My invention relates to a paint dispensing device and more particularly to a container for paint or the like having a well formed therein into which a metered quantity of paint may be introduced.

A principal object of my invention is the provision of a paint or similar container the top of which is provided with an opening defining a well into which a paint brush may be inserted to provide the required amount of paint on the brush.

It is a further object of my invention to provide a paint container including a brush receiving well the bottom of which is closed by a depressible gate, the gate being adapted to be opened under the pressure of the brush to permit a limited quantity of paint to flow into the well from the container.

Another object of my invention is the provision of an air-tight container having a paint brush receiving well therein the bottom of which is closed by a depressible gate responsive to pressure exerted upon the brush, the container including an air vent opening in the top thereof closed by a valve element operatively connected to the gate and adapted to open the vent opening when the gate is depressed thereby permitting air to enter the container and effectively meter the paint from the container into the well as desired.

Still a further object of my invention is the provision of a paint dispensing device having a well therein which is so arranged that should the container be tipped over, only the small quantity of paint contained in the well will be free to spill.

Attendant with this object, it is a further object of my invention to position the well in such fashion that even if the container is upset, it will be unlikely that even the paint contained in the well will be spilled.

Still another object of my invention is the provision of a container of the character described which is particularly adapted to be fastened to the user's body as by means of a belt, where it is desired to carry the paint supply and yet release both hands of the user for other purposes.

These and other objects of my invention which will appear hereinafter or which will be apparent to the skilled worker in the art upon reading these specifications, I accomplish by that construction and arrangement of parts of which I shall now describe certain exemplary embodiments.

Reference is now made to the accompanying drawings wherein:

Figure 1 is a plan view of a cylindrical container incorporating my dispensing device.

Figure 2 is a vertical elevation of the device illustrated in Figure 1.

Figure 3 is an enlarged sectional view taken along the line 3—3 of Figure 1.

Figure 4 is a sectional view taken along the line 4—4 of Figure 3.

Figure 5 is an enlarged partial sectional view similar to Figure 3 illustrating the gate at the bottom of the well in the open position.

Figure 6 is a perspective view of the gate element.

Figure 7 is a plan view of a modified container particularly adapted to be worn by the user.

Figure 8 is a partial sectional view illustrating a modified gate construction for the bottom of the well.

Referring now to Figures 1 and 2 of the drawings, I have therein illustrated a cylindrical paint can or container 1 having a removable top 2 interfitting, as at 3, with the can in conventional manner so as to effect a seal. The top of the can is interrupted by an elongated opening 4 into which is fitted the downwardly extending well element 5, the well element being preferably brazed or soldered to the top about the periphery of the opening, as indicated at 6.

The well element 5 extends angularly downwardly from the opening in the top and stops short of the bottom of the container. At its top the well preferably extends above the top of the container and terminates on a plurality of sides in an outwardly flanged lip 7. The lip 7 will preferably extend about three sides of the opening. The arrangement of the well is such that a paint brush 8 may be conveniently and easily inserted in the well.

As best seen in Figures 5 and 6, the bottom of the well is closed by means of a gate 9 having a gasket 10 adapted to make sealing contact with the bottom edges of the well. The gate 9 is provided with a plurality of flanges 11 spaced about its periphery and to which are secured the helical spring elements 12. The opposite ends of the spring elements 12 are connected to fingers 13 secured to the well element 5 at a distance from the bottom thereof sufficient to place the springs under tension and hence maintain the gate in sealing contact with the bottom of the well. The gate is, however, displacable against the tension of the spring elements 12 to open the bottom of the well. As seen in Figure 5, the paint brush 3 when pressed downwardly in the well against the gate, will serve to displace the gate to open the bottom of the well.

The top 2 is also provided with an air vent opening 14 for venting the otherwise sealed con-
a container. This vent is normally closed by a valve element 15 having a gasket 16 covering the vent opening and an extending threaded stem 17 pressing between the container top 2 and a thumb screw 19 threaded to the stem. As will be evident, downward movement of the stem 17 will displace the gasket 16 and hence open the vent. The spring 18, however, normally biases the valve element to the closed position.

