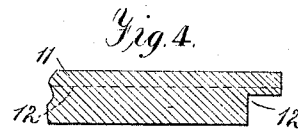
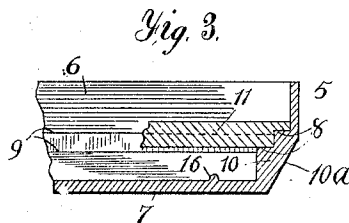
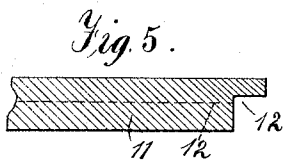
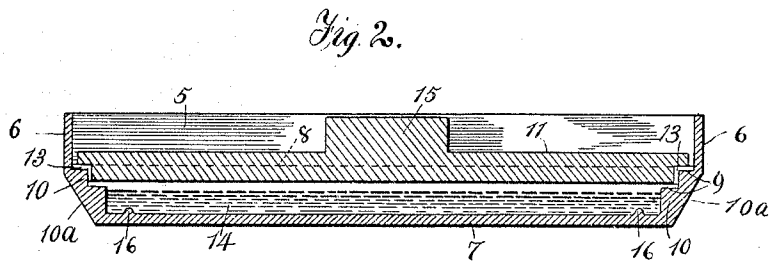
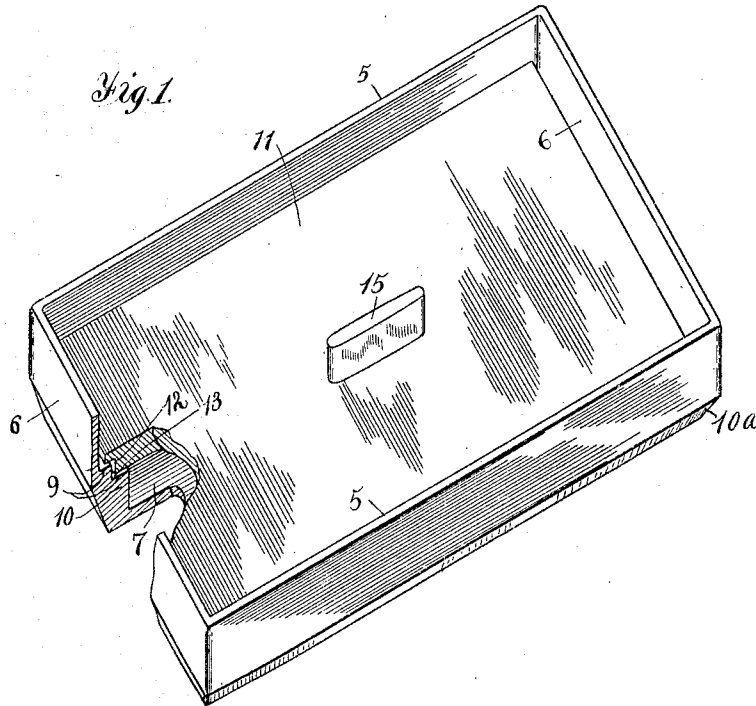


W. G. RICE.  
 PHOTOGRAPHIC TRAY.  
 APPLICATION FILED MAR. 8, 1909.

947,942.

Patented Feb. 1, 1910.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

WALDO G. RICE, OF EDISON PARK, ILLINOIS.

PHOTOGRAPHIC TRAY.

947,942.

Specification of Letters Patent.

Patented Feb. 1, 1910.

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*To all whom it may concern:*

Be it known that I, WALDO G. RICE, citizen of the United States, residing at Edison Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Photographic Trays, of which the following is a specification.

My invention relates to photographic apparatus and has special reference to the construction of trays employed in the process of developing negatives, and refers more particularly to portable trays adapted to the treatment of a single plate at a time. As usually formed, trays of this type cannot be employed for the developing process during the daytime unless a dark room is available and the lack of such an accessory may necessitate holding the plates until night time before they can be treated and examined.

The chief object of the improvements which form the subject matter of this application is to provide a negative tray of such construction that it may be employed for the developing process in the daylight, thus enabling the work to be carried on either indoors or out at the pleasure of the operator, the desired result being obtained by means of a covered tray of special construction, the arrangement of the parts permitting the application of the developer to the plate while contained in the tray, and the removal of the solution without danger of admitting rays of light to the negative.

Further objects of the invention are to produce a tray for the purpose stated that will be simple in construction, practicable in its operation, and so designed that it can be economically manufactured.

