F. W. QUIDAS.

DEVELOPING TRAY.

APPLICATION FILED NOV. 20, 1911.

1,053,317. Patented Feb. 18, 1913.

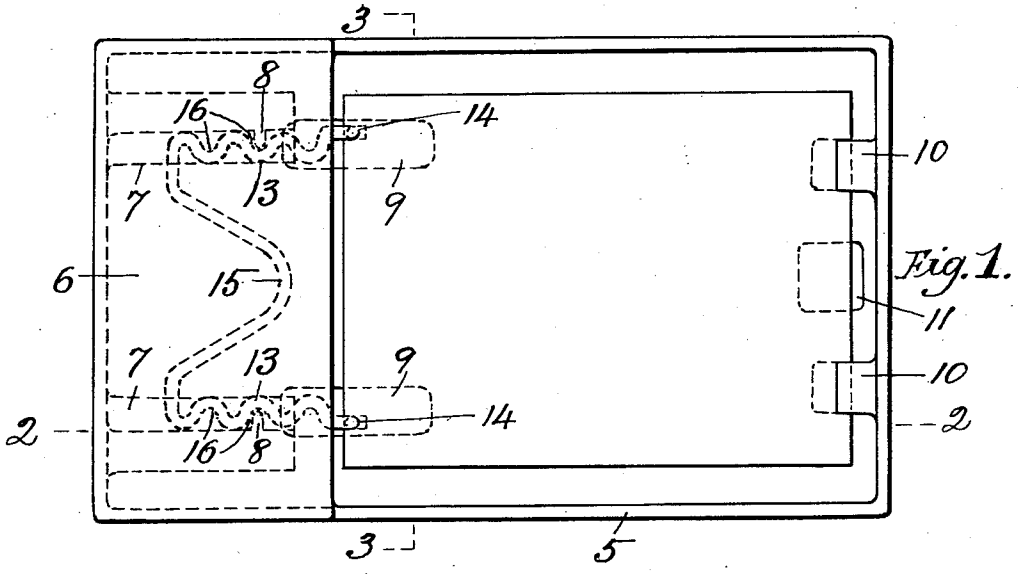

Fig. 1.

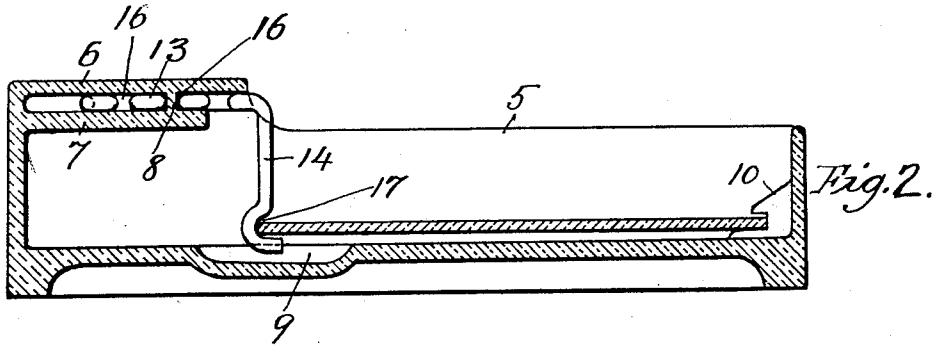

Fig. 2.

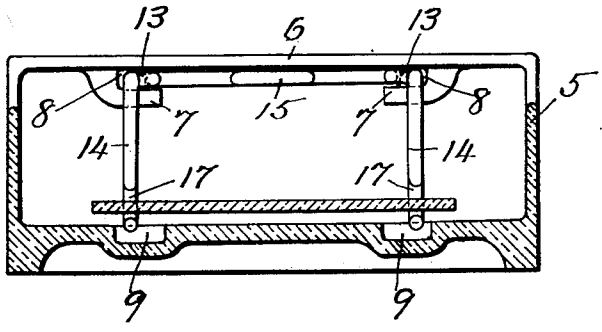

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

FREDERICK W. QUIDAS, OF BROOKLYN, NEW YORK.

DEVELOPING-TRAY.

1,053,317. Specification of Letters Patent. Patented Feb. 18, 1913.

Application filed November 20, 1911. Serial No. 661,335.

To all whom it may concern:

Be it known that I, FREDERICK W. QUIDAS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Developing-Trays, of which the following is a specification.

My invention relates to developing trays for photographic plates.

In developing photographic plates by means of the trays now in general use, the plates are often broken or damaged on account of being allowed to move around therein and the operator's fingers become stained on account of the necessity of frequently handling the plates.

My invention therefore has for its object to obviate these and other objectionable features and disadvantages, by providing a developing tray having means whereby plates may be supported and secured in proper position therein and developed without danger of accidental displacement, no matter in what position the tray may be placed, and yet allow the plates to be easily and readily removed from the tray when desired.

