

No. 838,167.

PATENTED DEC. 11, 1906

M. S. CLAWSON.
DEVELOPING TABLE FOR PHOTOGRAPHIC PLATES.
APPLICATION FILED SEPT. 19, 1905.

Fig. 1.

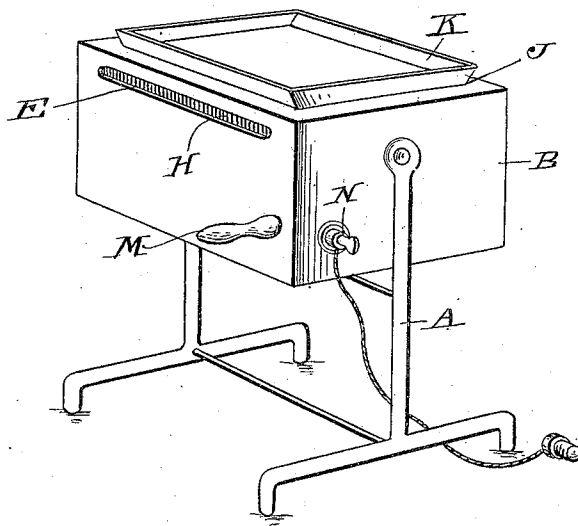
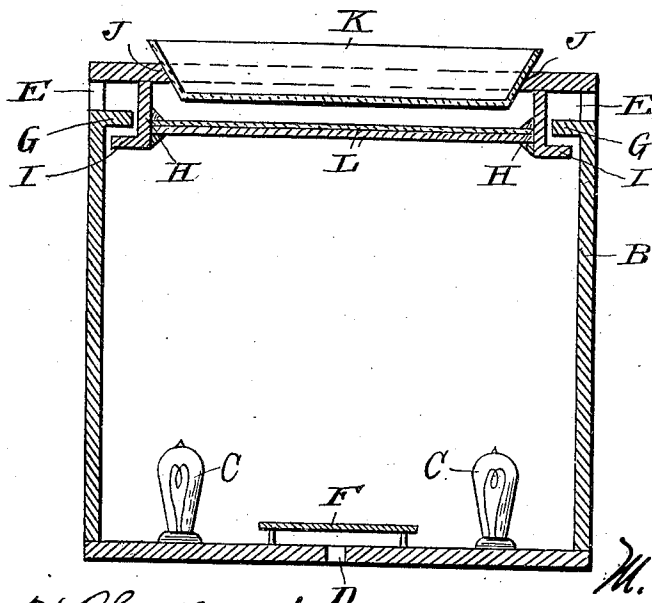


Fig. 2.



Witnesses

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DEVELOPING-TABLE FOR PHOTOGRAPHIC PLATES.

No. 838,167.

Specification of Letters Patent.

Patented Dec. 11, 1906.

Application filed September 19, 1905. Serial No. 279,179.

To all whom it may concern:

Be it known that I, MONROE S. CLAWSON, a citizen of the United States, residing in New York city, in the county and State of New York, have invented certain new and useful Improvements in Developing-Tables for Photographic Plates, of which the following is a specification.

My invention relates to tables used for developing the plates containing photographic negatives, and is especially useful in developing plates containing subjects made by X-ray light. In case of X-ray plates it is very important that the development should stop at a precise stage thereof, and my invention secures this desired result.

The developing apparatus in ordinary use consists of a dark room having an opening covered with non-actinic glass and a tray containing the developing fluid. In the use of this apparatus it is necessary to remove the plate from the developing fluid to determine the amount of development and while the plate is in the tray to keep the tray in motion by hand. This is an exceedingly-tiresome method, and the results are frequently not satisfactory, especially in X-ray negatives, which must, as heretofore stated, be developed to an exact point to secure the sharp results desired.

My invention consists in providing a box pivotally mounted on suitable standards, so that it may be rocked while in use. This box is made light-proof, but is provided with covered openings to permit ventilation. In the box is secured one or more lamps, preferably what are known as "incandescent electric lamps," that may be illuminated and extinguished at will. An opening is left in the top of the box, into which is set a glass tray for containing the developing fluid and plate, while immediately beneath the tray are secured plates of ruby and orange glass to absorb the actinic rays when the box is illuminated. In practice I have found that when the bottom of the tray is ground glass the details of the picture are best brought out.

My invention will be described in detail hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved developing apparatus, and Fig. 2 a view in cross-section of the box on an enlarged scale.

In the drawings similar reference characters indicate corresponding parts in both views.

A represents a suitable standard-frame in which is pivotally mounted a box B, having mounted therein lamps C, preferably of the incandescent electric type, that may be illuminated and extinguished at will.

