No. 750,665. PATENTED JAN. 26, 1904.

J. LESPÉRANCE.

DAYLIGHT PLATE DEVELOPING APPARATUS.

APPLICATION FILED JUNE 1, 1903.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 1.

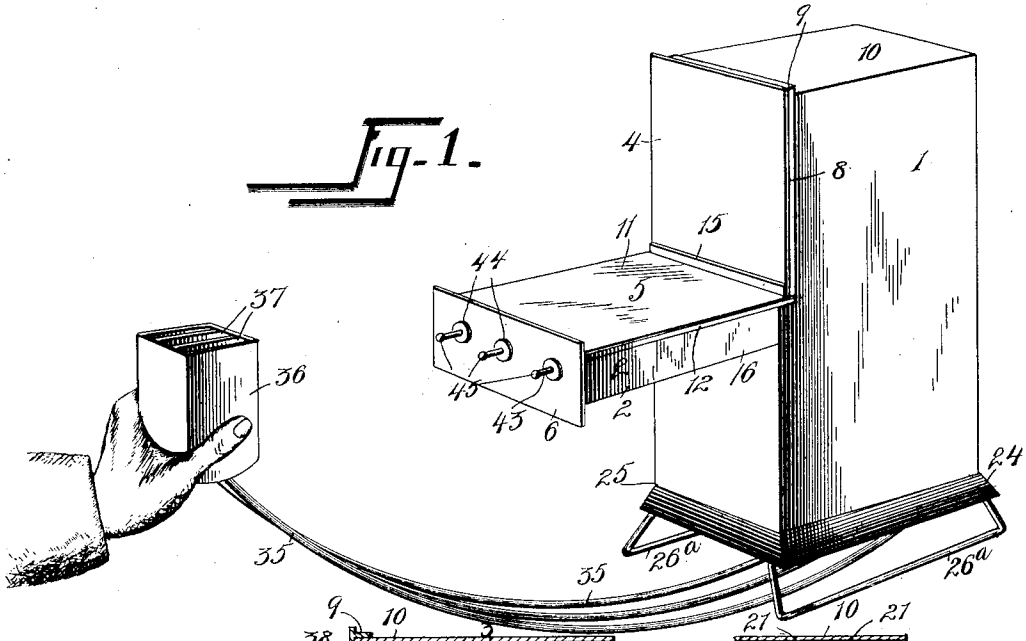


Fig. 2.

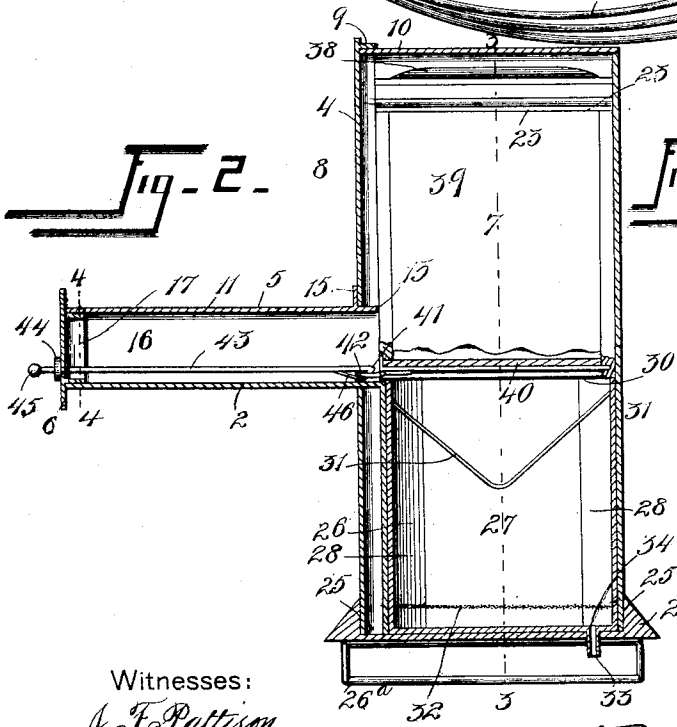
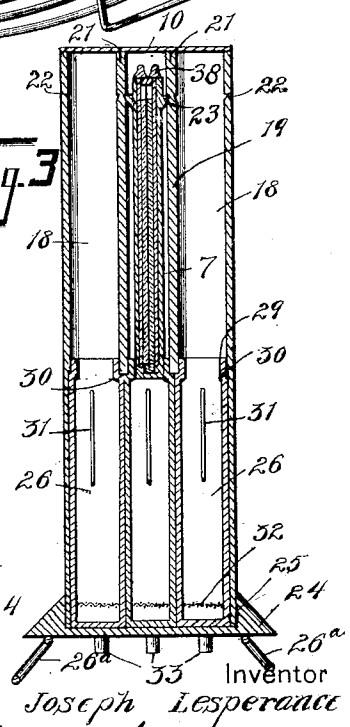


Fig. 3.



