No. 616,152. Patented Dec. 20, 1898.

J. H. SMITH.

PHOTOGRAPHIC TRAY.

(Application filed June 13, 1898.)

(No Model.)

Fig. 1.

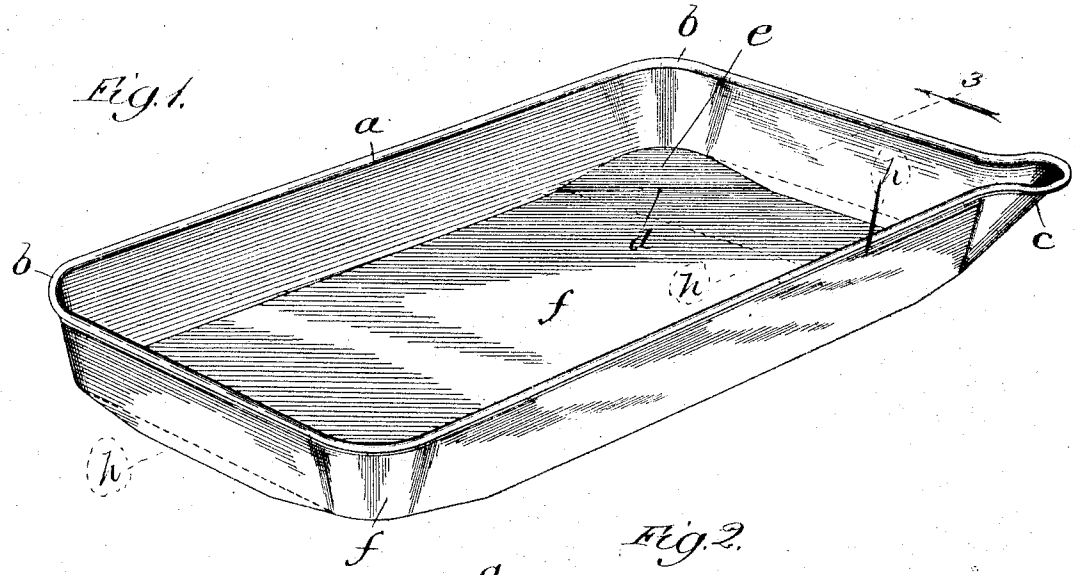


Fig. 2.

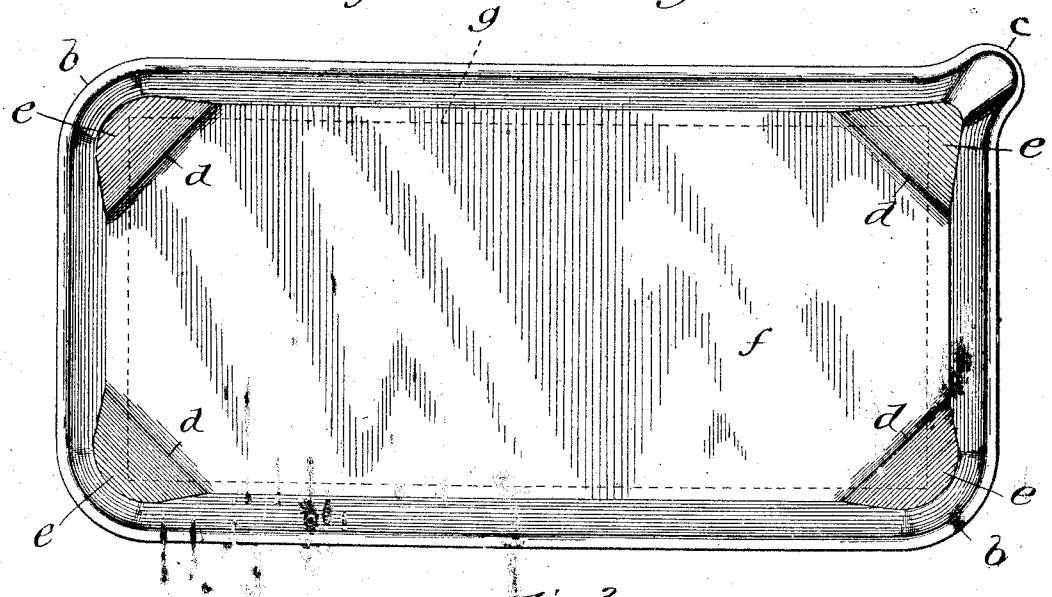
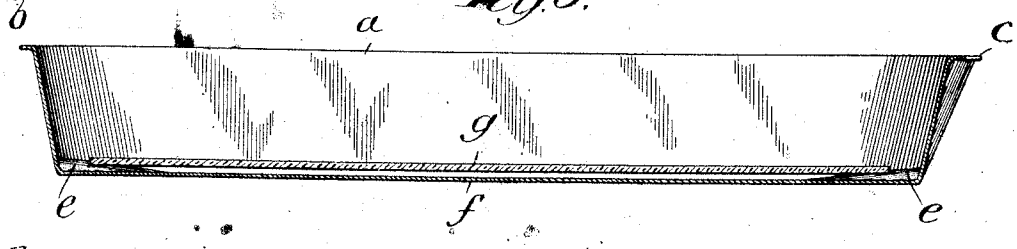


Fig. 3.



