazine are cut away on their lower surfaces, as shown at 9, 10, and 11 in Fig. 2, thus affording ample space for the movement of the plate which is moved with the discharger.

In order to insure a light-proof joint between the discharger and the magazine and at the same time to permit the requisite oscillatory movement of the discharger to effect the separation of the bottom plate from the remaining plates in the magazine, the side walls and the rear end wall of the magazine are channeled, as shown by dotted lines in Fig. 2 and at 12 in Figs. 5 and 6. The discharger has suitably fastened thereto an outer sheathing 13, extending along the sides thereof and across the rear end. The sheathing 13 is provided both at the top and at the bottom with flanges. The flanges at the top of the sheathing are not of uniform width, but are of the outlines shown at 14, 15, and 16 in Fig. 1, the widest portions of the said flanges being provided near the corners of the discharger-frame which are thrown farthest away from the side walls of the magazine when the discharger is thrown into the position shown in Fig. 1. The flanges 14, 15, and 16 lie in the channels 12, formed in the walls of the plate-magazine, and owing to the depth of the channels and the width of the flanges the flanges are never thrown out of the channels in the operation of the apparatus. As the channels are of just sufficient size to admit the flanges and permit movement of the flanges in the channels without friction, the said flanges and channels provided for their reception form effective means for preventing the entrance of light into the magazine at the sides and rear end thereof when the discharger is shifted. As a continuation of the sheathing 13 across the front end of the discharger would be undesirable, the means employed for preventing the entrance of light at the front end of the magazine is of different character. The front end wall of the magazine is cut away to provide for an upward extension of the front end wall of the discharger-frame, as shown at 17, and on the inner surface of the front end wall of the magazine a strip of leather or other suitable material is secured, as shown at 18, the ends of the strip being extended along the side walls of the magazine for a short distance. The lower edge of the leather strip presses downward upon the upper surface of the discharger-frame immediately below it, and the upward extension 17 on the front end wall of the discharger-frame rises in front of the lower portion of the strip 18 and serves in connection therewith to form an effective light-seal. In order to prevent the accidental withdrawal of the discharger-slide 8, a catch is provided at its forward end which is substantially the counterpart of the catch provided on the slide 2 at the top of the plate-magazine. It



is not only desirable to prevent accidental withdrawal of the slide 8, but it is also a desideratum to provide means to positively prevent the withdrawal of the slide 8, except when the discharger is in the position shown in Fig. 1. To this end a pivoted latch 20 is mounted on the front end of the plate-magazine and is provided with a projection 21, which engages with a stud 22, mounted on the slide 8 in suitable position for such engagement when the discharger is in the position shown in Fig. 3. The projection 21 is of such width that when the discharger is shifted to the position shown in dotted lines in Figs. 3 and 4 the stud 22 will be thrown out of position for engagement with the projection 21, and the slide 8 may then be withdrawn from the channels or grooves in which it is arranged to move. The pivoted latch 20 serves not only to prevent removal of the slide 8 from the discharger, except when the discharger is in position to discharge a plate from the magazine, but also serves to hold the discharger in discharging position. To serve this purpose, the latch 20 is provided with a lug 23 at one end, which is adapted for engagement with the outer surface of the sheathing 13 on the discharger when the discharger is shifted into discharging position, and when the discharger is in position for receiving a plate, as shown in solid lines in Figs. 3 and 4, the lug 23 rests upon the upper flange of the sheathing 13, as shown in Fig. 3, being held in that position by means of a spring 24, secured at one end by a stud 25, carried by the discharger, and having its other end connected with the latch 20. The spring 24 serves the double purpose, therefore, of drawing the latch downward, so as to operate automatically, and of exerting a pull upon the discharger which tends to restore it to receiving position as soon as the latch 20 is raised to the position shown in dotted lines in Fig. 3.