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NO MODEL. 3 SHEETS—SHEET 2.

Fig. 4.

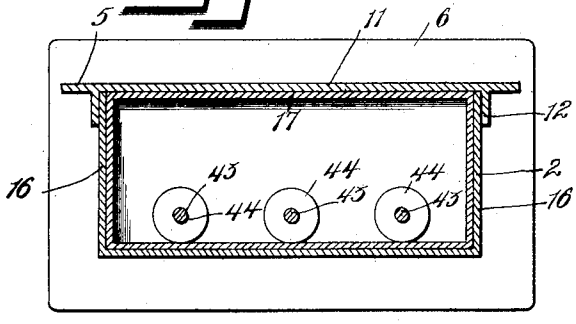


Fig. 8.

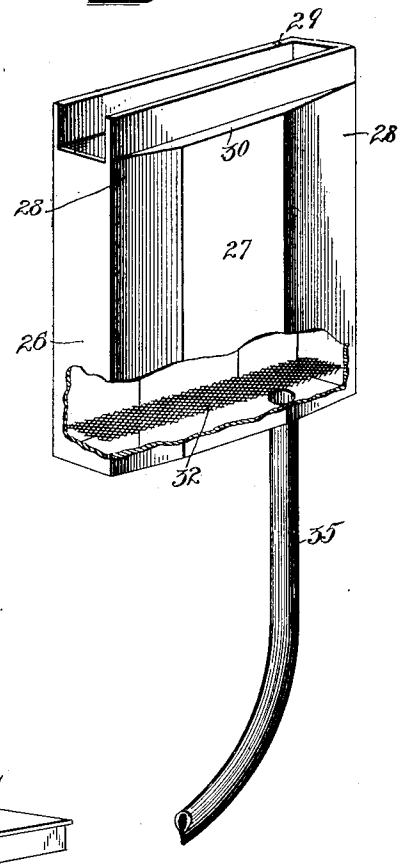


Fig. 5.

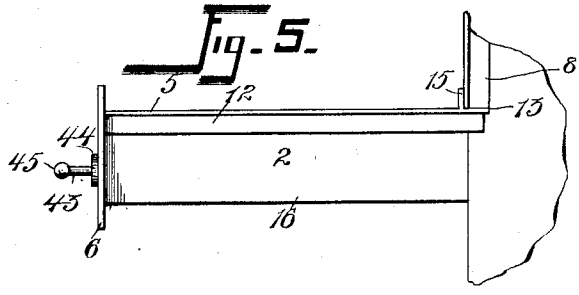


Fig. 6.

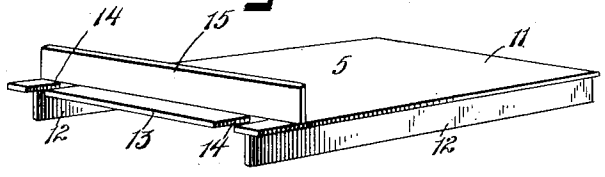
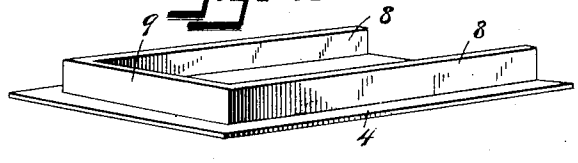


Fig. 7.



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APPLICATION FILED JUNE 1, 1903.

NO MODEL. 3 SHEETS—SHEET 3.

Fig. 11.

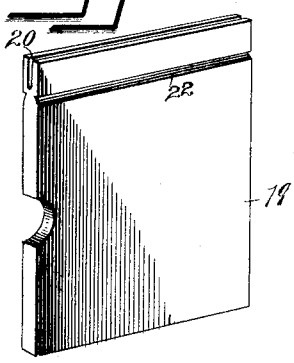
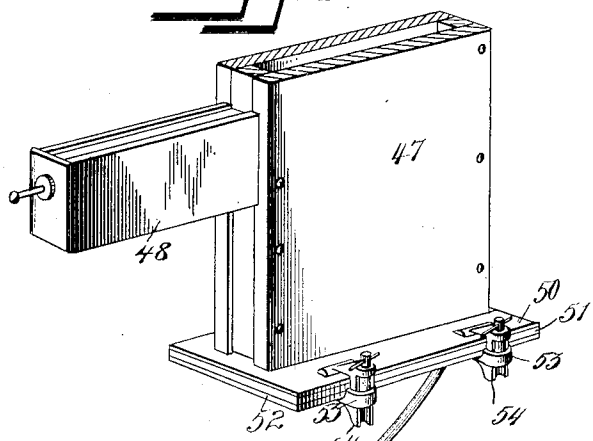


Fig. 12.



