

No. 744,602.

PATENTED NOV. 17, 1903.

E. E. PARK.
PHOTOGRAPHIC DEVELOPING APPARATUS.

APPLICATION FILED NOV. 21, 1902.

NO MODEL.

Fig. 1

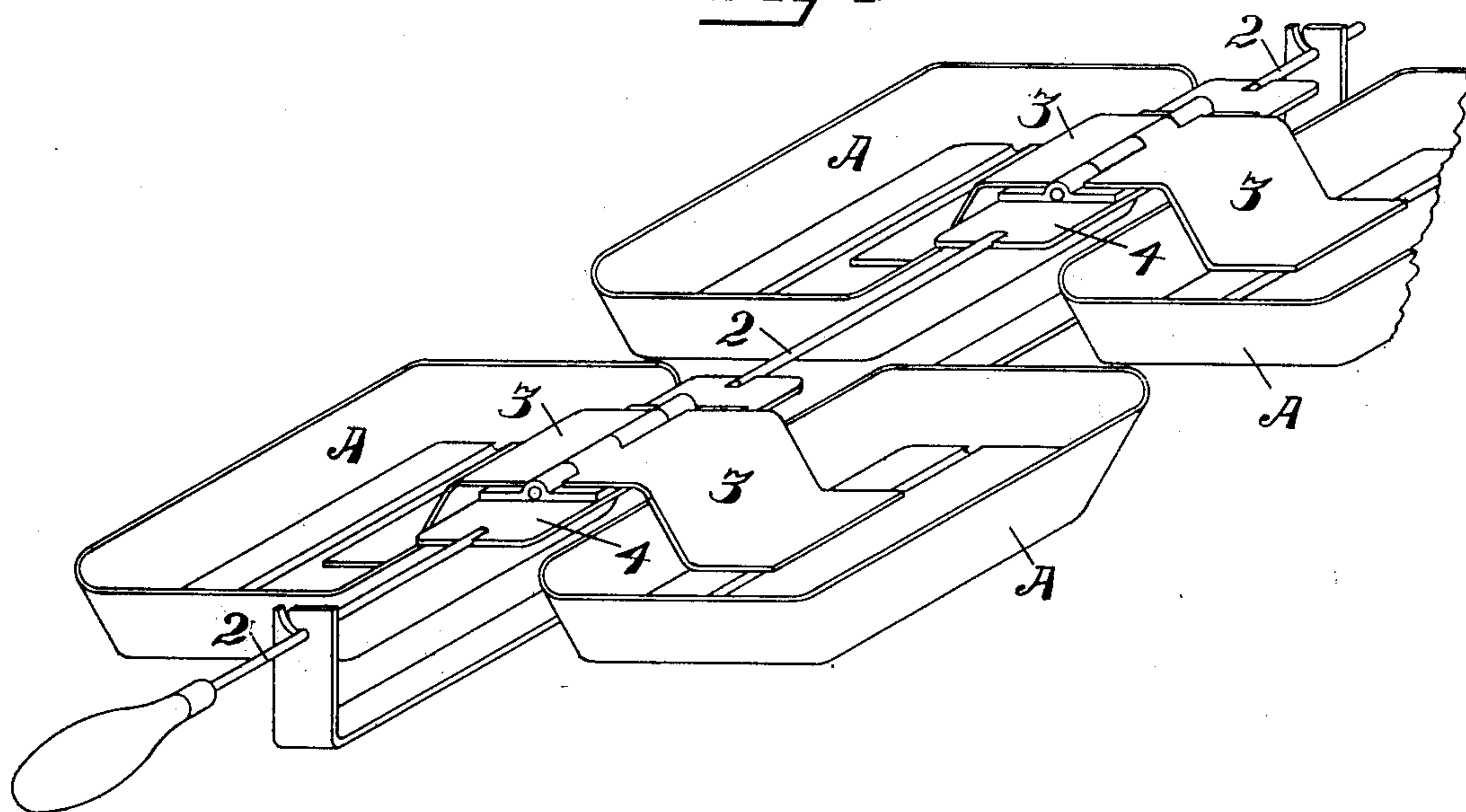
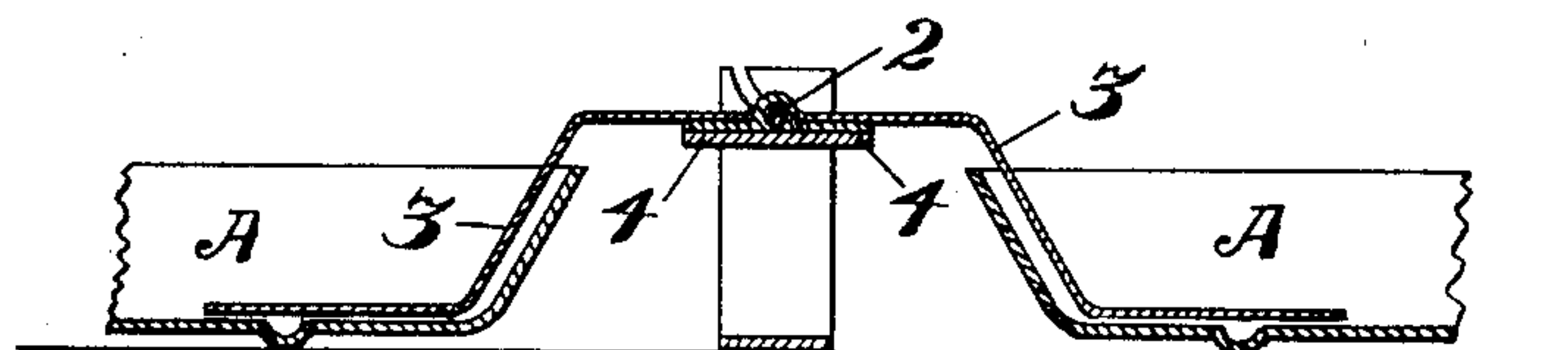


