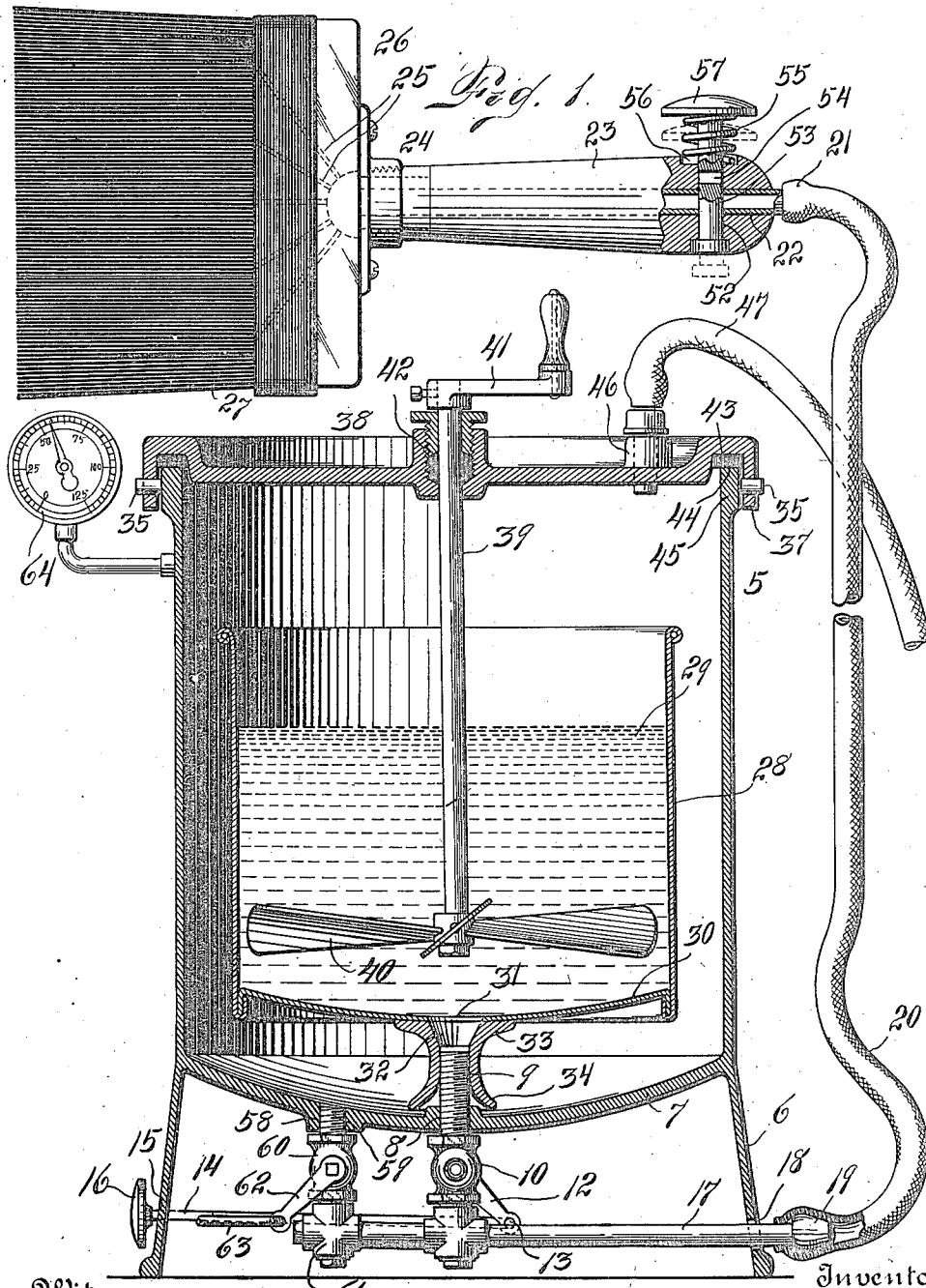


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 APPLICATION FILED MAR. 30, 1916.

1,254,429.

Patented Jan. 22, 1918.
 2 SHEETS—SHEET 1.



