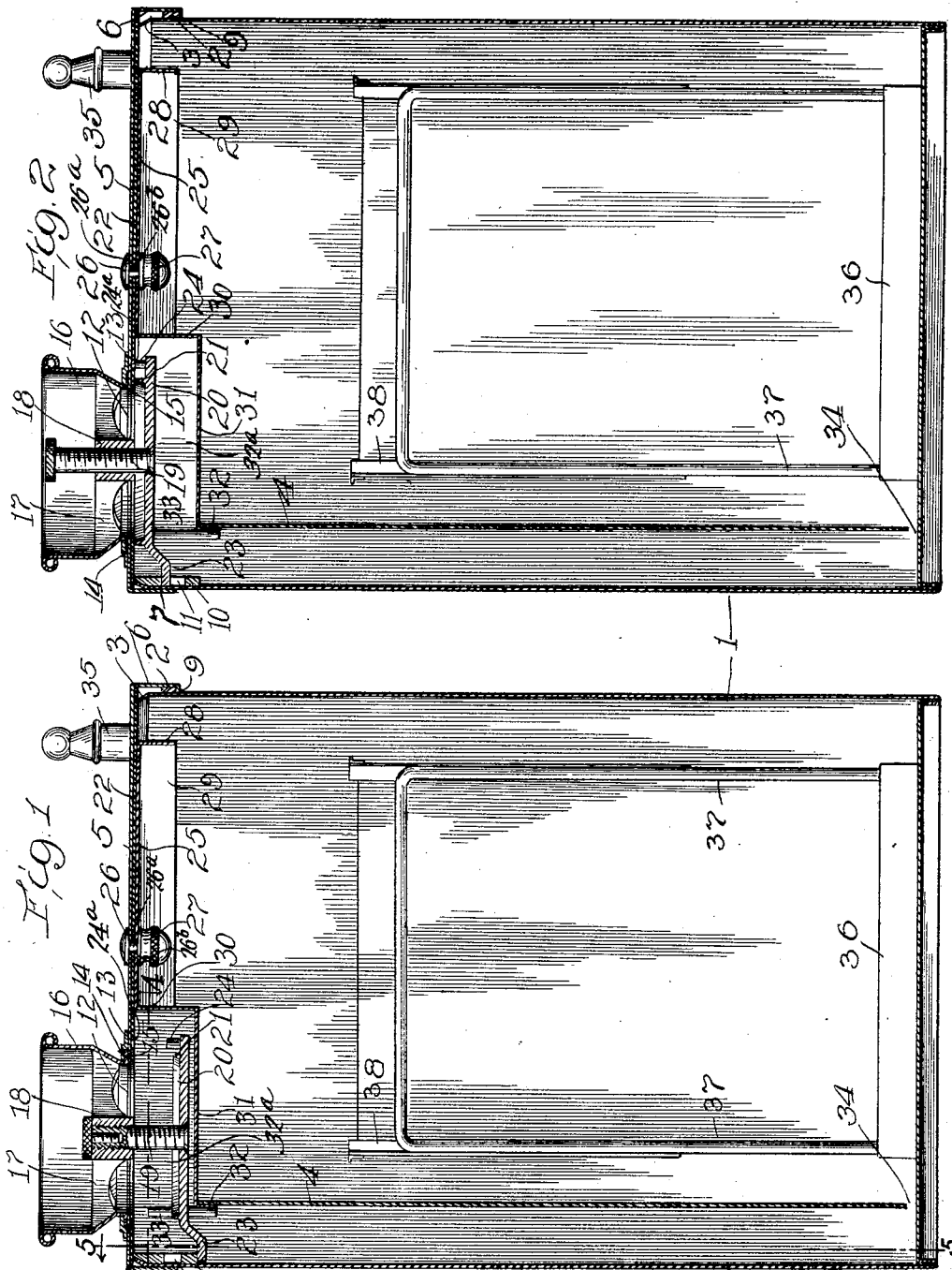


APPLICATION FILED JULY 9, 1910.

3 SHEETS—SHEET 1.



Wines 3555<sup>10</sup>  
HRL white  
RA white.

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 PHOTOGRAPHIC DEVELOPING TANK.  
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1,000,734.

Patented Aug. 15, 1911.  
 3 SHEETS—SHEET 2.