As it is extremely desirable in apparatus of the character to which this invention relates to have some automatic mechanism for indicating the removal of the plates from the magazine, I have provided in connection with the latch 20 a simple registering device by means of which the removal of each plate from the magazine is immediately registered, and hence the number of unused plates in the magazine is always determinable from the registering mechanism. The registering mechanism employed consists of a ratchet-disk 26, provided upon its face with an annular series of numerals corresponding to the capacity of the magazine, a spring-pawl 27, carried by the magazine and engaging the ratchet-teeth at the periphery of the disk 26, and a spring-pawl 28, mounted on the discharger and also engaging the teeth of the ratchet-disk 26 to impart a step-by-step rotation to the said disk as the discharger is successively shifted to discharge the plates from the magazine. The

ratchet-disk is disposed between the latch 20 and the end wall of the magazine, as shown in Fig. 3, and the latch 20 is provided with a small opening 29, through which one numeral of the series provided on the disk may always be seen. As shown in Fig. 3, the registering mechanism indicates the removal of a single plate from the magazine, and when the discharger is shifted to the dotted-line position preliminary to the discharge of a second plate from the magazine the pawl 28, engaging the periphery of the disk 26, will impart a partial rotative movement to the disk, so bringing the next numeral into view through the opening 29. When the discharger is returned to its receiving position, as shown in solid lines in Fig. 3, the pawl 27, engaging the edge of the disk at the upper side, will prevent the backward rotation of the disk and keep the disk in position to display the numeral brought into view by the pawl 28.

From the foregoing description it will be readily seen that when the magazine is charged with plates, as shown in Fig. 5, the movement of the discharger to the position shown in Fig. 1 will shift the lowermost plate into such position that if the slide 8 be then withdrawn from the discharger-frame the lowermost plate will be allowed to fall through the opening at the bottom of the discharger, and the other plates in the magazine will be supported upon the discharger-frame, and so prevented from escaping from the magazine. After the descent of the lowermost plate from the discharger the slide must be returned to closed position before the discharger is returned to the position shown in solid lines in Figs. 3 and 4; otherwise the plates left in the magazine would be allowed to descend through the opening in the discharger-frame as soon as it was brought back into registration with the wall of the magazine. The discharger-slide 8 being returned to closed position and the discharger being shifted back into its receiving position, the plates in the magazine descend at once until the lowermost plate rests upon the discharger-slide, as shown in Fig. 5. The apparatus is then ready for the discharge of the next plate in the manner explained above.

To receive the plates from the discharger without exposure to the light in the discharging operation, I make use of a novel form of plate-holder, which coöperates with the discharger in the manner now to be explained. The plate-holder is illustrated in section in Fig. 6 and is preferably adapted for the reception of a single plate only, though the plate-holder illustrated may be readily adapted for the reception of two plates by simply duplicating the plate-receiving space below the bottom or back of the holder and converting the bottom or back into a partition separating the two-plate chambers. The plate-holder illustrated consists of a frame 30, provided



with projecting flanges 31 at the sides, which cooperate with the flanges at the sheathing 13 to guide the plate-holder into position for receiving a plate from the discharger. The plate-holder is provided with a slide 32, arranged for sliding movement in grooves provided in the frame 30, and suitable devices are provided at the front end of the plate-holder to prevent the entry of light through the guideway in which the slide 32 moves. As shown in Fig. 6, the preferred form of light-seal comprises a spring-supported strip 33, disposed in a channel 34 in the frame of the plate-holder and pressed upward into close contact with the plate-holder slide by a spring 35 beneath the strip. The strip 33 is provided at its rear margin with a piece of leather which presses against the under surface of the slide when in closed position and which enters a recess provided to receive it when the slide is withdrawn, so closing the guideway for the slide and preventing the passage of light therethrough. The back or bottom of the plate-holder is preferably sheet metal and is provided with a lining 37 of some suitable dark material, as black velvet, which serves the double purpose of affording a cushion for the plate, as it is allowed to descend into the plate-holder, and of preventing halation when the plate is exposed in the camera.