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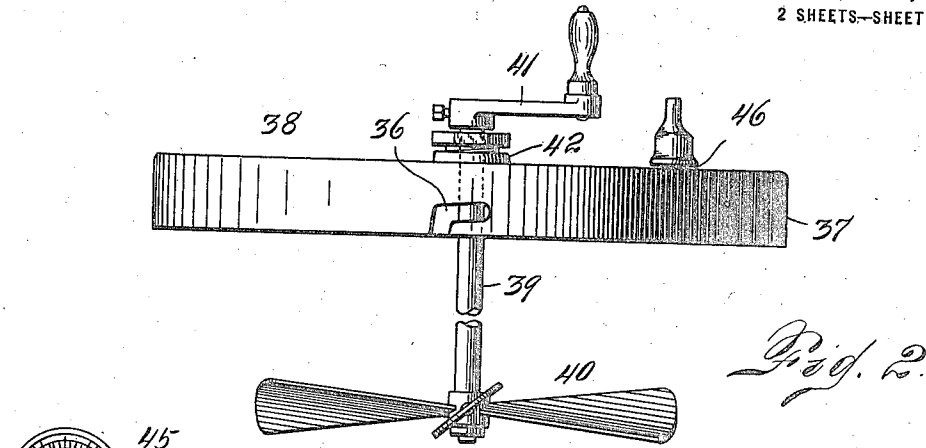


Fig. 2.

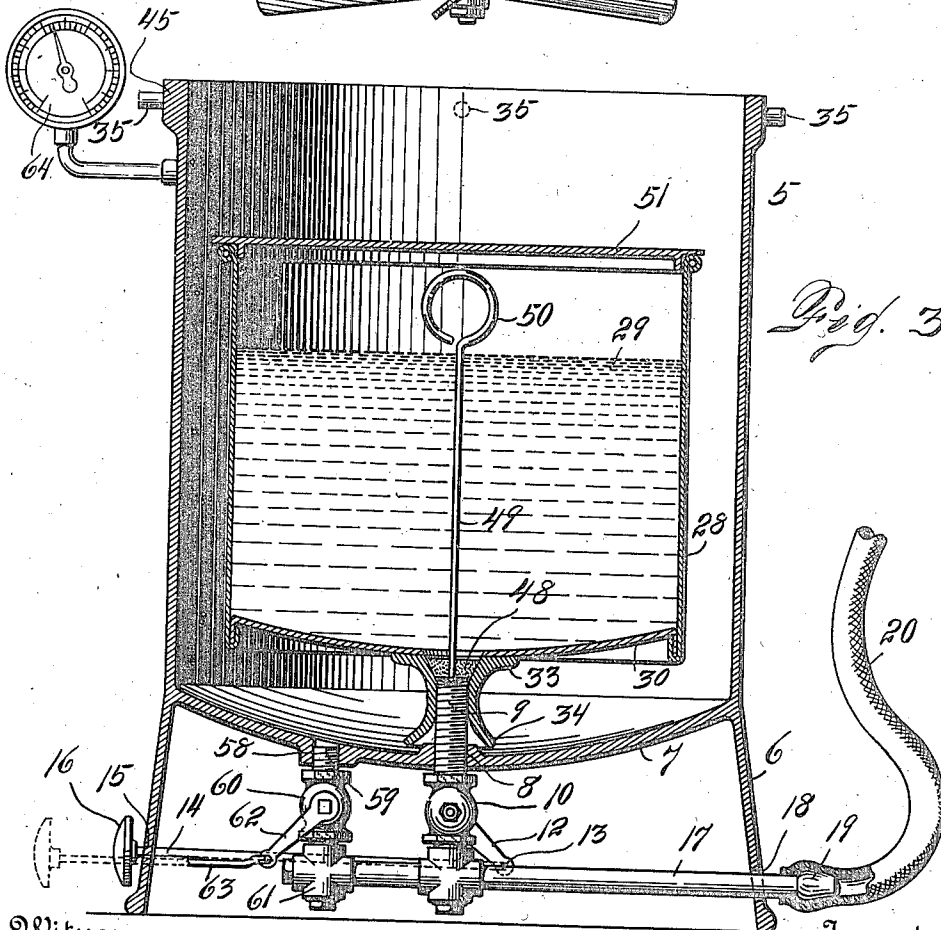


Fig. 3.

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UNITED STATES PATENT OFFICE.

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AUTOMATIC PAINTING APPARATUS.

1,254,429.

Specification of Letters Patent.

Patented Jan. 22, 1918.