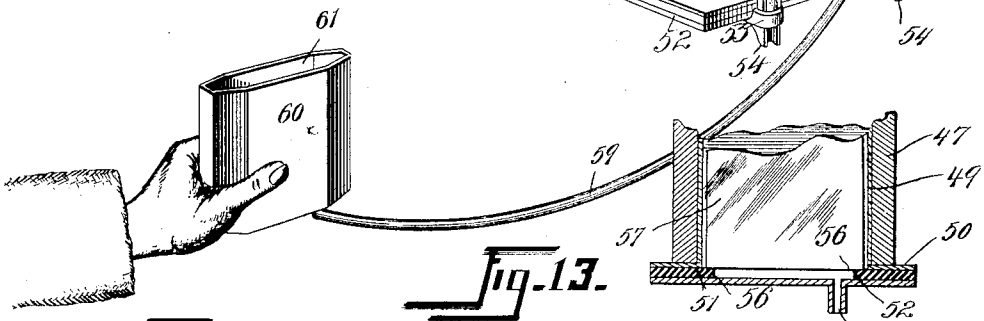


Fig. 13.

Fig. 9.

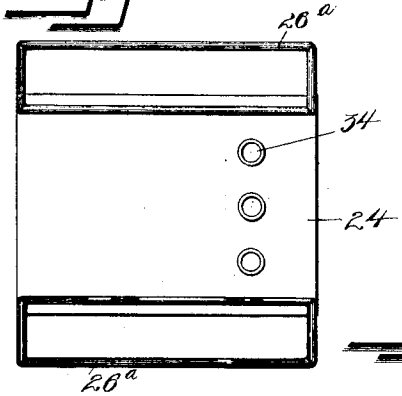


Fig. 14.

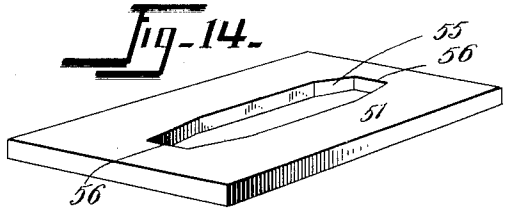
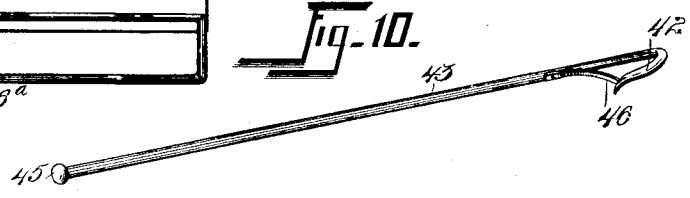


Fig. 10.



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No. 750,665. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

JOSEPH LESPÉRANCE, OF MONTREAL, CANADA.

DAYLIGHT PLATE-DEVELOPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 750,665, dated January 26, 1904.

Application filed June 1, 1903. Serial No. 159,517. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LESPÉRANCE, M. D., a subject of the King of Great Britain, residing in the city and district of Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Daylight Plate-Developing Apparatus; and I do hereby declare that the following is 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.

My invention relates to the art of photography, and concerns itself especially with apparatus intended to be used for developing photographic plates without the use of a dark room. Apparatus to effect a similar purpose with photographic films has already been produced; but such apparatus is not adapted for developing plates.

The object of this invention is to provide simple apparatus which will enable the developing process to be carried on effectively and speedily and without danger of admitting light to the plates or negatives as they are developing.

In its general construction the invention comprises a box in which the plate-holders are intended to be placed, the opening through which the plate-holders are inserted being thereafter closed by a suitable cover adapted to prevent the daylight passing into the interior of the box. In the lower portion of the said box developing-cups are placed, and arrangement is made for allowing the plates to descend from the plate-holders into these cups in order that they may be developed. These developing-cups are in communication with a receptacle which is adapted to be held in one's hand. This receptacle is connected by means of a light hose with the aforesaid developing-cups. The hand-receptacle or hand-cup is intended to receive the developing agent or developer and when held elevated of course affords means for filling the aforesaid developing-cups with the developer. After the plates have been treated for a sufficient length of time the hand-cup is depressed, which of course has the effect of draining the developing-cups. The developer is then poured out of the hand-cup, and it is replaced by water which affords means for washing the plates, the hand-cup being manipulated in the same manner as before in order to fill or empty the developing-cups. After the washing-water is poured off the hand-cup affords means for treating the plates with a fixing-bath.

The invention consists in the construction and combination of parts to be more fully described hereinafter, and definitely set forth in the claims.