D represents an opening in the bottom of the box, and E openings in each side of the box at the top, said openings being provided to secure ventilation and keep the interior of the box cool. The opening D is covered by a plate F, spaced apart from the surface of the box at a sufficient distance to permit the passage of air, but to prevent the egress of rays of light from lamps C. The openings E are similarly protected by means of a strip G, secured along the lower edge of each opening and projecting into the box, and vertical plates H, secured to the top of the box and extending below the plane of strips G, said plates having flanges I on their lower edges that extend under said strips. This construction permits the egress of heated air from the box, but prevents egress of rays of light from the lamps C.

The top of box B is provided with an opening J, into which is set a tray K for containing the developing fluid and into which the plate to be developed is placed. Tray K is made of transparent or translucent material, the latter preferable, and I have found that when the bottom of the tray is ground glass the details of the picture on the plate are most clearly brought out. Secured to plates H are one or more sheets of ruby and orange colored glass L to absorb the actinic rays of light from lamps C when illuminated.

M represents a handle to rock box B when in operation, and N a switch for controlling the illumination of the box.

In operation the plate to be developed is placed in tray K, in which is also placed a sufficient quantity of developing fluid. The box is gently rocked to agitate the developing fluid by means of handle M. Whenever desired, the operator may illuminate the interior of the box by operating switch N, and the light shining through the plates L and the bottom of tray C enables him to determine whether or not the plate has developed sufficiently to produce the desired result. The ventilating-openings D and E allow the

escape from the box of the heated air caused by illumination, so that the developing fluid in the tray K is not affected by the heat arising from said illumination.

5 I have described my invention as being applicable to the development of photographic plates; but it will be understood that it may also be used for the development of films or any other substance that may be used to receive photographic impressions.

10 Having thus described my invention, what I claim is—

1. In a photographic-plate-developing apparatus, a box pivotally mounted having an opening in its top, a glass tray set into said opening to contain the plate, an artificial light contained in the box to illuminate its interior, and means to exclude the actinic rays of light from said plate, the box being adapted to be rocked to agitate the developing fluid contained in said tray, substantially as shown and described.

2. In a photographic-plate-developing apparatus, a box pivotally mounted having an opening in its top, a tray made of translucent material set into said opening and adapted to receive the developing fluid and the plate, an artificial light contained in the box to illuminate its interior, and means to exclude the actinic rays of light from said plate, the box being adapted to be rocked to agitate the developing fluid contained in said tray, substantially as shown and described.

3. In a photographic-plate-developing apparatus, a box pivotally mounted having an opening in its top, a tray having its bottom made of ground glass set into said opening and adapted to receive the developing fluid and the plate, an artificial light contained in the box to illuminate its interior, and means to exclude the actinic rays of light from said plate, the box being adapted to be rocked to agitate the developing fluid contained in said tray, substantially as shown and described.

4. In a photographic-plate-developing apparatus, a box pivotally mounted having an opening in its top, an open-top glass tray set into said opening, plates of non-actinic glass secured beneath said tray, and an artificial light contained in the box and adapted to shine through said glass plates and tray, substantially as shown and described.

5. In a photographic-plate-developing apparatus, a box pivotally mounted having an opening in its top, an open-top tray made of translucent material set into said opening, plates of non-actinic glass secured beneath said tray, and an artificial light contained in the box and adapted to shine through said

glass plates and tray, substantially as shown and described.

6. In a photographic-plate-developing apparatus, a box pivotally mounted having an opening in its top, an open-top tray having its bottom made of ground glass set into said opening, plates of non-actinic glass secured beneath said tray, and an artificial light contained in the box and adapted to shine through said glass plates and tray, substantially as shown and described.

7. In a photographic-plate-developing apparatus, a box pivotally mounted having openings in its top, sides and bottom, a glass tray set in the opening in the top and adapted to receive the developing fluid and the plate, the openings in the bottom and sides covered to prevent the passage of light, incandescent electric lamps secured inside the box, and non-actinic glass plates secured in said box between the tray and lamps, said box being adapted to be rocked to agitate the developing fluid contained in the tray, substantially as shown and described.

8. In a photographic-plate-developing apparatus, a box pivotally mounted having openings in its top, sides and bottom, a tray made of translucent material set in the opening in the top and adapted to receive the developing fluid and the plate, the openings in the bottom and sides covered to prevent the passage of light, incandescent electric lamps secured inside the box, and non-actinic glass plates secured in said box between the tray and lamps, said box being adapted to be rocked to agitate the developing fluid contained in the tray, substantially as shown and described.

9. In a photographic-plate-developing apparatus, a box pivotally mounted having openings in its top, sides and bottom, a tray having its bottom made of ground glass set into the opening in the top and adapted to receive the developing fluid and the plate, the openings in the bottom and sides covered to prevent the passage of light, incandescent electric lamps secured inside the box, and non-actinic glass plates secured in said box between the tray and lamps, said box being adapted to be rocked to agitate the developing fluid contained in the tray, substantially as shown and described.

In testimony whereof I hereto affix my signature in the presence of two witnesses.

MONROE S. CLAWSON.

Witnesses:

HARRY G. HEROLD,
MARY E. LARKIN.