To prevent the accidental withdrawal of the slide 32 to too great a distance when a plate is being discharged from the discharger into the plate-holder, I provide at the sides of the plate-holder two sliding strips 38 and 39, each of which has the rear end overturned, as shown at 40 in Fig. 16, to serve as a lug for engagement with a stop 41, arranged at the forward end of the plate-holder. The sliding strips 38 and 39 are hooked at their forward ends, as shown at 42 in Fig. 8, and are normally engaged by lugs 43 and 44, formed in a member 45, arranged for sliding movement across the forward end of the plate-holder slide and held normally in position for engagement with the hooks 42 by means of a spring 46. The member 45 is limited in its sliding movement by means of studs 47, passing through slots formed in the said member, as shown in Fig. 8. The member 45 is also provided with upstruck tongues 48, which are adapted to enter notches 49, formed in a strip of metal 50, secured on the under side of the slide 8 of the discharger at its forward end, as shown in Fig. 9. When the plate-holder is in the position shown in Fig. 6 and is ready for the reception of a plate, the tongues 48 interlock with notches 49 and prevent any relative lateral movement of the two slides, so insuring the easy movement of the slides in their guideways when they are withdrawn to permit the discharge of a plate into the plate-holder.

In order to insure the simultaneous longitudinal movement of the slides 8 and 32, the slide 32 is provided on its under surface with

a spring-catch 51, having a lug 52, which engages with a notch 53, formed at the end of the bottom or back of the plate-holder, and the spring-catch 51 is provided with an upwardly-projecting pin 54, which is adapted when the catch is released from engagement with the notch in the back or bottom of the plate-holder to enter a socket 55, provided therefor in the end of the slide 8, as best seen in Fig. 15.

The means employed for holding a plate in the plate-holder when the plate is exposed in a photographic camera consists, preferably, of a pivoted latch 56, arranged in one side of the plate-holder, as shown in Fig. 14, and normally held in operative position by a spring 57, arranged at the outside of the plate-holder and engaging a lug 58 at the outer end of the latch. The latch is arranged beneath one of the flanges 31, which engage with the flanges at the bottom of the sheathing 13 around the discharging-frame. Hence when the plate-holder is thrust into the position for receiving a plate, as shown in Fig. 6, the outer end of the latch 56 will be engaged by the flange at the bottom of the sheathing 13 and will be forced into inoperative position, so permitting the plate to drop into the plate-holder when the slides 8 and 32 are drawn outward for that purpose. As soon as the plate-holder is removed from its position for receiving a plate the spring 57 will act automatically to throw the latch 56 into operative position, so as to hold the plate firmly in the plate-holder until the exposure thereof in the camera.

To prevent the accidental exposure of a plate a second time and also to prevent the return of a plate to the magazine before exposure, I provide at the rear end of the plate-holder a small indicating device, which is adapted to indicate automatically the exposure of the plate in the plate-holder without the necessity of reversing the slide of the plate-holder when it is returned to closed position after exposure of the plate, as is the ordinary practice. The exposure-indicator consists simply of a pivoted index member 60, arranged at the rear end of the plate-holder beneath a small piece of sheet metal 61, let into the upper surface of the frame 30 of the plate-holder, as shown in Figs. 11 and 12. The member 60 is of such dimensions that when the plate-holder is pushed into plate-receiving position at the bottom of the discharger the flange at the bottom of the sheathing 13 will engage one end of the member 60 and throw it into the position shown in Fig. 11, thus concealing the end of the member which bears thereon the letter "X" to indicate the exposure of a plate. When the plate-holder is introduced into the camera, the end of the member 60, bearing the letter "X," will be engaged by a stud 62, provided for that purpose in the camera, and the member 60 will be thrown into the position shown in



Fig. 12, thus bringing the letter "X" on said member into view through an opening 64, provided in the piece of sheet metal 61 over the member 60. This simple device is an effective safeguard against double exposures and also serves to prevent the return of a plate to the magazine for development before it has been exposed, as the letter "X" upon the indicator is not thrown into position until the plate-holder has been introduced into the camera for exposure, and after each exposure the letter "X" remains in view until the exposed plate has been removed from the plate-holder and a new plate introduced thereinto from the discharger.