It has for a further object to adapt the plate supporting and securing means to resiliently support and secure the plates in the tray, thereby preventing the plates from becoming broken or damaged by shocks received in knocking the tray against objects.

It has for a further object to adapt the plate supporting and securing means to be adjusted, thereby adapting said means to accommodate plates of different sizes.

It has for a still further object to provide a device of the character set forth embodying advantages in point of simple, strong, durable and inexpensive construction and effective operations.

In the drawings: Figure 1 is a top plan view of my developing tray and attachment. Fig. 2, a longitudinal sectional view taken on the line 2—2, Fig. 1. Fig. 3, a transverse sectional view taken on the line 3—3, Fig. 1.

Referring to the drawings illustrating my invention and in which like reference characters designate corresponding parts, 5 designates the tray which is preferably formed of transparent material to permit the progress of the development of the plates, placed therein, to be watched without removing the plates from the tray or handling them, after they are placed therein, until they are finished and ready to be removed. At its rearward end, the tray is provided with a partial top 6 which prevents the developing fluid from running out when the forward uncovered end is elevated to run the developing fluid off the plates and permit the progress of the development of the plates to be watched and the under side of the partial top is provided with depending inwardly extending supporting ledges 7 having engaging webs 8 and in its bottom the tray is provided, adjacent its rearward end, with longitudinal grooves 9 and at the forward end with notched lugs 10 and a finger groove 11.

For the purpose of supporting and securing, within the tray, the plates to be developed, a device is provided comprising spring arms having horizontal portions or members 13 and depending portions or members 14, and connected together and resiliently spaced apart at their rear by an interposed spring member or loop 15. The portions or members 13 of the arms rest on the ledges 7 and bear against the partial top to support the device and the portions or members 13 are provided with notches 16 which engage the webs 8 and secure the device adjustably in place, thereby adapting it to accommodate plates of different sizes, and the portions or members 14 of the arms extend into the grooves 9, in the bottom of the tray, and are provided with notches 17 to engage the rearward end of the plate to be developed, and resiliently support it and hold its forward end resiliently in engagement with the notches in the lugs 10.

From the foregoing considered in connection with the drawings it will be understood that to secure a plate in the tray, the supporting and securing device is first adjusted to suit the size of plate to be developed, by grasping the arms and forcing the portions or members 13 and 14 thereof together, against the action of the spring loop 15, then pulling the device out or pushing it in as may be required until the proper notches 16 come opposite the webs 8 and finally releasing the arms, whereupon they will be forced apart again by the spring loop 15 and the notches 16 will engage the webs 8 and attach the device to the tray. After the supporting and securing device has been adjusted and secured, one end of the plate to be developed, is inserted into the notches of the lugs 10 and the other end of the plate is then pushed down against the portions or members 14 of the

spring arms and against the spring action thereof, forcing said arms rearwardly until the notches are reached, whereupon the spring action of said arms will cause them to move forwardly again and engage their notches with the edge of the plate and resiliently secure and support it. The plate is removed by inserting the finger into the groove 11 and forcing the plate rearwardly against the action of the portions or members 14 of the spring arms until its forward end disengages the notches of the lugs 10 and then raising it at that end and disengaging its other end from the notches 17.

I do not wish to be understood as limiting myself to the details of construction and arrangement as herein described and illustrated, as it is manifest that variations and modifications may be made in the features of construction and arrangement in the adaptation of the device to various conditions of use without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variations and modifications as properly fall within the scope of my invention and the terms of the following claims.

I claim:—

1. A developing tray having a plate securing device comprising co-acting arms engageable with a plate and expansible and contractible spring means connecting said arms and holding them under tension in engagement with the tray, substantially as described.

2. A developing tray having a plate securing device comprising co-acting spring arms engageable with a plate and expansible and contractible spring means connecting said arms and holding them under tension in engagement with the tray, substantially as described.

3. A developing tray having a plate securing device provided with co-acting members, expansible and contractible spring means connecting said members and holding them under tension in engagement with the tray and means engageable with a plate, substantially as described.

4. A developing tray having a plate securing device provided with co-acting members, expansible and contractible spring means connecting said members and holding them under tension in engagement with the tray and spring means engageable with a plate, substantially as described.

5. A developing tray having a plate securing device provided with co-acting members, expansible and contractible spring means connecting said members and holding them under tension in engagement with the tray and members engageable with a plate, substantially as described.

6. A developing tray having a plate securing device provided with co-acting members, expansible and contractible spring means connecting said members and holding them under tension in engagement with the tray and spring members engageable with a plate, substantially as described.

In testimony whereof I have signed my name in the presence of two subscribing witnesses.

FREDERICK W. QUIDAS.

Witnesses:
E. LOVETT,
CHARLES LAWRENCE.