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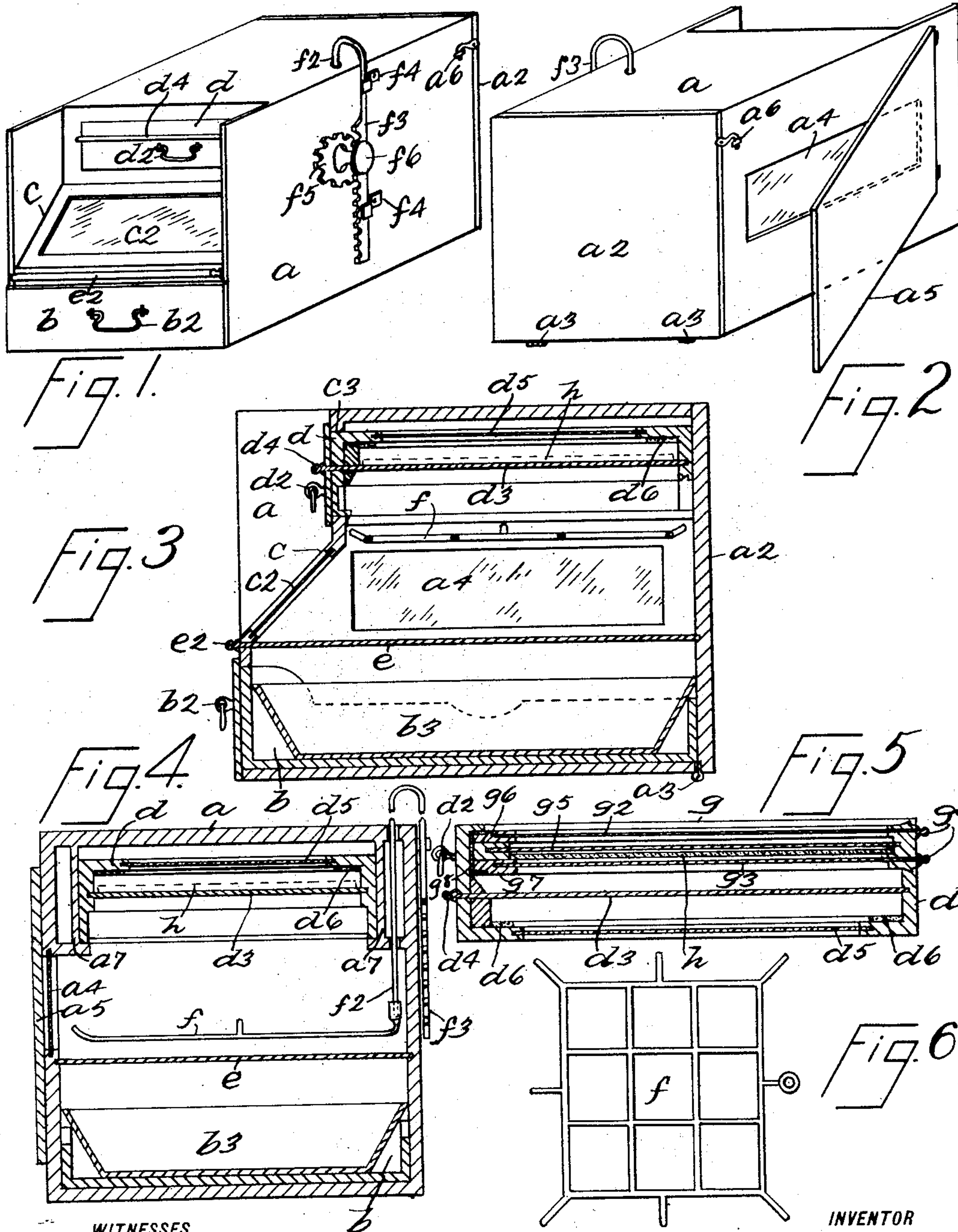
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G. L. PLUMLEY.

APPARATUS FOR DEVELOPING PHOTOGRAPHIC PLATES.

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NO MODEL.



WITNESSES

J. C. Larsen
F. A. Stewart

INVENTOR

Gardner L. Plumley

BY

Edgar L. & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

GARDNER L. PLUMLEY, OF NEW YORK, N. Y.

APPARATUS FOR DEVELOPING PHOTOGRAPHIC PLATES.

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To all whom it may concern:

Be it known that I, GARDNER L. PLUMLEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Developing Photographic Plates, of which the following is a specification such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide an improved apparatus for developing photographic plates without the use of a dark room; and with this and other objects in view the invention consists of an apparatus of the class described constructed as hereinafter specified and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a perspective front end view of an apparatus embodying my invention; Fig. 2, a perspective rear end view thereof; Fig. 3, a central longitudinal section; Fig. 4, a transverse section; Fig. 5, a longitudinal section of a transfer-case, and Fig. 6 a plan view of a vertically-adjustable plate-holder which forms a part of my improved apparatus.