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To all whom it may concern:

Be it known that I, CHARLES H. PARMELEY, a citizen of the United States, residing at the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Automatic Painting Apparatus; and I do 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, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in painting apparatus, my object being to provide a construction whereby the paint shall be subjected to air pressure for the purpose of feeding it to and through the brush to the surface to be painted, the brush being manually manipulated in the usual way. My improvement includes an outer tank or receptacle, adapted to receive a smaller tank which is readily removable, in order that the color of the paint, or that different kinds of paint may be dispensed through the medium of the same apparatus as circumstances may require. Provision is made for connecting the inner tank or receptacle with the outer or larger tank, whereby the paint may pass from the inner tank, through an outlet fixed in the bottom of the larger tank, and pass thence through a valve-controlled opening into a hose pipe of suitable length which is connected with the handle of the paint brush, the latter being open to allow the paint to pass therethrough, into and through the head of the brush which is provided with perforations communicating with the longitudinal opening through the handle. Provision is made for introducing compressed air into the tank through the medium of a manually operated air pump of ordinary construction, or in any other suitable manner. Provision is also made for cleaning out the conduit by opening communication between the air pressure in the outer tank and the conduit which is in communication with the paint brush.

Having briefly outlined my present improvement I will proceed to describe the same in detail, reference being made to the

accompanying drawing, in which is illustrated an embodiment thereof. In this 55 drawing,—

Figure 1 is a vertical section taken through the two tanks or receptacles, and showing the same connected in operative relation with a paint brush, the handle of 60 which is also shown partly in section.

Fig. 2 is an elevation of the cover for the outer tank shown in connection with the agitator, adapted to enter the inner tank or paint receptacle. 65

Fig. 3 is a vertical section taken through the two tanks showing the cover and agitator removed.

The same reference characters indicate the same parts in all the views. 70

Let the numeral 5 designate an outer tank or receptacle which is supported upon a base 6 surrounding and extending below the bottom 7 of the tank which is provided with a central opening 8 interiorly threaded to receive an exteriorly threaded outlet pipe 9 75 which extends both above and below the bottom, the part below the bottom being provided with a valve 10 whose valve piece is connected with an arm 12 with which is pivotally connected as shown at 13, a rod 14 which passes through an opening 15 80 formed in the base 6, its outer extremity being equipped with a hand-hold 16 for convenience of manipulation. The lower extremity of the protruding part of the outlet 9 is in communication with a rigid pipe member 17 which passes through an opening 18 formed in the base 6, its outer extremity being connected in operative relation as shown at 19 with a flexible hose pipe or conduit 20 whose opposite extremity is connected as shown at 21 with the outer end of a tube 22 passing centrally through and forming a part of the handle 23 of the 85 paint brush 24. This tube 22 communicates at the inner extremity of the brush with perforations 25 which pass through the head 26 of the brush and open at the base of the bristle portion 27. 90 100

The outlet 9 extends sufficiently above the bottom 9 of the tank 5, to form a connection with the bottom of an inner receptacle 28 which holds the paint 29 to be used. The bottom 30 of the receptacle 28 is provided with an opening 31 which communi- 105

cates or registers with an opening 32 in a member 33 made fast to the bottom of the receptacle and interiorly threaded below its opening 32 to cooperate with the exterior threads of the pipe 9. The lower portion of the member 33 is flared outwardly as shown at 34, below the interior threads which cooperate with the exterior threads of the part 9. Hence, when the receptacle 28 is introduced into the tank 5, it is connected with the outlet pipe 9 by turning the receptacle 28 sufficiently to interlock the cooperating screw threads of the adjacent parts 9 and 33.

The upper extremity of the wall of the tank 5 is equipped with a number of pins 35 adapted to cooperate with angle slots 36 formed in the flange 37 of a cover 38 in the center of which is journaled a shaft 39 having agitating blades 40 at its lower extremity and an operating hand crank 41 at its upper extremity. This shaft passes through a stuffing box 42 in the cover, whereby an air-tight joint is formed around the shaft 39. The outer portion of the cover 38 is provided with a circumferential groove 43 in which is located a gasket ring or packing 44 which is engaged by the upper edge 45 of the wall of the tank 5, whereby an air-tight joint is formed between the cover and the upper edge of the tank 5. The cover 38 is equipped with an inwardly-opening check valve 46 with which the hose pipe or conduit 47 of an air pump (not shown), is connected, through the medium of which the pressure within the tank 5 may be raised to the desired degree, say 100 pounds to the square inch, in order to furnish the necessary pressure, to force the paint 29 through the path which it must take in order to reach the bristles of the paint brush, as heretofore described.