In the drawings, which fully illustrate my invention, Figure 1 represents the same in perspective. Fig. 2 is a longitudinal vertical section through the developing-box. Fig. 3 is a transverse vertical section taken substantially on the line 3 3 of Fig. 2. Fig. 4 is a transverse vertical section taken substantially on the line 4 4 of Fig. 2, this view being upon an enlarged scale, as will appear. Fig. 5 is a side elevation of a portion of the apparatus. Fig. 6 is a perspective showing a portion or section of a cover for excluding light from the developing-box. Fig. 7 is a perspective of another section of the cover. Fig. 8 is a perspective of one of the developing-cups, the same being broken away near its lower portion, as will appear, to disclose its construction upon its interior. Fig. 9 is a bottom plan of the base upon which the developing-box rests. Fig. 10 is a perspective of one of the hooks which are instrumental in bringing about the descent of the plates into the developing-cups. Fig. 11 is a perspective of one of the partitions which are used to separate the plate-holders within the developing-box. Fig. 12 is a perspective showing a modified form which is especially adapted for developing only two plates at once. This view represents only the lower portion of the developing-box, as will appear. Fig. 13 is a longitudinal vertical section through the base shown in Fig. 12 and contiguous parts. Fig. 14 is a perspective showing a cushion which is adapted to break the fall of the plates in this modified form when they descend into the developing-cup.

Throughout the drawings and specification the same numerals of reference denote like parts.

Referring more particularly to the parts, 1

represents the preferred form of the developing-box shown in Fig. 1. This box or casing is of substantially rectangular form, as shown, preferably made of sheet metal, and provided on its forward side, preferably substantially midway of its height, with a horizontal extension or housing 2. The interior of this housing 2 is in communication with the interior of the developing-box 1, as shown, and above this housing the said box 1 is perfectly open, being closed at this part by a face-plate or cover 4. In like manner the said housing 2 is open above and closed by a removable plate or cover 5. The outer extremity of the housing 2 is also open, but closed by a removable head 6. It should be understood that the plate 4, the cover 5, and the head 6 are made removable for the purpose of facilitating the insertion of the plate-holders 7 in the upper portion of the developing-box 1, and it should be observed that these parts are constructed with a special view to excluding light from the interior of the developing-box or the housing 2.

The construction of the face-plate 4 is most clearly shown in Fig. 7, in which view it is represented in such a manner as to show its inner side. Upon its inner side this plate has attached thereto a flange 8, which is disposed so as to constitute three sides of the rectangle, and it should be understood that this plate is adapted to be applied to the developing-box in the manner indicated in Fig. 1, so that the portion 9 of the flange 8 rests upon the top 10 of the box, while the remaining portions of the flange lie adjacent to the outer faces of the sides of the box, as will be readily understood.

The construction of the cover 5 aforesaid is most clearly shown in Fig. 6, as indicated. It consists of a plate 11 of rectangular form to correspond with the housing 2, having depending flanges 12 near its opposite edges, as shown, and upon its inner edge 13 the plate 11 is provided with a pair of oppositely-disposed recesses or openings 14, which are adjacent to the flanges 12, as shown. At the rear edges of these recesses 14 a vertical flange 15 is attached, which extends transversely of the plate from edge to edge of the same, as shown. This cover 5 is adapted to be applied to the housing 2 in the manner indicated, with the flange 12 lying just outside of the upper edges of the side walls 16 of the housing and with the edge 13 projecting beyond the face-plate 4. When applied in this manner the forward edges of the sides of the box are received by the recesses 14, as will be readily understood. From this arrangement the light is effectually excluded.

The head 6 comprises a rectangularly-disposed flange 17, which projects into the extremity of the housing 2, as shown, in this manner excluding the light at this point.

It should be understood that the developing-box 1, constituting the preferred form, is adapted for developing six plates simultaneously. To this end it is formed in its upper portion into three smaller compartments 18 by means of two vertical partitions 19. One of these partitions is shown most clearly in Fig. 11. The upper edges of these partitions are provided, respectively, with longitudinal grooves 20, which extend from front to back of the partitions, as indicated, and these grooves are adapted to receive fins or flanges 21, which project downwardly from the under side of the top 10 of the developing-box and extend from front to rear of the same, as will be readily understood. At opposite points the said partitions 19 and the inner sides of the side walls of the box are provided with substantially horizontal grooves 22, which are adapted to receive the beads 23, which are usually formed upon plate-holders.

The developing-box 1 is removably received by a base 24, which base is provided with a recess 25, conforming to the shape of the lower portion of the box, as shown. This base is supported upon suitable legs 26^a, consisting of rectangularly-formed heavy wires, as shown. Except for this base 24 it should appear that the box 1 is bottomless. From this arrangement it is possible to insert three developing-cups 26, which are disposed, respectively, beneath the compartments 18. The construction of these cups is most clearly shown in Fig. 8. It should appear that they are of substantially rectangular form, narrow, and of expanded width at their central portions, so that they present oppositely-disposed flat faces 27 at this part and inclined faces 28 near their edges. As indicated, these cups are open above and are formed with contracted necks 29, whereby oppositely-disposed shoulders 30 are formed extending from front to back of the cups. Certain of these shoulders afford means for supporting the aforesaid partitions 19, the lower edges of the said partitions resting upon the same, as shown in Fig. 3. In the upper portion of each cup 26 there is provided a parting-wire 31, which is disposed centrally within the cup, as shown, and presents the appearance of a bluntly-pointed **V**, as viewed in Fig. 2. These wires are for a purpose which will appear hereinafter. Near the bottom each developing-cup 26 is also provided with a false bottom 32 of light wire mesh, the purpose of which is to break the fall of the plates as they descend into the cups in order to prevent their being accidently broken in falling. Each of the developing-cups is provided at its bottom with a short tubular spout 33, which projects downwardly from the same, as shown. The three spouts pass through three openings 34, which are formed in the bottom of the base 24 to receive the same, as will be readily understood, and beneath the base 24 there are attached, respectively, to these spouts 33 hose 35. These hose

