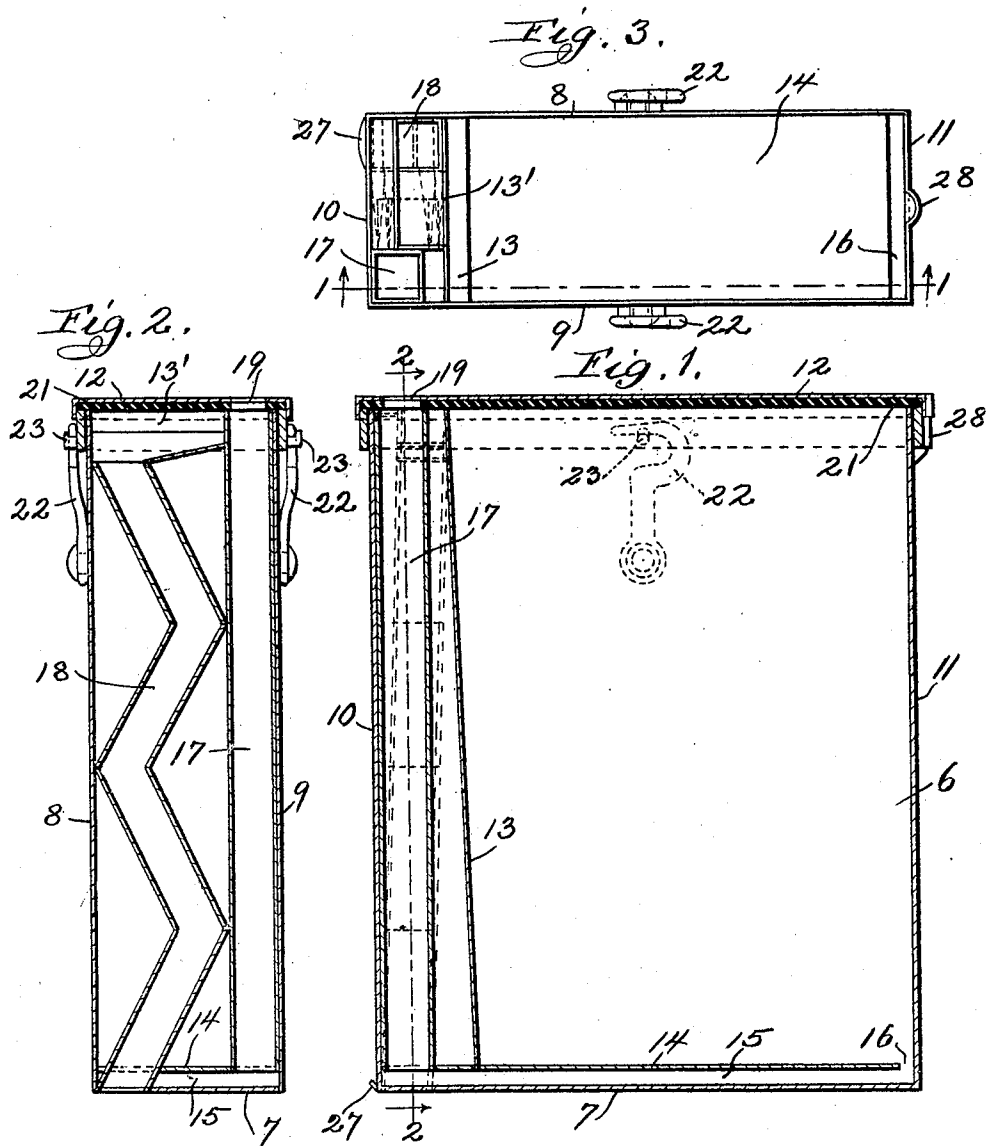


L. A. BARRACK.
 PHOTOGRAPHIC DEVELOPING APPARATUS.
 APPLICATION FILED MAY 25, 1908.

996,198.

Patented June 27, 1911.