The above desirable results are obtained by means of the device illustrated in the accompanying drawing which forms a part of this application, the details of construction being disclosed in the following views.

Figure 1 is a perspective view of my improved photographic developing tray with a portion removed; Fig. 2 is a median longitudinal section; Fig. 3 is a fragmentary view showing a corner of the tray; Fig. 4 is a sectional detail showing a side edge of the cover; Fig. 5 is a sectional detail showing an end edge of the cover.

Referring to the details of the drawing, the numerals 5 and 6 indicate the side and end walls, and 7 the bottom respectively, of a shallow rectangular tray, of any desirable

material adapted to withstand the action of the chemical solution used in developing and fixing negatives. The inner faces of the side and end walls on planes substantially below their upper edges are furnished with projections and grooves in the form of stepped shoulders or ledges 8, 9, which are preferably formed integral with the said walls, provision being made for this conformation by thickening or reinforcing the inner faces of walls as indicated at 10, compensation being made for this increase in weight by reducing the thickness of the wall upon the outer side by cutting it away at an angle as shown at 10<sup>a</sup>. The tray is provided with a light excluding plate or cover 11, having its entire margin furnished with a rabbet 12 upon the under side, forming shoulders adapted to fit closely the shoulders or ledges 8 upon the side walls 5 of the tray. The shoulders 9 of the end walls 7 are formed slightly lower than the ledges or shoulders 8, thus leaving a slight interval between the cover and the shoulders, thereby providing a deviated angular passage 13 which extends the width of the tray at each end thereof and permits any liquid which may be poured upon the cover to find its way readily to the space below, which is shown in Fig. 2 partially filled with a solution 14. The said openings will also facilitate the pouring off of the solution from the tray. The said cover is furnished with a knob or handle 15, so that it may be readily inserted or removed, and the inner face of the bottom 7 is furnished with suitable lugs or projections 16 upon which the plate will rest and facilitate its removal. The cover being considerably below the upper edges of the side walls of the tray, the latter cooperate with the shoulders in excluding the rays of light from the bottom of the tray and also serve as a funnel to guide the pouring of the liquids into or from the tray.

Instead of varying the height of the shoulders on the tray, I may vary the rabbet on the cover as indicated in Figs. 4 and 5, with the same result so far as providing a passageway at one or both ends of the tray.

In operating the tray it is obvious that some means must be employed for transferring thereto from the holder the negative that is to be developed. For this purpose a changing bag or a piece of cloth of suitable texture and dimensions or other well-known device may be employed to temporarily ex-

clude the light. The plate having been properly placed in the bottom of the tray and the light proof cover 11 placed in its seat upon the side ledges 8, the temporary protective bag or cloth may be removed and the process of developing carried out in the usual manner. The developing solution is poured directly upon the cover 11, the liquid running quickly through the devious passages 13 at the ends of the tray to the chamber below which contains the plate. The developer is allowed to remain a sufficient time to complete the first step of the process, which will, of course, vary as usual according to the conditions of temperature and composition, after which it is poured out by way of one of the passages through which it entered, without removing the cover, and the fixing solution is then introduced by pouring it upon the cover in the same manner as before. After a sufficient time has elapsed the cover 11 may then be lifted out of the tray and the prepared negative examined and washed in the usual manner.

I have not shown any temporary light excluding device because same forms no part of my invention, and the use of a photographer's changing bag is so well known in the art.

Having thus described my invention, what I claim as new, is:—

1. A photographic tray, having bottom and side walls with angular projections and recesses on the inner surfaces of said walls, and a plate having its margins conforming

with said projections and recesses to provide a light-excluding joint, said members being separated throughout a portion of the joint to form a passageway.

2. In a photographic tray having bottom and side walls, of angular shoulders and recesses on the inner surfaces of said walls, and co-extensive longitudinally therewith, the shoulders upon two opposite sides being at a greater relative elevation than those upon the other sides, and a plate having its margins adapted to conform with said shoulders and recesses to provide a light-excluding joint.

3. A negative developing apparatus, comprising a tray, a cover fitting within the walls of the tray, the relative construction and arrangement of the walls of the tray and the edges of the cover providing a light-excluding joint and a liquid passageway therebetween.

4. A negative developing apparatus, comprising a tray, a cover fitting within the walls of the tray so that the upper surface of the cover is appreciably below the edges of said walls, the relative construction and arrangement of the walls and cover providing a devious joint and a liquid passageway therebetween.

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

WALDO G. RICE.

Witnesses:

F. BENJAMIN,  
H. DE LOS HIGMORE.