attach to a hand-receptacle or hand-cup 36, which is formed with three compartments 37, with which the said hose respectively connect. The purpose and the manner of operating this hand-cup 36 in conjunction with the developing-box will be described more fully hereinafter.

The holders 7 may be of common form slightly altered in order to enable the plates to fall from the same into the developing-cups 26. It should be understood that these holders are adapted to be slid into the compartments 18 sidewise, so that they come into position directly over the cups 26, being retained thereabove by reason of the beads 23 aforesaid and the grooves 22. It should be understood that in order to insert the holders in this manner they are held in such a manner that the handles 38 of their shutters 39 would draw in a vertical direction. As indicated most clearly in Fig. 2, the portion of these holders lying opposite to the handles 38 comprise movable heads 40, which are adapted to slide longitudinally in the direction of the housing 2 aforesaid. These sliding heads are preferably of substantially the form shown in Fig. 2. They have attached thereto pivoted eyes 41, which afford means for attaching hooks 42, which hooks are formed upon the extremities of certain pull-rods 43, the said pull-rods being mounted in the aforesaid head 6, suitable washers 44 being provided through which the same are guided in order to exclude light at these points. Beyond the washers 44 the pull-rods 43 may terminate in knobs 45 to facilitate their being grasped by one's fingers. One of these pull-rods 43 is clearly illustrated in Fig. 10, where it should appear that the same is provided near the hook 42 with a resilient tongue or spring 46, which cooperates with the hook 42, as will be readily understood.

In Fig. 12 a portion of a developing-box of modified form is illustrated. This form is intended to be used where the device is constructed generally of wood. This modified form is constructed with a view to developing only two plates at the same time. The construction in this instance comprises a casing 47 made of wood, to which is attached a housing 48, having the same functions as the housing 2 aforesaid. This casing 47 is formed without any bottom and is adapted to receive snugly within the same a cup 49, which is also without a bottom and provided with a laterally-projecting flange 50. Under the flange 50 there is placed a gasket 51, preferably of rubber, and beneath this gasket there is a plate 52, which constitutes a bottom for the cup and for the developing-box. The gasket 51 and plate 52 are clamped in place by means of small clamps 53, the lower portions 54 of which are adapted to rest upon a table or similar support, so as to constitute legs or feet for the developing-box. The form of the gasket 51 is most clearly shown in Fig. 14. It consists of a rectangular base of substantially the form of the outline of the flange 50 aforesaid, and it is provided with an elongated longitudinally-disposed opening 55, which opening alines itself when the gasket is in position just beneath the cup 49. It should appear, however, that when arranged in this way the edges 56 at the extremities of the opening 55 lie well under the cup. In this way these edges afford means for breaking the fall of the plate 57 as it drops into the cup from above, it appearing that the corners of the plate at its lower edge would strike upon the rubber gasket at this part, in this manner cushioning the fall of the plate, as will be readily understood. The plate 52 is provided with a tubular spout 58, which projects downwardly from the same and to which is attached a light hose 59, which hose is in connection with a hand-cup 60, which hand-cup has the same functions as the hand-cup 36 aforesaid, but is simpler in construction, comprising, as it does, only one compartment 61.

It should be understood that the preferred form of the developing-box shown in Fig. 1 enables six plates or negatives to be developed simultaneously.

The mode of operating the preferred form would be substantially as follows: The face-plate 4 and the cover 5 having been removed, the plate-holders 7, which would be of special form or of common form, with certain alterations as described, would be introduced into the outer portion of the developing-box, so as to be received, respectively, by the three compartments 18. In this way they would be brought into position directly above the three developing-cups 26. It should be understood that the plate-holders are introduced into the developing-box perfectly intact and just as they are taken from the camera, their shutters not having been disturbed in any way. After the plate-holders have been placed within the developing-box in the manner described the hooks 42 within the housing 2 are hooked, respectively, into the eyes 41, which eyes are attached to the sliding heads 40, which close the lower portion of the holders when they are disposed in the manner described. The cover 5 of the housing is then placed in position, and the head 6, together with the plate 4, are adjusted into proper relation with the same in such a manner as to exclude the entrance of light at the joints or points of connection. The pull-rods 43 are now drawn outwardly, in this manner withdrawing the sliding heads 40, so that the plates within the plate-holders fall by their own gravity into the developing-cups 26. It will be remembered that that side which is called the "film" side of a photographic plate is disposed toward the outer side of the plate-holder, and from this fact it follows that when the plates descend into the cups in the manner described their film sides