2 SHEETS-SHEET 1.



Witnesses:
 H. McLevin
 Don C. Gray

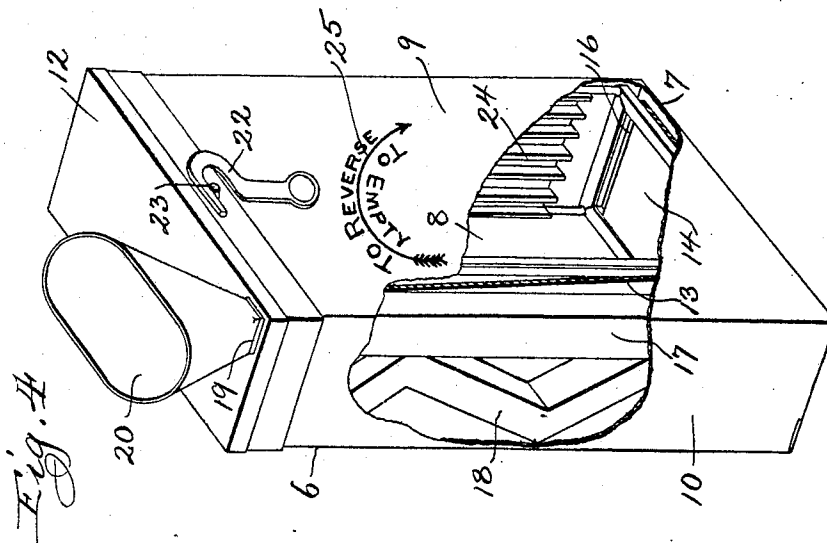
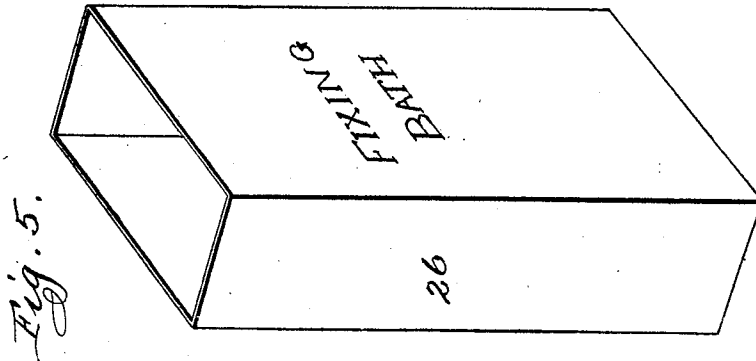
Inventor:
 Lewis A. Barrack
 By R. J. Jacker
 Atty.

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2 SHEETS—SHEET 2.



Witnesses:
L. McLean
Sam C. Gray

Inventor:
Lewis A. Barrack
By *R. J. Jacker*
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UNITED STATES PATENT OFFICE.

LEWIS A. BARRACK, OF CHICAGO, ILLINOIS.

PHOTOGRAPHIC DEVELOPING APPARATUS.

996,198.

Specification of Letters Patent. Patented June 27, 1911.

Application filed May 25, 1908. Serial No. 434,991.

To all whom it may concern:

Be it known that I, LEWIS A. BARRACK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Photographic Developing Apparatus, of which the following is a specification.

My invention relates to developing apparatus which can be manipulated in day light without any danger of the plates or film becoming light-struck, and the objects of my improvements are, first, to make a light tight receptacle; second, to fill, invert and empty the receptacle while it is sealed; third, to nest the several parts in a compact form; fourth, to make a neat and durable device and other objects to become apparent from the description to follow. In developing apparatus of this class it is very desirable to have a simple construction that is light tight and to be able to fill this light tight receptacle or box with liquid without uncovering the same, and to invert the position of the box and also to allow the liquid to flow out of the box. All these advantageous features are present in my invention.

Another novel feature of my invention is to make all the parts so they can be tested in one can and thus can be carried conveniently.

To describe my invention so that others versed in the art to which it pertains can make and use the same I have illustrated it on the accompanying two sheets of drawings forming a part of this specification in which:

Figure 1, is a longitudinal sectional view of a receptacle comprising my invention taken on line 1—1 of Fig. 3; Fig. 2, is a sectional view of the same taken on line 2—2 of Fig. 1; Fig. 3, is a plan view of the same with the lid or cover removed; Fig. 4, is a perspective view of the same partly broken away to show the construction and Fig. 5, is a perspective view of a can used for the fixing bath.

Similar reference characters refer to similar parts throughout the several views.

The receptacle 6 is made rectangular in shape of the desired dimensions and has the

bottom 7, side walls 8 and 9, end walls 10 and 11, and its top open end closed with a removable lid or cover 12. Close to the end wall 10 is a vertical partition 13 extending from the top of receptacle 6 down to within a short distance of the bottom 7 where it joins the partition 14 lying parallel with the bottom 7 and extending from end wall 10 to within a short distance of the end wall 11. A flat passage 15 is thus formed in the bottom of receptacle 6 which communicates with the interior of receptacle 6 through the opening 16 adjacent to end wall 11.

In the space between partition 13 and end wall 10 are two tubes 17 and 18 extending the entire length of the receptacle 6, the lower end of tube 17 being secured through the partition 14 so as to form communication with the passage 15. The lid or cover 12 is provided with an opening 19 to register with the top open end of the tube 17 into which a funnel 20 can be inserted as seen in Fig. 4. The tube 18 has its lower end secured through the bottom 7 so as to communicate with the exterior and has its upper end terminating at the hole 13' through the partition 13 so as to communicate with the interior of the receptacle 6. The tube 18 is also preferably provided with a plurality of bends or other means to prevent any light entering the receptacle 6 through the tube 18.

The lid or cover 12 is provided with a gasket 21 to engage the top edges of walls 8, 9 and 11, partition 13 and a part of tube 18, which will serve to seal the receptacle 6 liquid tight when the lid or cover 12 is held tightly to said receptacle by any means as for example the hooks 22 pivoted to the exterior of the receptacle 6 which are forced over the pins or lugs 23 provided on the lid or cover 12.