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD E. PARK, OF SAN FRANCISCO, CALIFORNIA.

PHOTOGRAPHIC DEVELOPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 744,602, dated November 17, 1903.

Application filed November 21, 1902. Serial No. 132,244. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. PARK, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Photographic Developing Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improvement in apparatus for developing photographs.

It consists of one or more hinged or tilting plates dipping into the trays containing the developing solution so as to lie beneath the plates which are being developed, means for alternately raising and lowering the plates so as to agitate the developing liquid and also to serve to raise the plate out of the liquid when it is desired to remove them, and means by which said tilting plate or plates may be actuated.

It also comprises details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention, showing arrangement. Fig. 2 is a cross-section through wings and trays.

In the developing of photographic plates and the like it is desirable to constantly agitate the developing solution within the trays in which the plates are immersed.

It is the object of my invention to provide an attachment or device by which the developing liquid can be agitated without moving or handling the trays and by which the plates may be raised out of the liquid when it is desired to remove or inspect them.

As shown in the accompanying drawings, A represents trays of any suitable or desired size to fit the plates which are to be developed and adapted to contain the developing liquid.

2 is a suitably-journaled shaft, which has loosely attached or hinged to it the wings or leaves 3.

If a single tray only is being employed, a single wing will be sufficient; but for economy in developing a large number of plates, and especially where a developing liquid of different strength or character is necessary for different plates, a convenient arrangement would be to have a series of these trays dis-

posed side by side in line either endwise or transversely from the position of the operator, and the shaft 2 is journaled to extend between the whole series of trays, having wings attached to it at points which will allow the wings to dip into the trays upon opposite sides of the shaft. These wings are so bent as to approximately lie upon the bottom of the trays and have sufficient width or extent so that the plates to be developed may lie upon the extensions of the plates within the trays.

The shaft 2 may have projections or arms 4 of any suitable or desired form extending beneath the wings so as to contact with them at a short distance from the hinged points. Thus when the shaft is turned in one direction the projections will raise the wings upon one side, and these wings will correspondingly raise the plates beneath which they lie. A partial rotation of the shaft in the opposite direction will raise the wings in the plates upon the opposite side. Thus any number of trays from one up within the ability of the operator to turn the shaft may be in use and developing be carried on within the trays, and each tray may have a developing solution such as is needed for the particular plate to be developed.

The alternate raising and lowering of the plates within the developing liquid causes a constant agitation and flow of the liquid over the surfaces of the plates, so as to constantly agitate and apply the liquid to the plates to the best advantage.

In the ordinary methods of developing plates whenever it is necessary to examine or remove the plates some device is required to lift them out of the liquid. These wings serve perfectly for this purpose, and the edges of the plates can at any time be raised so that any one or more of them can be removed or examined and again returned. It will be manifest that these wings may be made of any suitable or desired material, either wood, rubber, porcelain, metal, or any other equivalent substance and that any number of the wings may be employed either in pairs or singly.

The shaft by which the plates are actuated is preferably journaled upon supports suitably placed with relation to the trays and

sufficiently high or wide so that the wings will clear the upper edges of the trays.

The shaft-supports may have stops fixed at any suitable point, and lugs or projections or
5 equivalent devices carried by the shaft 2 will be adapted to contact with the stops, so as to limit the amount of oscillation of the shaft and the consequent raising of the plates in either direction.

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

1. The combination with a pair of separated
15 developing-trays, of a shaft supported centrally between the trays; wings hinged to said shaft and extending right and left therefrom one of said wings adapted to dip into the solution of each tray and lie beneath the plate; and projections on the shaft extending right
20 and left therefrom and extending beneath the wings whereby each wing may be alter-

nately lifted and depressed within the solution.

2. The combination with a double row of
developing - trays; of a support extending 25 through the space between the rows of trays; a shaft mounted in the upper portion of said support; pairs of right and left extending wings, hinged together at their meeting edges, each of said wings adapted to dip into a tray; 30 and projections at different points on the shaft extending right and left therefrom and beneath the wings of each pair to alternately raise and lower the wings and superposed plates. 35

In witness whereof I have hereunto set my hand.

EDWARD E. PARK.

Witnesses:

GEO. T. KNOX,
A. WOLF.