will be located toward the outer sides of the cups, which respectively receive them. The reason for making the sides of the cups of the peculiar form shown should now be apparent, for it should be understood that from the fact that these cups are of expanded width at their middle portions any possibility of the film of the plates coming into contact with the sides of the cup is prevented. The plates may bear upon the sides of the developing-cups only along their vertical edges. The function of the wires 31, which may very properly be called "dividing-wires," is to prevent any possibility of the rear sides of the plates coming into contact in such a manner as to adhere together, it being understood that from the location of these wires one plate from the holder thereabove would descend at one side of the wire, while the other plate from the same holder would descend at the opposite side of the wire. The jar or shock which might be incident to the falling of the plates in the manner described is much relieved by the presence of the false bottoms 32 within the cups, which were described as constructed of light wire, so as to constitute screws or guards. The dividing-wires 31, it should be stated, are preferably made of very light material of high flexibility, so that while they efficiently perform their functions they at the same time may be readily deflected by the plates if they move laterally. Attention is called to the form of these dividing-wires, the extremities of which being elevated to a point near the mouths of the cups operate to insure the plates passing properly into the cups, while at the same time the body of each wire is depressed, so that its middle lies substantially opposite the central portion of the plates when lying within the cup. After the plates have been safely deposited in the developing-cups 26 the process of developing them is begun by means of the hand-cup 36 having the three compartments 37, which compartments, it will be remembered, communicate, respectively, with the three developing-cups 26. If six plates are being developed simultaneously, the three compartments 37 would be filled or substantially filled with the developing agent or developer, the said compartments being filled while the hand-cup was held in a depressed position—that is, below the level of the developing-cups 26. Now when the hand-cup is elevated into some such position as that indicated in Fig. 1 the developer will flow from the same into the developing-cups 26 and action upon the plates will begin. In order to promote a uniform action of the developer upon the plates, the hand-cup 36 would be periodically moved to a depressed position and immediately elevated again, in this way causing the developer to flow and reflow into the developing-cups, as will be readily understood, the effect produced being substantially the same as that of tilting or agitating a developing-tray. When the plates have been subjected to this treatment for a sufficient length of time, the developer would be poured out of the apparatus by means of the hand-cup, and the hand-cup would be thereafter filled with water and manipulated as before, so as to subject the plates to a washing or rinsing action. This would be followed by a similar operation, the hand-cup having been filled with a fixing solution, and after sufficient time had elapsed to insure the proper fixing of the negatives the operation would cease, and the plates could then be removed from the developing-box by removing the base 24 from the same, as shown, and withdrawing the developing-cups vertically downward, as will be readily understood, by reason of the fact that the developing-box is bottomless. Where it is desired to develop the contents of one plate-holder, only one of the compartments 37 of the hand-cup 36 would be brought into use, and the economical advantage of providing separate developing-cups will now be apparent, as otherwise a large quantity of developer would be necessary in order to bring the level within the cup to the necessary height, though only one plate was being developed within the cup. Such an arrangement as this is also advantageous, as it operates to facilitate the rapid filling or draining of the cup. The arrangement of the hand-cup 36 in compartments is considered advantageous, coöperating, as it does, with the arrangement of the developing-cups.

The mode of operation of the modified form shown in Fig. 12 is substantially the same as that just described in connection with the preferred form shown in Fig. 1. Any suitable arrangement may be made for introducing the plate-holders and providing for the light-proofness of the developing-box. With this form of the apparatus, however, the plates would of course be removed by detaching the clamps 53 in order to enable the bottom plate 52 to be removed, together with the gasket 51, in this way enabling the plates to be slipped out, as will be readily understood. With this form of the device, it will be remembered, the manner of cushioning the fall of the plates is different, as they are received when they fall upon the rubber gasket instead of upon the light wire screens.

It should appear from the arrangement described that a very compact and serviceable apparatus is produced admirably adapted for its purposes, it being possible to carry on the developing process in a bright light without danger of the plates becoming light-struck during the operation.

The manner of employing the hand-cup 36 in conjunction with the developing-box is considered an advantageous feature, since it dispenses with any necessity for providing filling-spouts or drain-cocks in connection with the developing-cups and affords means at the same time for bringing about a desirable agi-

tation of the developing fluid with a view to promoting the uniformity of action of the baths upon the plates.