Witnesses:
Chas. E. Gaylord.
Lutz & Mason

Inventor:
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By Dixon & Fletcher,
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UNITED STATES PATENT OFFICE.

JAMES H. SMITH, OF CHICAGO, ILLINOIS.

PHOTOGRAPHIC TRAY.

SPECIFICATION forming part of Letters Patent No. 616,152, dated December 20, 1898.

Application filed June 13, 1898. Serial No. 683,298. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. SMITH, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Photographers' Negative-Trays, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding letters of reference in the different figures indicate like parts.

My invention has reference to what are commonly known among photographers as "negative-trays." An important difficulty has heretofore been found in the use of the flat-bottomed negative-tray owing to the suction produced while removing the negative-plates from the bath. It is not only difficult to introduce the finger beneath the plate, but the least uncertainty of grasp may cause it to slip off, and in so doing is liable to destroy the film. Attempts have heretofore been made to overcome this difficulty by forming one or more depressions in the bottom of the tray to provide room for the insertion of the finger beneath the plate or by forming a series of raised portions or knobs above the bottom of the plane of the tray for the plate to rest upon. The objection to the former device is that it does not overcome the suction, while the contact with the latter would at once destroy the film should the plate by mistake be inverted when placed in the bath. Moreover, should the negative-tray be used (as it frequently is by traveling or amateur photographers) for toning prints the film upon the latter would, as a result of agitation in the tray, be ruined by contact with the projections upon the bottom. The object of my invention is to overcome these difficulties and to so construct a negative-tray that the plate when placed therein may be raised above the bottom and supported only by contact with the extreme edges or corners, while at the same time the bottom of the tray may be smooth and of such a shape as to present no irregularity of surface which would tend to injure or destroy the films of prints while being toned therein or the film of the negative should that side of the plate be placed downwardly when inserting it in the tray, all of which is hereinafter more particularly specified, and pointed out in the claim.

In the drawings, Figure 1 is a perspective view of a negative-tray embodying the features of my improvement. Fig. 2 is a plan view thereof; and Fig. 3 is a vertical sectional view taken upon the line 3, Fig. 2, viewed in the direction of the arrow shown.

Referring to the drawings, *a* represents my improved tray, which is preferably stamped from a single piece of sheet metal or formed from hard rubber, papier-mâché, or other suitable material. Three of the corners *b* are preferably rounded, while the fourth is formed into a spout *c* of the usual shape. I will first describe the construction which I regard as preferable. Extending diagonally across from the intersecting side walls at each corner, commencing at or near the lines *d*, are a series of inclined planes *e*, each of which as it approaches the corner from the bottom of the tray is extended upwardly and each of which is oblique to the plane of said bottom. These inclined surfaces, respectively, may be formed by beveling the face of the die upon which the tray is formed at the respective corners. It will be seen by reference to Fig. 2 that when a plate *g* is placed in the tray, as shown in Fig. 3 and indicated in dotted lines in Fig. 2, the respective corners will rest upon the four inclined corner surfaces *e*, thus causing the plate *g* to be supported only at the corners, while the entire body thereof is raised above and lies in a plane parallel to the bottom *f*, but sufficiently separated therefrom, as shown in Fig. 3, to enable a finger to be inserted beneath the plate at either end and to lift the same from the bath, while the suction which would occur in the absence of the inclined corner surfaces would be wholly avoided. It is obvious, moreover, that prints, which are usually toned with the film side down, might be agitated within the tray without injury thereto, inasmuch as there are no abrupt surfaces which would tend to interfere with or mar the delicate film.

In Fig. 1 I have indicated a modified construction which I claim as the mechanical equivalent of that above described. The dot-

ted lines *h* in said figure indicate the beginning and end or the lower and upper edges, respectively, of inclined surfaces which may be formed either at the ends or along the bottom next to the sides of the tray, and in either case said inclined surfaces are oblique to the main portion of the bottom of the tray. In use the extreme edges instead of the corners of the plate would rest upon the inclined surfaces, thereby raising the plate from contact with the bottom of the tray as effectually as if the former touched only at the corners, while leaving the bottom equally free from abrupt surfaces.

An important advantage of my improved construction is that should the tray be employed as a receptacle for a fixing solution the film side of the plate may be placed downwardly therein, thereby avoiding the accumulation upon its surface of sedimentary deposits which are liable to cloud or mottle the plate, especially when alum is employed as a constituent of the fixing-bath.

My improved tray has the further advantages of being cheaply constructed and easily cleaned after use.

Having thus described my invention, I claim—

The combination with the bottom and side walls of a photographer's negative-tray, of inclined surfaces forming a part of the bottom proper, as distinguished from the side walls, the plane of each of which inclined surfaces is oblique to that of the main portion of the bottom of the tray, substantially as described.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 9th day of June, 1898.

JAMES H. SMITH.

Witnesses:
D. H. FLETCHER,
JOSEPHINE S. MCGREGOR.