In order to provide for the return of exposed plates to the magazine, a strip 65 of sheet metal is provided at the top of the magazine, having an inwardly-projecting flange extending over the upper surface of the casing-wall and so corresponding to the flange at the lower margin of the sheathing 13, by means of which the plate-holder is secured at the bottom of the discharger. When it is desired to return a plate to the magazine from the plate-holder, the plate-holder will be inverted and placed in position above the magazine, being held by the flange 31 on the plate-holder frame, engaging with the flange of the strip 65. The interlocking flanges of the plate-holder and strip 65 serve to hold the plate-holder in close contact with the upper surface of the magazine, so preventing the entrance of light at the rear end or sides of the magazine, and at the forward end of the magazine a strip of leather 66 is provided at the top of the magazine-wall for contact with the adjacent surface of the plate-holder.

The general operation of the entire apparatus as above described may be briefly summarized as follows: The magazine is loaded with plates without exposure to actinic light, great care being taken to remove any particles of dust from the surface of the plates and the plates being carefully laid in the magazine with the film side upward. The slide 2 at the top of the magazine is then closed, and the apparatus is ready for use. In order to introduce the lowermost plate in the magazine into the plate-holder for exposure in the camera, the plate-holder is secured beneath the discharger, the discharger is shifted into discharging position, as shown in Fig. 1, the slides of the discharger and plate-holder are then withdrawn to the extent permitted by the sliding straps 38 and 39, and the plate contained in the discharger is allowed to descend into the plate-holder. The slides are then returned to closed position, the plate-holder is removed from its position at the bottom of the discharger, the plate is exposed in the camera in the usual manner, the exposure-indicator being thrown into position at the same time, and the plate-holder is then removed from the camera and secured at the

top of the magazine preparatory to returning the plate to the magazine. The plate-holder slide and the magazine-slide are then simultaneously withdrawn, the two slides being locked together by means of the pin 54 and the catch on the plate-holder slide, and the plate is allowed to drop into the magazine with the film side downward. The slides are then returned to closed position, and the plate-holder may be removed preparatory to receiving another plate from the discharger. Every time a plate is removed from the magazine by the operation of the discharger the registering mechanism is operated to register the removal of the plate, and when all the plates contained in the magazine have been successively transferred to the plate-holder and then returned to the magazine after exposure the plates may be removed from the magazine and developed at once in a suitable portable developing apparatus, such as that described in my companion application, Serial No. 189,362, filed of even date herewith. If it is not convenient to develop the plates at once, they may be reserved for later development in the usual manner.

From the foregoing description of the construction and operation of my invention it will be noted that the entire apparatus is of very compact character, the parts thereof are so arranged as to insure the satisfactory operation of the apparatus under any circumstances, the accidental exposure of plates is carefully guarded against, and the apparatus may be easily operated by any one after the construction thereof is understood.

By means of the apparatus as described and illustrated a photographer is enabled to carry with him a sufficient supply of plates for any ordinary work and is enabled to shift the plates from a carrier to the plate-holder in a very few moments when it is desired to make an exposure. The apparatus being very compact, three or four of the carriers may be carried without inconvenience in the space that would be occupied by the ordinary double plate-holders necessary to contain one-fourth as many plates, and the photographer is so enabled to make pictures upon plates with all the attendant advantages of the use of plates with but little more inconvenience and labor than would be required in the use of "films."

Having thus described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In apparatus of the character specified, a plate-magazine, and a plate-discharging mechanism mounted on said magazine and movable relatively thereto, said plate-discharging mechanism and said magazine each having a chamber therein and said chambers being of the same contour and adapted to register when said magazine and said discharging mechanism are in position for a plate to pass from the magazine into the discharging mechanism.



2. In apparatus of the character specified, a plate-magazine and plate-discharging mechanism mounted on said magazine for bodily movement relative to said magazine, both the magazine and the discharging mechanism having a chamber of rectangular contour and of the same size.