While I have shown in the accompanying drawings the preferred form of my invention, it will be understood that I do not limit myself to the precise form shown, for many of the details may be changed in form or position without affecting the operativeness or utility of my invention, and I therefore reserve the right to make all such modifications as are included within the scope of the following claims or of mechanical equivalents to the structures set forth.

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

1. In apparatus of the class described, in combination, a plate-holder, a cup, means for opening communication between the interior of said plate-holder and said cup, whereby plates contained in said plate-holder may pass into said cup, and a member adapted to separate said plate within said cup.

2. In apparatus of the class described, in combination, a plate-holder, a cup disposed therebelow, means for opening communication between the interior of said plate-holder and said cup, whereby plates contained in said plate-holder may descend into said cup, and a member dividing said cup, and adapted to lie between said plates within said cup.

3. In apparatus of the class described, in combination, a plate-holder, a developing-cup disposed in connection therewith, means for opening communication between the interior of said plate-holder and said cup, whereby the plates within said plate-holder may pass into said cup, and a dividing-wire lying within said cup and adapted to separate said plates when received thereby, said dividing-wire affording means for guiding said plates into said cup.

4. In apparatus of the class described, in combination, a casing, a plurality of developing-cups received in the lower portion thereof, means for receiving a plurality of plate-holders above said cups within said casing, means for passing the plates from said plate-holder into said cups, and means for controlling the flow of a developing agent to said cup.

5. In apparatus of the class described, in combination, a casing, a plurality of developing-cups disposed in the lower portion of said casing, a plurality of compartments formed in the upper portion of said casing and communicating respectively with said cups, said compartments being adapted to receive plate-holders, means for passing the plates from said plate-holders into said cups, and means for controlling the flow of a developing fluid into said cups.

6. In apparatus of the class described, in combination, a casing, a plurality of developing-cups disposed in the lower portion thereof, a plurality of partitions dividing the upper portion of said casing, said partitions being received between the said cups and forming compartments adapted to receive plate-holders, means for opening communication from the plate-holders into said cups, and means for controlling the flow of a developing fluid into said cups.

7. In apparatus of the class described, in combination, a casing, a plurality of developing-cups received in the lower portion thereof, said developing-cups being open above, a plurality of partitions dividing the upper portion of said casing into compartments, said partitions being received between the upper edges of said cups, said compartments being adapted to receive plate-holders disposed above said cups, means for opening communication from said plate-holders into said cups, and means for controlling the flow of a developing fluid to said cups.

8. In apparatus of the class described, in combination, a casing, developing-cups received in the lower portion of said casing and having oppositely-disposed shoulders at the upper portion thereof, a partition dividing the upper portion of said casing into compartments, the lower edge whereof rests upon said shoulders, plate-holders adapted to be received by said compartments, means for opening communication from said plate-holders into the said developing-cups, and means for controlling the flow of a developing fluid into said cups.

9. In apparatus of the class described, in combination, a casing, a developing-cup received in the lower portion of said casing, a plate-holder adapted to be received in the upper portion of said casing, said plate-holder and said casing having, the one a recess, and the other a projection received thereby, said recess and said projection being adapted to support said plate-holder, and means for opening communication between the interior of said plate-holder and said cup.

10. In apparatus of the class described, in combination, a casing, a plurality of developing-cups received in the lower portion thereof, a plurality of partitions dividing the upper portion of said casing into compartments, plate-holders adapted to be received by said compartments, there being an interlocking connection between said plate-holders and the wall of said compartments operating to support said plate-holders, and means for opening communication from said plate-holders into said cups.

11. In appararus of the class described, in combination, a developing-cup adapted to receive a plate to be developed, a base adapted to support said developing-cup, and having an opening therethrough, a second cup adapted to be held in one's hand, a hose attached to said second cup and communicating with the interior of said developing-cup through said opening.

12. In apparatus of the class described, in combination, a developing-cup, means for supporting the same with its bottom in an elevated position, a spout communicating with the interior of said cup, a second cup adapted to receive a developing fluid, and a flexible tubular connection between said spout and said second cup.

13. In apparatus of the class described, in combination, a casing, a developing-cup received in the lower portion thereof, a base adapted to support said casing and said cup, a spout projecting downwardly below said base and communicating with the interior of said developing-cup, a hand-cup, and a flexible tubular connection between said hand-cup and said spout.

14. In apparatus of the class described, in combination, a bottomless casing, a base supporting the same, a removable developing-cup mounted in the lower portion of said casing, and having a spout projecting downwardly therefrom, there being an opening through said base through which said spout passes, a hand-cup adapted to contain a developing fluid, and a flexible tubular connection between said hand-cup and said spout.

15. In apparatus of the class described, in combination, a bottomless casing, a plurality of developing-cups disposed in the lower portion thereof and having downwardly-projecting spouts, a base adapted to support said casing and said developing-cups, a hand-cup, and tubular connections leading from said hand-cup to said spouts.