Fig. 3

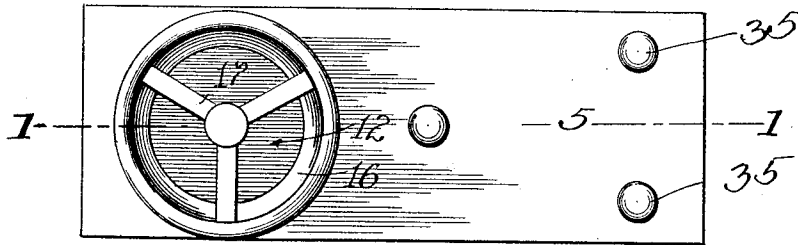


Fig. 4

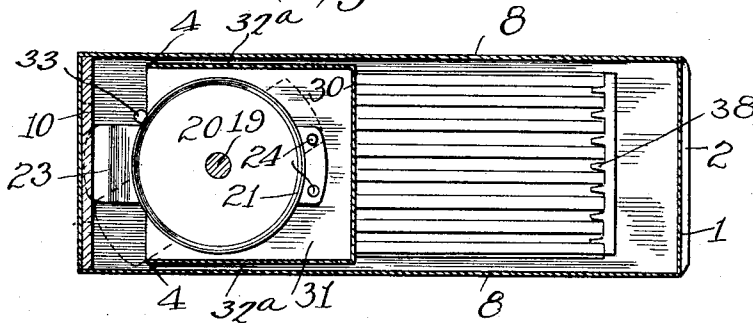


Fig. 5

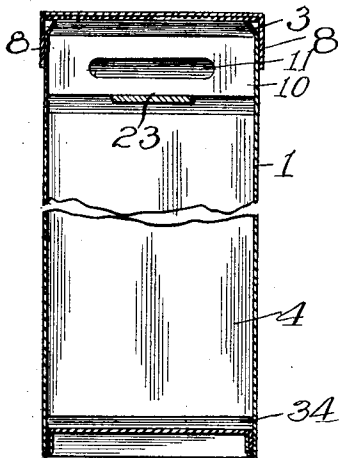
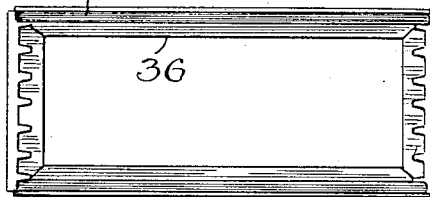


Fig. 6



Witnesses:  
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 R. A. White.

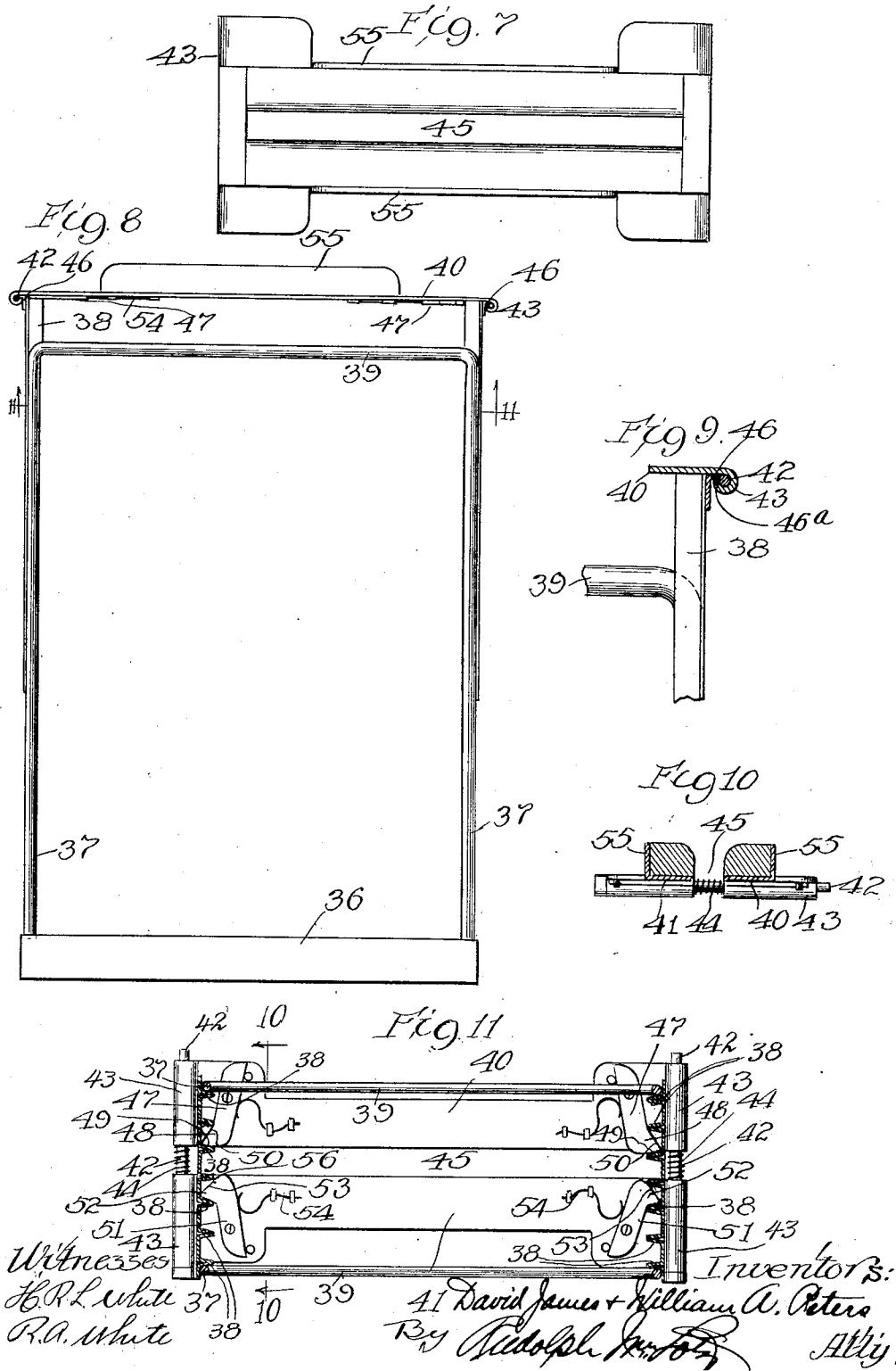
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Patented Aug. 15, 1911.