In the practice of my invention I provide a case *a*, having a rear end member *a*², which is hinged at the bottom, as shown at *a*³, and in one side of which is a ruby glass *a*⁴, and the side of the case in which the ruby glass *a*⁴ is placed is provided with a hinged door *a*⁵, which is adapted to cover said glass, and the hinged rear end portion *a*² is provided with a catch *a*⁶ to hold it in a closed position, and any suitable catch or securing device may be provided for the door *a*⁵.

Within the bottom portion of the case *a* is placed a drawer *b*, which is provided at the front end of the case with a handle *b*² and which is adapted to be drawn out through the front end of said case, and placed in this drawer is a pan *b*³, which is designed to receive the fixing and developing liquids.

In the front end of the case *a* is an inwardly-

directed and upwardly-inclined frame member *c*, in which is placed a ruby glass *c*², and in the top of the case *a* above the frame member *c* is an opening *c*³, which is adapted to receive a drawer-shaped transfer-case *d*, provided at its front end with a handle *d*², and the opposite sides of the case *a* are provided with inwardly-set members *a*⁷, between which the transfer-case *d* is placed, and said transfer-case *d* is narrower in transverse section than the case *a*. The transfer-case *d* is provided with a longitudinal partition *d*³ in the form of a slide and provided at its front end with a bead or handle member *d*⁴, by which it may be drawn out or inserted into position, and above the drawer *b* in the bottom portion of the case *a* is another partition *e* in the form of a slide, which is also provided at its front end with a bead or handle member *e*², by which it may be drawn out from or inserted into the case *a*. One side of the transfer-case *d*—the top side as shown in Fig. 3 and the bottom side as shown in Fig. 5—is in the form of construction shown provided with a ruby glass *d*⁵, and placed thereunder or thereover is a gasket *d*⁶, of felt, soft rubber, or other suitable material.

In Fig. 5 of the drawings I have shown an ordinary plate-holder *g*, which is adapted to be slid into the transfer-case *d* from the rear end thereof and which is provided with two rubber slides *g*² and *g*³, which are provided at their outer ends with beads, knobs, or handles *g*⁴, by means of which they may be drawn outwardly through the rear end of the plate-holder or inserted therein when desired. The plate-holder *g* is also provided with a central longitudinal plate *g*⁵, and this plate-holder consists of a rigid frame at the front end of which are two transverse members *g*⁶ and *g*⁷, which are connected with the frame by a flexible member *g*⁸, whereby the said transverse members *g*⁶ and *g*⁷ are adapted to turn, as on a hinge, and the slides *g*² and *g*³ when in position enter corresponding recesses formed in the members *g*⁶ and *g*⁷, as clearly shown in Fig. 5.

In the central portion of the case *a* is a vertically-movable frame or support *f*, which is preferably composed of rubber-work, with

which is connected at one side a rod f^2 , which passes upwardly through the top of the case a at one side of the transfer-case d and which is provided with a downwardly-directed rack-bar member f^3 , which passes through suitable keepers f^4 , secured to the sides of the case a , and connected with the side of the case a is a pinion f^5 , which operates in connection with the rack-bar f^3 , and by manipulating the pinion f^5 by means of the handle f^6 the frame or support f may be raised or lowered, as will be readily understood.

The plate-holder g is of the well-known Cycle-Poco type, and the exposure of the plate h , contained therein, is made in the usual manner in a camera of this type. When the plate h has been exposed in the camera, the slide g^3 is forced into the position shown in Fig. 5, and the plate-holder g may then be removed without danger to the exposed plate h , and in the practice of my invention I place the plate-holder g in the transfer-case d with the side of the plate-holder containing the exposed plate in the direction of the ruby-glass plate d^5 of the transfer-case d , and the slide d^3 is then withdrawn, or nearly so, and the slide g^3 being then withdrawn the member g^7 of the plate-holder g swings downwardly, and the plate h is free to pass to the bottom of the transfer-case d , being received on the felt flange d^6 , which prevents a possibility of breaking. The slide d^3 is then again forced into the position shown in Fig. 5, which prevents light from reaching the plate h , and at this time I remove the plate-holder g , and inverting the transfer-case d I insert it into the opening c^3 of the case a and into the position shown in Fig. 3. The gear-wheel f^5 is then operated to elevate the rod f^2 and support or holder f into their highest position, at which time I withdraw the plate e from the case a , and when the slide e is withdrawn I also withdraw the slide d^3 , which permits the exposed plate h to drop on the support or holder f , and by reversing the movement of the gear-wheel f^5 the support f is carried to the bottom of the case a and into the pan b^3 , which at this stage of the operation contains the developing solution. After the plate h has been subjected to the action of the developing solution in the pan d^3 it is again raised to nearly the highest position of the support or holder f , and the slide e is again closed. The drawer b is then withdrawn from the case a and the pan b^3 removed therefrom, and a similar pan containing the hypo or other fixing solution is placed in the drawer b , which is then returned to its position in the case a , and the slide e being again withdrawn the support or holder f may be lowered and the plate h exposed to the action of the hypo or other fixing solution, after which the hinged end a^2 of the case a may be opened and the plate removed, which is then ready for washing.