16. In apparatus of the class described, in combination, a bottomless casing, a plurality of developing-cups received in the lower portion thereof, a base adapted to receive said casing, a hand-cup having compartments therein and adapted to receive a developing fluid, and flexible tubular members connecting said compartments respectively with said developing-cups.

17. In apparatus of the class described, in combination, a casing, a developing-cup contained therein, a plate-holder within said casing and connecting with said cup, pull-rods adapted to open communication between said plate-holder and said cup, and a housing for said pull-rods, said casing and said housing being adapted to exclude light from the interior thereof.

18. In apparatus of the class described, in combination, a casing having an opening through a vertical wall thereof, a plate-holder adapted to be introduced into said casing through said opening, a removable cover for said opening, said casing having a lateral extension below said opening, a removable cover for said lateral extension, said covers having edges overlapping with said casing, a developing-cup in the lower portion of said casing, and adapted to receive a plate from said plate-holder, a removable member adapted to open communication between the interior of said plate-holder and said cup, and means for advancing said removable member into said lateral extension.

19. In apparatus of the class described, in combination, a casing having an opening through a vertical wall thereof, and having a lateral extension adjacent to said opening, a removable cover for said opening and a removable cover for said extension, plate-holders adapted to be introduced into said casing through said opening, developing-cups carried within said casing beneath said plate-holders, sliding heads carried by said plate-holders, and adapted to open communication between the same and said cups, and pull-rods carried within said extension and connecting with said sliding heads, said covers affording means for excluding the light from the interior of said casing.

20. In apparatus of the class described, in combination, a casing, plate-holders adapted to be introduced into said casing, developing-cups carried within said casing, and connecting with said plate-holders, sliding members carried by said plate-holders and adapted to open communication between the interior thereof and said cups, said casing having a lateral extension opposite to said sliding members, and means for advancing said sliding members into said extension, said extension being adapted to exclude light from the interior of said casing.

21. In apparatus of the class described, in combination, a casing, plate-holders adapted to be introduced therein, developing-cups in conjunction with said plate-holders, removable heads adapted to open communication between the interior of said plate-holders and said cups, said casing having a lateral extension opposite the said removable heads, a removable cover for said extension, and means for advancing said removable heads into said extension, said cover being adapted to exclude light from the interior of said casing.

22. In apparatus of the class described, in combination, a casing, a plate-holder adapted to be introduced into said casing, a developing-cup in connection with said plate-holder, a sliding head carried by said plate-holder, and adapted to open communication between the interior of said plate-holder and said cup, said casing having a lateral extension opposite to said sliding head, a removable cover for said extension, a member carried in said extension and adapted to withdraw said sliding head, and a removable connection between said member and said sliding head.

23. In apparatus of the class described, in combination, a casing, a plate-holder adapted to be introduced into the same, a developing-cup, a sliding head carried by said plate-holder and adapted to open communication between

the interior thereof and said cup, said casing having a lateral extension opposite to said sliding head, a pull-rod carried in said extension, a removable cover for said extension, and a hook-and-eye connection between said pull-rod and said sliding head.

24. In apparatus of the class described, in combination, a developing-casing adapted to receive plate-holders, said casing having a lateral extension, a removable cover for said extension, a removable cover for said casing adjacent to said extension, said covers having overlapping edges adapted to exclude the light from the interior of said casing, and members carried in said extension and adapted to open said plate-holders.

25. In apparatus of the class described, in combination, a developing-casing adapted to receive plate-holders, and having a lateral extension, a removable cover for said casing, a removable cover for said extension, said removable covers having abutting edges, means whereby said edges may exclude the light, members carried within said extension and projecting through the wall thereof, said members being adapted to open said plate-holders, and developing-cups adapted to receive the plates from said plate-holders.

26. In apparatus of the class described, in combination, a developing-casing, comprising, in combination, a body adapted to receive plate-holders and having a lateral extension, said lateral extension having a removable head, members mounted in said head and adapted to open said plate-holders, and developing-cups adapted to receive the plates from said plate-holders.

27. In apparatus of the class described, in combination, a casing adapted to receive plate-holders, said casing having an opening in the vertical wall thereof and a substantially horizontal extension below said opening, a removable cover for said extension, the inner edge whereof projects beyond the edges of said casing, said cover having an upwardly-projecting flange near the inner edge thereof, a removable cover for said opening, the edge whereof abuts said flange, members carried within said extension and projecting through the wall thereof, said members being adapted to open said plate-holders.

28. In apparatus of the class described, in combination, a casing having a substantially horizontal extension and an opening in the vertical wall thereof above said extension, said casing being adapted to receive plate-holders, the lower edges whereof are in substantial alinement with said extension, a removable cover for said opening, a removable cover for said extension, a removable head for said extension, and members mounted in said head and adapted to open said plate-holders.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOSEPH LESPÉRANCE.

Witnesses:
T. MYNARD,
M. MCALEER.