3 SHEETS-SHEET 3.



# UNITED STATES PATENT OFFICE.

DAVID JAMES AND WILLIAM A. PETERS, OF CHICAGO, ILLINOIS.

PHOTOGRAPHIC DEVELOPING-TANK.

1,000,734.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed July 9, 1910. Serial No. 571,160.

*To all whom it may concern:*

Be it known that we, DAVID JAMES and WILLIAM A. PETERS, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Photographic Developing-Tanks; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has for its object to provide a novel and efficient daylight developing tank for photographers' use, and consists in the novel features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings illustrating this invention Figure —1— is a central vertical longitudinal section on the line 1—1 of Fig. —3— of a tank constructed in accordance with our invention. Fig. —2— is a similar view of the same showing a part of the operating mechanism in a different position. Fig. —3— is a top plan view of the same. Fig. —4— is a plan section of the same on the line 4—4 of Fig. —1—. Fig. —5— is a detail vertical transverse section partially broken away taken on the line 5—5 of Fig. —1—. Fig. —6— is a plan view of a plate-holding rack adapted to be received within the tank. Fig. —7— is a top plan view of a plate guiding device adapted to be used in connection with the rack for loading the latter. Fig. —8— is a side elevation of the rack equipped with the plate guiding device. Fig. —9— is a fragmentary detail vertical section showing guides on the rack and a part of the plate guiding device engaged therewith. Fig. —10— is a detail vertical transverse section of the plate guiding device taken on the line 10—10 of Fig. —11—. Fig. —11— is an inverted plan section taken on the line 11—11 of Fig. —8—.

Our invention has for its primary object to provide a daylight developing tank which after being loaded with the plates may be sealed against the admission of light while at the same time permitting the same to be filled with the developing liquid and subsequently with the fixing solution and which after being filled may be hermetically sealed so as to enable the same to be inverted and

the contents thereof agitated at will without danger of leakage.

A further object of the invention consists in providing within said tank a movable rack adapted to contain a number of plates to be developed to maintain the same separate from each other and further to provide in connection with the said rack a removable plate guiding device operable in the dark for guiding successive plates into the successive guides within said rack.

Other objects of our invention will appear from the following description.

Our said device comprises a rectangular receptacle made of any suitable material preferably of a sheet metal not affected by the acids generally employed by photographers for developing and fixing negatives. For convenience said receptacle 1 is made oblong in cross section and is open at one end. At said end the same is provided on one of its end walls with a rib or projection 2 while the other end wall thereof presents a plane outer face. The extreme upper ends of the four walls of said receptacle are preferably bent inwardly as at 3 to slightly contract the mouth of the receptacle. Adjacent the end wall of said receptacle presenting the plane outer face there is provided within the same a plate 4 extending parallel with said end wall from a point adjacent the upper end of the receptacle to a point adjacent the bottom thereof and which is secured at its side edges to the side walls of the receptacle in any suitable well-known manner. The said receptacle is adapted to be closed by means of an oblong cover 5 provided on its four edges with flanges 6, 7 and 8 respectively, said flange 6 being provided on its free end with a projection 9 adapted to engage the said projection or rib 2 on one of said end walls of said receptacle 1. Secured to the inner face of the opposite end wall of said receptacle adjacent the upper end thereof is a plate 10 provided between its ends with a horizontal slot 11, which constitutes one member of a latch for securing said cover upon said receptacle. Said cover is provided adjacent the end thereof equipped with said flange 7 with an opening 12 and mounted upon the upper face of the top wall of said cover around said opening is a ring 13 Z-shaped in cross section and presenting an inwardly projecting annular flange 14 between which and the top wall of