During the operations just described it will

be apparent that the developing of the plate may be noted by means of the ruby glass c^2 , artificial or natural light being admitted to the ruby glass a^4 for this purpose, and in practice I prefer to place a candle adjacent to the ruby glass a^4 and may provide a suitable support for said candle on the case a or door a^5 , if desired.

The plate-holder g , having two compartments, permits of two exposures being made, and when the developing of one plate is completed the operation may be repeated by again placing the plate-holder g in the transfer-case d by reversing the same, and in this manner any number of plates may be developed in a strong light and without the use of a dark room.

Although I have shown and described a distinct type of plate-holder in connection with my apparatus, it will be apparent that the transfer-case d may be adapted for plate-holders of any construction, and the ruby glass d^5 in the bottom of the transfer-case d is not absolutely necessary, the purpose thereof when used being to observe the plate h after it has been dropped to the bottom of the transfer-case d in order to see if it is in a proper position for the closing of the slide d^3 , and the design or construction of the support or holder f may be modified in order to adapt it to the use of my apparatus constructed according to the plate-holder used therewith, and various other changes in and modifications of the same may be made without departing from the spirit of my invention or sacrificing its advantages.

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

1. In an apparatus for developing photographic plates, a main case provided in the bottom thereof with a drawer, a slide placed over said drawer, a ruby glass in one side thereof over said slide, a vertically-adjustable frame or holder in the body portion of said main case over said slide, another ruby glass in the end thereof over said drawer and slide, and a transfer-case adapted to be inserted into the top portion of said main case over said last-named ruby glass, substantially as shown and described.

2. In an apparatus for developing photographic plates, a main case provided in the bottom thereof with a drawer, a slide placed over said drawer, a ruby glass in one side thereof over said slide, a vertically-adjustable frame or holder in the body portion of said main case over said slide, another ruby glass in the end thereof over said drawer and slide, and a transfer-case adapted to be inserted into the top portion of said main case over said last-named ruby glass, said transfer-case being closed at one side and at both ends and provided with a central longitudinal slide and being also adapted to receive a plate-holder, substantially as shown and described.

3. In an apparatus for developing photographic plates, a main case, a receptacle adapted to be inserted into the bottom thereof and removed therefrom, a vertically-adjustable frame or holder over said receptacle and a transfer-case adapted to be inserted into the main case over the vertically-adjustable frame or holder, substantially as shown and described.

4. In an apparatus for developing photographic plates, a main case provided with a movable rear end, a drawer mounted in the bottom thereof and adapted to be withdrawn from the front end thereof, a slide mounted in said main case over said drawer and adapted to be withdrawn from the front end thereof, a ruby glass in one side of said main case, a door for covering said glass, a ruby glass in the front end of said main case over said slide, a vertically-adjustable frame or holder in said main case over said slide, and a transfer-case adapted to be inserted into the front end of said main case over said last-named ruby glass, substantially as shown and described.

5. In an apparatus for developing photographic plates, a main case provided with a hinged rear end, a drawer mounted in the bottom thereof and adapted to be withdrawn from the front end thereof, a slide mounted in said main case over said drawer and adapted to be withdrawn from the front end thereof, a ruby glass in one side of said main case, a door for covering said glass, a ruby glass in the front end of said main case over said slide, a vertically-adjustable frame or holder in said main case over said slide, and a transfer-case adapted to be inserted into the front end of said main case over said last-named ruby glass, the rear end of said case being also hinged, substantially as shown and described.

6. In an apparatus for developing photographic plates, a main case provided with a movable rear end, a drawer in the bottom of said main case and adapted to be withdrawn from the front end thereof, a longitudinal slide in said main case over said drawer, a vertically-adjustable frame or support within said main case over said slide, a transfer-case adapted to be inserted into the main case from the front end thereof and to be removed there-

from, said main case being also provided in one side and in the front end thereof with a ruby glass, substantially as shown and described.

7. In an apparatus for developing photographic plates, a main case provided in the bottom thereof with a drawer, a ruby glass in one side thereof over said drawer, a vertically-adjustable frame or holder in the body portion of said main case over said drawer, another ruby glass in the front end of the case over said drawer and a transfer-case adapted to be inserted into the top portion of the main case over the last-named ruby glass, substantially as shown and described.

8. In an apparatus for developing photographic plates, a main case provided in the bottom thereof with a drawer, a vertically-adjustable frame or holder over said drawer, and a transfer-case adapted to be inserted into the main case over the vertically-adjustable frame or holder, substantially as shown and described.

9. In an apparatus for developing photographic plates, a main case provided in the bottom thereof with a drawer, a vertically-adjustable frame or holder over said drawer, and a transfer-case adapted to be inserted into the main case over the vertically-adjustable frame or holder, said main case being also provided with a ruby glass, substantially as shown and described.

10. In an apparatus of the class described, a main case having an opening in the bottom portion thereof, a receptacle adapted to be inserted horizontally into the bottom portion of said case and removed therefrom through said opening, a vertically-adjustable frame or holder over said receptacle within said case, and means for operating said frame or holder, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 1st day of May, 1903.

GARDNER L. PLUMLEY.

Witnesses:

J. C. LARSEN,

F. A. STEWART.