In operation the removable rack 24 loaded with undeveloped plates is placed into the receptacle 6 and the lid or cover 12 is placed on same, which of course is done in a dark room, changing bag or other suitable place, the balance of the operations may and preferably are done in the light. Next, the developing fluid is poured into the funnel 20 which has first been placed in position as

seen in Fig. 4, in the hole 19 of the lid or cover 12; the developer passed from the funnel 20 down through tube 17, thence through passage 15 and opening 16 into the receptacle 6. A sufficient amount of the developer is thus poured into the receptacle 6 to submerge the plates and the receptacle is permitted to set right side up a part of the time required to develop the plates when the receptacle is placed in an inverted position for a sufficient time to finish developing the plates after which the developing fluid is poured out of the receptacle 6. The construction and connection of the tubes 17 and 18 make it necessary that the receptacle 6 be turned in a certain direction when placed from one position to another, and to indicate to the operator in which direction it is to be turned an indicator 25 may be provided on the exterior of said receptacle.

When the receptacle 6 is to be turned from its righted position to its inverted position it must be turned clockwise as viewed in Fig. 1. When thus turned, the liquid which is in tube 17 on a level with that in receptacle 6 will pass down said tube 17 through passage 15 and into receptacle 6, while a corresponding amount of the liquid will pass from the receptacle 6 up into the tube 18, thus when the receptacle 6 is in an inverted position the liquid will stand on the same level in receptacle 6 and tube 18 while the tube 17 and passage 15 contain no liquid. When it is desired to allow the liquid to flow out of receptacle 6 it is turned on its edge with the end wall 10 down and the end wall 11 up. Thus it will be seen by referring to Fig. 1, that while in such position the liquid will flow from receptacle 6 into the tube 18 adjacent the lid or cover 12 and to the exterior through said tube 18. To take the place of the liquid flowing out of receptacle 6 air passes into the open end of tube 17, thence through passage 15 and into receptacle 6. The same operation is then gone through with clear water for rinsing purposes and after thus being developed and rinsed the rack 24 with the plates is removed and placed into the can or receptacle 26 shown in Fig. 5, containing the fixing solution.

It will be noted that the partition 13 and tube 18 are both inclined somewhat so that the liquid will drain out by gravitation. I prefer to provide at the outlet end of tube 18 a small projecting lip 27 to prevent the liquid from flowing back on the receptacle 6; and I also prefer to provide the lid or cover 12 and the upper edge of the receptacle 6 with cooperating humps 28 so that it is impossible to place the lid or cover 12 on the receptacle 6 in an incorrect position, this may also be accomplished by having

the top end of tube 17 project up through the hole 19 in the lid or cover 12.

When not in use the several parts are made to be placed in a compact package; *i. e.* the can 26 is telescoped inside of the receptacle 6, the rack 24 is placed inside of the can 26 as is also the funnel 20, thus the entire apparatus is contained within the receptacle 6, which is only slightly larger than a box of plates.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a developing apparatus, a rectangular receptacle having its open top closed by a light-tight cover, an L shaped passage or tube extending from the top of said receptacle to and communicating with the bottom of said receptacle and a zigzag passage or tube adjacent the vertical portion of said L shaped passage or tube forming communication between the upper part of said receptacle and the exterior at the bottom of said receptacle.

2. In a developing apparatus, a rectangular receptacle having its open top closed by a light-tight cover, a straight tube and a zigzag tube adjacent to one another extending from the top of said receptacle to the bottom of said receptacle, said straight tube being open at the top and having its lower end communicatively connected with said receptacle and said zigzag tube being open at its lower end and having its upper end communicatively connected to said receptacle.

3. In a developing apparatus a sealed rectangular receptacle provided with two tubes communicating with its interior, one of said tubes leading from the bottom of said receptacle to the exterior at the top and the other tube leading from the top of said receptacle to the exterior at the bottom, said tubes being so arranged as to prevent light entering said receptacle and so that the said receptacle when filled with liquid can be in either of the three positions, right-side-up, on one of its edges or up-side-down, without having the liquid contained therein passing out of said receptacle while both tubes are open to the atmosphere.

4. In a developing apparatus, a closed receptacle provided with two adjacent tubes communicating with the interior of said receptacle, one of said tubes always open at the top of said receptacle and the other tube always open at the bottom of said receptacle and so arranged that light cannot enter said receptacle through said tubes.

5. In a developing apparatus, a developer receptacle, an inlet tube communicating with the interior of said receptacle, an out-

let tube communicating with the interior of said receptacle, a lid or cover to tightly close the open end of said receptacle and co-operating humps provided on said receptacle and said lid or cover.

In testimony whereof I have signed my name to this specification in presence of two

subscribing witnesses this 20th day of May 1908, at Chicago, Illinois.

LEWIS A. BARRACK.

Witnesses:

H. S. WHITE,

R. J. JACKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

It is hereby certified that in Letters Patent No. 996,198, granted June 27, 1911, upon the application of Lewis A. Barrack, of Chicago, Illinois, for an improvement in "Photographic Developing Apparatus," an error appears in the printed specification requiring correction as follows: Page 1, line 29, the word "tested" should read *nested*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 29th day of August, A. D., 1911.

[SEAL.]

F. A. TENNANT,
Acting Commissioner of Patents.

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