said cover the annular flange 15 on the lower end of the funnel 16 is received and engaged, said funnel being rotatable relatively to said cover and being equipped between its ends with a spider 17 carrying a hub disposed concentric with said funnel and internally threaded as at 18. The said hub receives the threaded stem 19 of the valve 20 controlling the said opening 12. The said valve 20 consists of a flat plate provided on its upper face with an annular inverted V-shaped rib 21 adapted to engage the gasket 22 of rubber or other suitable material disposed over the entire lower face of said top wall 5 of said cover thereby producing a fluid tight joint around said opening 12 to prevent escape of liquid from said receptacle. On said valve 20 at one point is a tongue 23 preferably off-set and disposed at a lower elevation than the body of said valve, said tongue being adapted to engage the lower edge of said plate 10 and the slot 11 therein respectively, as will be hereinafter more fully described. Diametrically opposite said tongue 23 said valve 20 is equipped with projections 24 which are adapted to pass through openings 24<sup>a</sup> in the rubber gasket 22 when said valve is raised to close the same as will also hereinafter be more fully pointed out. As previously stated the said rubber gasket 22 covers the entire lower face of the top wall 5 of said cover and to maintain the same securely in place we provide a plate 25 which bears upon said gasket over the main portion of the surface thereof, said plate being removably held in place by means of the threaded projection 26 extending downwardly from the middle of said cover 5 and which passes through an opening 26<sup>a</sup> in said gasket 22 and through an opening 26<sup>b</sup> in said plate 25 and receives the thumb nut 27 which bears upon the latter to clamp same in place. The said plate 25 is provided with edge flanges 28 and 29 respectively, which serve to stiffen the same. The body portion of said plate is provided at one end with a downwardly extending flange 30 terminating in a horizontal flange 31 on the free end of which is a downwardly extending lip 32. The said flange 31 is provided with upwardly extending side flanges 32<sup>a</sup> meeting the side edge flanges 29 of said plate or continuations thereof. Said portion 30 and flange 31 and said side flanges 32<sup>a</sup> of the latter partially inclose said valve 20 and its stem. When said cover is disposed upon said receptacle the said lip 32 extends into the free space between the plate 4 and the adjacent end wall of said receptacle 1 so that no rays of light passing through the opening 12 can possibly find their way into said receptacle to strike any plate which may be contained therein.

In placing the cover on the receptacle it is necessary to dispose said cover at an in-

cline so as to maintain the valve-carrying end thereof raised to permit the projection 9 on the end flange 6 of said cover to pass underneath said projection 2. By then turning the cover on said flange 9 as a fulcrum the valved end thereof is lowered until the upper end portion or mouth of the receptacle is received between the said flanges 6, 7 and 8. The threaded connection of the valve stem 19 with the hub 18 of said spider 17 will cause said valve to swing with said funnel 16 when the latter is rotated until the rotation of said valve is resisted by contract with the pin 33 or with one of the flanges 32<sup>a</sup>. At the time of placing the cover upon the receptacle the said tongue 23 of the valve will be disposed in the position indicated in dotted lines in Fig. —4— in contact with one end of one of the side flanges 32<sup>a</sup> of the flange 31 thus permitting the free end of the tongue to readily pass said plate 10 as the cover is lowered. By now turning the said funnel 16 to the right to cause said valve 20 to be raised relatively to the cover said valve will primarily rotate with said funnel, the tongue pressing below the plate 10 until it strikes the projection 33 secured to the flange 32 and projecting into the path of said tongue to limit the movement thereof in that direction. When said tongue has been swung into engagement with said projection 33, as shown in Fig. —4—, the free end thereof will be disposed underneath the plate 10. By continuing to turn the said funnel 16 to raise said valve 20 said tongue will be caused to engage the lower edge of said plate 10 and thereby cause the cover to be drawn down firmly upon the receptacle. This will cause the upper edges of the side and end walls of the receptacle to bite into the gasket 22 although this action is not desirable until after liquid has been introduced into said receptacle and the latter is sealed preparatory to development of the contained plates. The engagement of said tongue 23 with said plate 10 will, however, serve to prevent removal of the cover from the receptacle through inadvertence while at the same time the opening 12 is free for the admission of the developing liquid. It is, of course, necessary that the plates be introduced into the receptacle in a dark room or dark space and the cover placed on the receptacle during the time that the latter is contained therein. The cover being now securely held upon the receptacle and the valve being still open liquid is introduced, the latter flowing upon said valve and upon the flange 31 of said plate 25 and thence through the space between the plate 4 and the adjacent end wall of said receptacle and through the slot 34 between the lower end of said plate 4 and the bottom of said receptacle into the plate containing space in which it rises until it has attained the requi-