When the receptacle 28 is originally placed in the tank 5, the opening 32 is closed by a plug 48 which is connected with the lower extremity of a rod 49 whose upper extremity is equipped with an eye 50 for convenience in hand manipulation. After the receptacle 28 is placed within the tank 5 and connected with the outlet 9 as heretofore explained, the lid or cover 51 may be removed from the receptacle 28, and the plug 48 also removed from the opening 32. The cover 38 may then be placed upon the tank 5 and connected therewith in operative relation through the medium of the bayonet joint connection illustrated, or in any other suitable manner. The shaft 39 may then be turned, whereby the paint within the receptacle 28 may be thoroughly agitated and mixed, whereby it is made homogeneous in character. Up to this time the valve 10 has been closed. As soon as the operator is ready to apply the paint through the medium of the brush 24, the valve 10 is opened by manipulating the

rod 14 or moving it from the full line position in Figs. 1 and 3 to the dotted line position in Fig. 3. Before opening this valve, however, the pressure within the tank 5 and upon the paint 29 in the receptacle 28 should be raised to the desired degree through the introduction of air under pressure by way of the check valve 46, a conduit 47 and a hand pump (not shown), or in any other suitable manner.

The handle 23 of the paint brush is equipped with a transverse opening 52 which intersects the tube 22, and in which is located a valve piece 53 having an opening 54 which is normally held out of register with the tube 22 by a spiral spring 55 having one extremity seated in a recess 56 in the handle, while its opposite extremity bears against a head 57 of the valve piece. When the operator desires that the brush shall be filled with paint, he presses on the head 57 of the valve piece, whereby the opening 54 is brought into register with the opening of the tube 22. As soon as this occurs the paint is forced through the route or path heretofore described, into the bristle portion 27 of the brush. The operator after the brush is loaded, may release the pressure upon the head 57 when the valve piece 52 will be returned to its normal or closed position; and, as often as a new supply of paint is needed, the operator repeats the pressure on the head 57 of the said valve piece.

The tank 5 is further provided with an opening 58 in its bottom, into which is screwed as shown at 59, a short pipe member provided with a valve 60, the short pipe member being in communication as shown at 61 with the pipe 17 through which the paint passes to the brush. This valve 60 is normally closed, the valve piece being equipped with a crank arm 62 which is connected with a rod 63 for manipulating purposes.

When it is desired to change the kind or color of the paint, the valve 10 will be closed and the valve 60 opened, thus allowing the air pressure in the tank 5 to act through the pipe 17, the hose pipe 20, the brush handle and the brush head for the purpose of cleaning out the paint, preparatory to the use of a different kind or color of paint with the apparatus. As soon as this is done, the valve 60 may be closed, the cover 38 of the tank 5 together with the agitator, removed, and the receptacle 28 detached and removed from the tank 5. Another similar receptacle containing the proper kind or color of paint may then be put in place and connected with the tank in the same manner, after which the cover 38 together with the agitator will be restored to the tank 5 and the operation heretofore described repeated.

In order that the user of the apparatus may be advised when the air pressure is raised to the desired limit within the tank, 130

the latter is equipped with a pressure gage 64 which may be of any suitable construction.

Having thus described my invention, what I claim is,—

1. Apparatus of the class described, including a receptacle, a main tank adapted to receive the said receptacle, an outlet member connected with the bottom of the tank and extending both interiorly and exteriorly therefrom, the receptacle being equipped to be detachably connected with the interior portion of the tank outlet, a cover for the tank, an agitator operably connected with the cover, and means for introducing air under pressure into the tank.

2. Apparatus of the class described, including a main tank, an outlet member connected with the bottom of the tank and extending both interiorly and exteriorly therefrom, its interior portion being threaded, a receptacle adapted to enter the tank and having a threaded socket at its bottom adapted to connect with the interiorly projecting part of the outlet of the tank, a valve with which the exterior portion of the tank outlet is equipped, a conduit in communication with said outlet, and a brush connected with the conduit and constructed to allow the contents of the receptacle to

pass therefrom to the brush under the influence of pressure within the tank.

3. The combination of a main tank having an outlet opening in its bottom, a receptacle located within the tank and having an opening in its bottom, a connection between the two openings to permit the escape of the contents of the receptacle from the tank, and a valve-controlled conduit leading from the tank and in communication with said receptacle, the tank being equipped with a second valve-controlled outlet which is also in communication with said conduit.

4. A painting apparatus including a paint receptacle, provided with an opening in its bottom, a main tank adapted to receive said receptacle and having a valve-controlled outlet, a sleeve secured to the bottom of the receptacle in register with the opening therein, the said sleeve being also detachably connected with the outlet of the main tank, a closure to seal the tank and means for compressing the air within the said tank.

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

CHARLES H. PARMELEY.

Witnesses:

GRACE HUSTON,
A. EBERT O'BRIEN.