3. In apparatus of the character specified, a plate-magazine and plate-discharging mechanism at the bottom of said magazine, said discharging mechanism having a chamber of sufficient length and breadth to receive a plate and of a depth slightly less than the thickness of a plate, and the walls of the magazine being undercut at the bottom to permit lateral movement of a plate with the plate-discharging mechanism.

4. In apparatus of the character specified, a magazine, plate-discharging mechanism pivotally mounted at the bottom of the magazine, and interengaging channels and flanges provided on the magazine and the discharging mechanism to prevent the entrance of light between said magazine and said discharging mechanism.

5. In apparatus of the character specified, a plate-magazine, a discharger disposed beneath said magazine and pivotally mounted at one side thereof, one of said structures being provided on the exterior with suitable channels, and the other structure being provided with flanges entering said channels; said flanges being of such width as to permit a limited swinging movement of the discharging mechanism relative to the magazine without withdrawal of the flanges from the channels.

6. In apparatus of the character specified, a plate-magazine, a plate-discharger disposed beneath said magazine for limited oscillatory movement, and a light-excluding strip of suitable material disposed in said magazine and projecting downward into said discharger.

7. In apparatus of the character specified, a plate-magazine, plate-discharging mechanism movable bodily relative to said magazine, and a latch for positively securing said discharging mechanism in position to discharge a single plate from the apparatus.

8. In apparatus of the character specified, a magazine, plate-discharging mechanism movable bodily relative to said magazine, and an automatic latch carried by said magazine and adapted to lock said discharging mechanism positively in position to discharge a single plate from the magazine.

9. In apparatus of the character specified, a magazine, plate-discharging mechanism movable bodily relative to said magazine, a latch to hold said plate-discharging mechanism positively in discharging position, and registering mechanism connected with said latch and actuated by the movements of said latch.

10. In apparatus of the character specified, a plate-magazine, means for discharging plates from said magazine, a plate-holder to receive

a plate as discharged from the magazine, and an exposure-index mounted on said plate-holder and thrown into inoperative position when the plate-holder is brought into position to receive a plate.

11. In apparatus of the character specified, a magazine, plate-discharging mechanism, a slide provided in said discharging mechanism, a plate-holder adapted to receive plates from said discharging mechanism, a slide in said plate-holder, a catch to secure said plate-holder slide against accidental withdrawal, and means provided on said catch and operative when said catch is released to engage with the slide of the discharging mechanism and lock said slide for movement with the plate-holder slide.

12. In apparatus of the character specified, plate-discharging mechanism, a plate-holder adapted to receive plates from said discharging mechanism, a plate-holder slide, a discharger-slide, means for locking said slides for movement together, and means for limiting the outward movement of the plate-holder slide, said means being susceptible of disengagement from said slide.

13. In apparatus of the character specified, plate-discharging mechanism, a plate-holder to receive plates from said discharging mechanism, a slide in said plate-holder, a sliding strip arranged for limited sliding movement in said plate-holder, and devices carried by said slide which engage automatically with said sliding strip to keep said slide normally connected therewith, said devices being disengageable from said sliding strip.

14. In apparatus of the character specified, a plate-magazine, plate-discharging mechanism movable bodily relative to said magazine, said magazine and said discharging mechanism having chambers adapted to be brought into registration, a latch to hold said discharging mechanism with its chamber out of registration with the chamber of the magazine, and means for automatically returning said discharging mechanism into its normal position with the chamber therein in registration with the chamber of the magazine as soon as said latch is released.

15. In apparatus of the character specified, a plate-magazine having a plate-chamber therein, plate-discharging mechanism pivotally mounted on said magazine and having a chamber normally in registration with the chamber of the magazine, means for limiting the pivotal movement of said plate-discharging mechanism, and an automatic latch to hold said plate-discharging mechanism out of normal position.

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

WILLIAM A. PETERS.

Witnesses:

GEORGE R. COOK,  
C. G. HENRY.