site depth to completely immerse such plates. Having poured sufficient liquid into the receptacle the latter is ready to be sealed and to effect sealing thereof the said funnel 16 is rotated in the reverse direction thereby primarily lowering said valve 20 until said projection 23 no longer meets the resistance of frictional contact with the lower edge of the plate 10 whereby said projection 23 will swing free of said plate. By now again rotating said funnel in a direction to raise said valve 20 and preferably inclining the receptacle in a direction to cause said tongue 23 to resist by gravity rotation with said funnel the same may be raised without engaging the lower edge of said plate 10 until it has attained an elevation sufficient to permit the said tongue 23 to enter the slot 11 in said plate and by then righting the tank the said valve will rotate with said tunnel 16 thereby throwing the said tongue 23 into said slot 11 and during the continued rotation of said funnel in the same direction the said tongue will engage the upper wall of said slot after which further rotation of said funnel 16 will (since the pin 33 prevents further rotary movement of the valve 20) draw the cover very firmly down upon the upper edges of the walls of the receptacle and at the same time will bring the gasket into contact with the annular flange 21 of said valve 20 thereby producing a fluid tight joint around said opening 12 and also over the entire mouth of said receptacle 1. The position of the valve when closed is clearly shown in Fig. —2—. It will be seen that when the valve is closed the said projections 24, which are somewhat higher than the flange 21, enter openings 24<sup>a</sup> provided therefor in said gasket 22 thus preventing relative rotation of said valve in said cover after the former has attained a given elevation relatively to the latter. The receptacle may now be inverted or laid upon its side or otherwise manipulated to cause the contained liquid to circulate over the sensitized surfaces of the plates for developing the latter without danger of leakage, and to enable the device to be supported in an inverted position we provide on said cover 5 a pair of projections 35 of a height equal to that of the funnel 16 and co-acting with the latter to constitute supports for the receptacle when so inverted. In the event that the frictional contact between the threaded valve stem and the funnel should be so great as to overcome the gravity resistance to turning of the valve in order to raise the same to a position to engage the tongue 23 in the slot 11 the operator may slightly raise the valved end of the cover so as to throw said projection 23 opposite the end plate 10 and then turn said funnel in order to raise the valve; said plate in that event serving to resist rotation of the valve with the funnel until said tongue opposes

said slot 11 whereupon it will swing into the same. By then continuing to turn the funnel the said cover will be drawn back into place and the valve will close as hereinbefore described. In practice it has not been found necessary to resort to this method of manipulation.

A daylight developing tank must necessarily be equipped with means for maintaining a number of contained plates separated from each other so as to prevent sensitized surfaces from becoming covered or partly covered and inaccessible to the liquid by contact of any portion of the surface of a companion plate. The usual means for so maintaining the plates separated from each other consists of a rack which, in the instance illustrated, comprises the base 36 bordered by standards 37 mounted upon the ends of said base 36 and provided on their opposing faces with parallel ribs 38 between which the edges of the plates to be developed are received and guided and by means of which contiguous plates are maintained isolated or separated from each other. The structure is preferably reinforced by means of cross bars 39 connecting said opposed standards adjacent the upper ends thereof, said cross bars serving also as handles for grasping the structure as will be obvious.

The usual difficulty had with racks resides in loading the same in a dark room or space in which the operator can be guided only by his sense of touch. The result is that sometimes, inadvertently, two plates become disposed in the same guides so that the sensitized surface of one thereof is covered by the other or in the event that the sensitized faces are opposed both of the same are covered or further one or two plates may become canted, that is the opposite edges thereof disposed in guides which are not directly opposed and in this manner two edges of contiguous plates may become lodged in a single guide groove while the other edges thereof are disposed in different guide grooves. Accordingly there is danger that the developing liquid will not act upon the thus partially covered edge portion of one plate or groove, as the case may be, as it does upon the other edge portion thereof. It is desirable, of course, that the plates shall become properly lodged each in a pair of opposed guides intended therefor and to this end we provide a device adapted to be removably mounted upon the upper end or mouth of the rack for successively guiding plates into opposed guide grooves intended to receive the same. The said device comprises two plates 40 and 41 respectively, each overturned at its ends to form sleeves 43. Through the said sleeves 43 rods 42 pass, the same being preferably firmly secured in the sleeves of the plate 41 and being movable in the sleeves of said plate

40, the latter being movable relatively to said plate 41 on said rods 42 and being normally maintained at the outer limit of its movement relatively thereto by means of the spiral compression springs 44 interposed between opposing ends of said sleeves 43, said springs surrounding said rods 42. A slot 45 is thus normally provided between the members 40 and 41 through which plates are adapted to be passed into the rack. The said standards 37 of said rack are provided on their upper ends with outwardly extending flanges 46 which enter and engage recesses 46<sup>a</sup> in the end portions of the plates 40 and 41 formed preferably between the body portion thereof and the free edges of the overturned flanges forming the sleeves 43 as shown in detail in Fig. —9—. Upon the lower face of said member 40 there is pivotally disposed a pair of dogs 47 each provided at one end with a projection 48 presenting a straight or substantially straight edge 49, which is normally disposed substantially flush with the edge of said member 40 bordering the slot 45, and a rounded or inclined face or edge 50, the former being adapted to engage the said ribs 38 to prevent movement of said member 40 relatively thereto in one direction while the said face or faces 50 of said projections are adapted to act as cams engaging the next adjacent ribs 38 to cause said projections to ride over the same when said member 40 is moved in the direction in which it is free to move. The member 41 is similarly provided on its lower face with pivoted dogs 51 each provided at one end with a V-shaped projection 52, the edges 53 of which are inclined to a lesser extent than the edges 50 of the projections 48 so as to less readily ride over the ribs 38 than is the case with the inclined or rounded edges 50 of said dogs 47, while the other edges of said projections are normally substantially parallel with the faces of said ribs 38 and are adapted to prevent said projections 52 from riding over said ribs in one direction. Springs 54 suitably mounted upon the lower faces of said members 40 and 41 engage said dogs 47 and 51 respectively, to maintain the said projections 48 and 52 respectively, normally in engagement with said ribs 38 of said rack.

The operation of the said plate-guiding device is as follows: Before entering the dark room or space in which the rack is to be loaded preparatory to being placed in the tank the member 41 is slipped upon the upper end or mouth of the rack and moved laterally over said mouth until the projections 48 of said dogs 47 shall have entered the second guide groove between adjacent ribs 38 thus bringing the open slot 45 between said members 40 and 41 in alinement with the first pair of said guide grooves.

By now inserting a plate through said slot 45 the same must enter the first pair of opposed guides. The operator now grasps with his fingers the flanges 55 on said members 40 and 41 respectively, and presses them together against the action of said springs 44. As the edges 49 of the dogs 47 prevent movement of the plate 40 toward the plate 41 the latter must necessarily move toward said plate 40, this being rendered possible by the inclined edges 53 of the projections 52 of the dogs 51. Consequently the said projections 52 will ride over the next adjacent pair of opposed ribs 38 thus throwing the straighter edges of said projections 52 into engagement with the faces of said next adjacent pair of opposed ribs 38 which oppose the inner edge of the plate 40. By now releasing the pressure upon said plates 40 and 41 the springs 44 which have been compressed will act to separate said plates 40 and 41 and as the inclined faces 50 of the dogs 47 offer less resistance to movement of the plate 40 the latter will be moved by the springs until the dogs 47 shall have passed over the next adjacent pair of opposed ribs 38. Thus by repeating this operation successively the slot 45 will be brought to successively register with the several pairs of opposed guides for the plates thus permitting the latter to be easily inserted.

The rack herein shown and described is entirely out of proportion to the size of the tank but was so drawn in order to avoid confusion, the rack being intended to be as large as the free space within the tank will permit.

We claim as our invention:

1. A daylight developing tank comprising a receptacle, projections on opposed walls of said receptacle adjacent the mouth of the latter, a cover for said receptacle, a projection thereon adapted to engage one of said projections of said receptacle, there being an opening in said cover for the admission and discharge of liquids, a valve controlling said opening operable from the exterior of said receptacle, and a projection on said valve adapted to engage the other of said projections of said receptacle to hold said cover against removal.

2. A daylight developing tank comprising a receptacle open at one end, a cover therefor provided with an opening for the admission and discharge of liquids, a projection on said cover, projections on at least two of the walls of said receptacle, one of same disposed in the path of and adapted to be engaged by said projection on said cover, a valve controlling said opening, and a projection on said valve adapted to engage another of said projections of said receptacle to hold said cover against removal.

3. A daylight developing tank compris-

ing a receptacle open at one end, a cover therefor provided with an opening for the admission and discharge of liquids, a projection on said cover, projections on at least two of the walls of said receptacle, one of same disposed in the path of and adapted to be engaged by said projection on said cover, a valve controlling said opening, a projection on said valve adapted to engage another of said projections of said receptacle to hold said cover against removal, a gasket on said cover and opposing said valve and the upper ends of the walls of said receptacle and adapted to be compressed thereby to form fluid tight joints when said valve is moved to closed position during engagement of said projection thereof with said projection of said receptacle.

4. A daylight developing tank comprising a receptacle open at one end, a cover therefor provided with an opening for the admission and discharge of liquids, a projection on said cover, projections on at least two of the walls of said receptacle, one of same disposed in the path of and adapted to be engaged by said projection on said cover, a valve controlling said opening, rotatable means on said cover operatively engaging said valve and adapted to impart rotary and longitudinal movement thereto, and a projection on said valve adapted when the latter is turned in one direction to engage the other of said projections on said receptacle to hold said cover against removal.

5. A device of the kind specified, comprising a receptacle, a cover therefor provided with an opening for the admission to and discharge of liquids from said receptacle, and means for engaging said cover with said receptacle including a projection on a wall of said receptacle, a valve controlling the opening in said cover, and means on said valve for engaging said projection during closing movement of said valve.

6. A device of the kind specified comprising a receptacle, a cover therefor provided with an opening for the admission to and discharge of liquids from said receptacle, and means for engaging said cover with said receptacle including a projection on a wall of said receptacle, a valve controlling the opening in said cover, a threaded stem on said valve, means rotatable relatively to said cover and engaging said valve-stem to impart movement to said valve relatively to said cover, a projection on said valve for engaging said projection on a wall of said receptacle and adapted to be swung into and out of engaging relation thereto, and stops on said cover disposed in the path of said projection on said valve to limit the rotary movement of the latter relatively to said cover.

7. A device of the kind specified, com-

prising a receptacle, a cover therefor provided with an opening for the admission and discharge of liquids to and from said receptacle, a guard below said opening for preventing penetration of light into said receptacle, a partition wall adjacent one wall of the latter and together with said second-named wall forming a passage for liquid into the said receptacle, a valve controlling the opening in said cover, a gasket on the latter opposing said valve and the upper ends of the walls of said receptacle, means on said cover for raising and lowering said valve and imparting rotary movement thereto relatively to said cover, a projection on said valve, projections on a wall of said cover and disposed at different elevations and adapted to be engaged by said projection on said valve to engage said cover with said receptacle, closing movement of said valve during engagement of the projection thereof with either of said projections serving to compress the gasket upon the walls of said receptacle to form a fluid tight joint, and engagement with the higher of said projections permitting closure of the valve to seal the receptacle.

8. A device of the kind specified, comprising a receptacle, a cover therefor provided with an opening for the admission and discharge of liquids to and from said receptacle, a guard below said opening for preventing penetration of light into said receptacle, a partition wall adjacent one wall of the latter and together with said second-named wall forming a passage for liquid into the said receptacle, a valve controlling the opening in said cover, a gasket on the latter opposing said valve and the upper ends of the walls of said receptacle, a threaded stem on said valve, a funnel rotatably disposed on said cover at said opening, a threaded hub carried by said funnel and engaging said threaded valve-stem, the latter being adapted to rotate with said funnel, a projection on said valve, stops on said cover disposed in the path of said projection to limit the arc of rotary movement of said valve, shoulders disposed on a wall of said receptacle at different elevations and adapted to oppose and be engaged by said projection on said valve when the latter is turned in one direction, closing movement of said valve while said projection thereof engages one of said shoulders serving to compress the gasket upon the walls of said receptacle to form a fluid tight joint, and engagement with the higher of said shoulders permitting closure of the valve to seal the receptacle.

9. A device of the kind specified comprising a receptacle, a cover therefor having an opening therein, interhooking projections on said receptacle and said cover respectively for engaging the same with each other at one point, a rotatable funnel on said cover

at said opening, a spider carried thereby having a centrally disposed threaded opening, a valve controlling said first-named opening, a threaded stem thereon engaged  
 5 in said threaded opening and adapted to be moved longitudinally by rotation of said funnel, a projection on said valve, means on said cover disposed in the path of said projection and cooperating with the latter  
 10 to limit the rotary movement of said valve, and a plurality of shoulders disposed at different elevations on a wall of said receptacle and opposing said projection when said valve is turned to one limit of its rotary  
 15 movement.

10. A device of the kind specified comprising a receptacle, a cover therefor having an opening therein, interhooking projections on said receptacle and said cover respectively for engaging the same with each other  
 20 at one point, a rotatable funnel on said cover at said opening, a spider carried thereby having a centrally disposed threaded opening, a valve controlling said first-named  
 25 opening, a threaded stem thereon engaged in said threaded opening and adapted to be moved longitudinally by rotation of said funnel, a projection on said valve, means on said cover disposed in the path of said pro-  
 30 jection and cooperating with the latter to limit the rotary movement of said valve, a plurality of shoulders disposed at different elevations on a wall of said receptacle and opposing said projection when said valve is  
 35 turned to one limit of its rotary movement, and a gasket on said cover and opposing said valve and the mouth of said receptacle and adapted to be compressed to seal said receptacle when said funnel is turned in a  
 40 direction to close said valve during engagement of the projection thereon with one of said shoulders.

11. In a device of the kind specified, the combination with a receptacle and a cover  
 45 therefor, the latter provided with an opening, of interhooking projections on said parts adapted to engage the same with each other at one point, means interposed between said parts for effecting a sealed joint  
 50 between the same, a valve controlling said opening, means on said cover for actuating said valve, and coacting locking means on receptacle and said cover controlled by said valve actuating means.

55 12. In a device of the kind specified, the combination with a receptacle and a cover therefor, the latter provided with an opening, of interhooking projections on said parts adapted to engage the same with each  
 60 other at one point, a valve controlling said opening, coacting locking means on said receptacle and said cover, and means common to said valve and said locking means for actuating the same.

65 13. In a device of the kind specified, the

combination with a receptacle and a cover therefor, the latter provided with an opening, of coacting means for locking said cover on said receptacle, a valve controlling  
 70 the opening in said cover, and means common to said valve and said locking means for simultaneously actuating the same to seal said opening and lock said cover on said receptacle.

14. In a device of the kind specified, the  
 combination with a receptacle and a cover therefor, the latter provided with an opening, of a valve and a latch member carried by said cover, a plurality of inverted shoulders on a wall of said receptacle adapted  
 80 to be engaged by said latch member, and means common to said valve and said latch member for actuating the former to engage any one of said shoulders to lock said cover on said receptacle, said valve being actuated  
 85 simultaneously with said latch member and being closed when the latter engages the uppermost of said shoulders.

15. In a device of the kind specified, the combination with a tank for containing liquids  
 90 for developing or fixing photographic negatives, a rack for the contained negatives removable from said tank and equipped with a plurality of parallel guides for said negatives, of rack loading means comprising a  
 95 member having sliding engagement with said rack and movable over the open end thereof, said member provided with a slot between its ends adapted to register with successive pairs of opposed guides, and  
 100 means carried by said member and engaging in the guides of said rack for successively holding said member in position to align the slot therein with successive guides.

16. In a device of the kind specified, the  
 105 combination with a tank for containing liquids for developing or fixing photographic negatives, and a rack removably disposed in said receptacle and open at one end for the insertion of negatives, the side walls of  
 110 said rack equipped on their opposed faces with parallel ribs forming opposed pairs of guide recesses, of rack loading means comprising a member having sliding engagement with said end walls of said rack and  
 115 movable laterally over the same, a pair of spring actuated dogs carried thereby and engaging said ribs, a member movable on guides relatively to said first-named member, springs normally maintaining said  
 120 members separated to provide a slot therebetween adapted to register with opposed pairs of guide recesses in said rack, and a pair of spring actuated dogs carried by said second member and engaging said ribs, said  
 125 respective dogs adapted to prevent movement of said respective members relatively to said rack in one direction.

17. In a device of the kind specified, the combination with a tank for containing liq-  
 130

uids for developing or fixing photographic negatives, a rack for the contained negatives removable from said tank and equipped with a plurality of parallel guides for said negatives, of rack loading means comprising a member having sliding engagement with said rack and movable over the open end thereof, a member movable relatively to said first-named member, springs maintaining said respective members normally separated to provide a slot therebetween adapted to register with successive pairs of opposed guides of said rack, and means carried by each of said members and engaging in said guides of said rack for holding said members against movement relatively to said rack in one direction.

18. In a device of the kind specified, the combination with a tank for containing liquids for developing or fixing photographic negatives, a rack for the contained negatives removable from said tank and equipped with a plurality of parallel guides for said negatives, of rack loading means comprising a member having sliding engagement with said rack and movable over the open end thereof, a member movable relatively to said first-named member, springs maintaining said respective members normally separated to provide a slot therebetween adapted to register with successive pairs of opposed guides of said rack, and means carried by

each of said members and engaging in said guides of said rack for holding said members against movement relatively to said rack in one direction.

19. In a device of the kind specified, the combination with a tank for containing liquids for developing or fixing photographic negatives, a rack for the contained negatives removable from said tank and equipped with a plurality of parallel guides for said negatives, of rack loading means comprising a member having sliding engagement with said rack and movable over the open end thereof, a member movable relatively to said first-named member, springs maintaining said respective members normally separated to provide a slot therebetween adapted to register with successive pairs of opposed guides of said rack, and a pair of spring actuated dogs carried by each of said members and engaging in opposed pairs of said guide grooves of said rack to prevent movement of said members relatively to said rack in one direction.

In testimony whereof we have signed our names in presence of two subscribing witnesses.

DAVID JAMES.  
WILLIAM A. PETERS.

Witnesses:

RUDOLPH WM. LOTZ,  
M. M. BOYLE.