The valve stem 17 terminates at its lower end in an eye 20 to which is secured one end of a link 21. The opposite end of the link 21 is connected to the ear 22 carried by the gate 9. The arrangement is such that displacement of the gate 9 will cause the valve element to open the vent, the downward movement of the gate acting through ear 22, link 21, and stem 17 to move the gasket 16 downwardly against the resistance of spring 18.

In the operation of my device, paint will be introduced into the container 1 either by removing the top 2 or by use of the filling opening 23 covered by a cap, such as the screw cap 24. The evaporation of paint in the container is illustrated at 25. Since the bottom of the well element 5 is normally closed by the gate 9, the paint will be prevented from flowing into the well until the gate is displaced to open the bottom of the well to the container. As already indicated, this is done by pressing the paint brush against the gate. However, unless means are provided to vent the container to the outside air, the paint will not flow into the well due to the differential between the air pressure above the paint in the container and the pressure of the outside air. When the vent 14 is opened, the inside and outside air pressure will be equalized and hence the paint will flow into the well. The arrangement is such that the container will be vented only at such times as the gate is depressed, and this results in a metering of the paint into the well. Of course, once the desired amount of paint is metered into the well, the pressure on the gate will be released and it will be closed by the action of the springs 12.

At the same time, the valve 15 will close the vent opening. Should the paint can be upset when in use, only that small quantity of paint contained in the well 8 would be spilled. However, even the spilling of this small amount can be largely eliminated by inclining the well in the manner illustrated in Figure 3, wherein it will be seen that the well is inclined from the vertical and extends downwardly and outwardly toward the side of the container. Thus should the can be upset, there is an even chance that it will be upset in such fashion that the inclination of the well will prevent the paint contained therein from running out. Should the overturned can fall on its other side—that so the paint would readily run from the well—it would be noted that the well is displaced outwardly from the center of the container so that the paint will flow across a substantial portion of the container top before it would overflow onto the floor or other surface. Since only a small quantity of paint is contained in the well, it is unlikely that such overflow would occur.

Modifications may be made in my invention without departing from the spirit of it: and I have illustrated several of these modifications in the drawings. In Figure 3, for example, the bottom of the container may be inclined, as at 26, toward the bottom of the well so as to assure a supply of paint at the bottom of the well even when the quantity contained in the paint can is relatively small.

In Figure 8 I have illustrated an alternative form of spring means for maintaining the gate in contact with the bottom of the well. In this embodiment the helical spring elements 12 are replaced with a flat or leaf spring element 27 configured so as to hold the gate in sealing contact with the bottom of the well. As before, the gate is depressed against the resistance of the spring element.

In Figure 7, I have illustrated a modified dispensing container particularly adapted for use when painting from a ladder or other difficult position wherein freedom of the user's hands is desired. In this embodiment the container 20 is of curved configuration and adapted to be strapped to the user's waist by means of a belt 28. The container may be formed with an integral top, and as before is provided with an opening 4 into which is fitted well element 5. The valve element 15 and other operating mechanism is the same as that which has been previously described; and the container will be filled through the filling opening covered by a screw cap 24.

Other modifications of my invention may be made without departing from the spirit of it. For example, the gate may be hingedly connected along a longitudinal edge of the well and may or may not be provided with spring means contacting the gate to hold it closed. Where the spring means is eliminated, the spring element 18 of the valve may be relied upon to maintain the gate in the closed position, the spring acting through the link 21 and ear 22 to draw the gate closed.

Having, however, described my invention in certain exemplary embodiments, what I desire to secure and protect by Letters Patent is:

1. A dispensing device for paint and the like, a closed container including a top having an opening therein, a well element carried within said container extending downwardly from said opening, said well element stopping short of the bottom of said container and being open at the top and bottom, a gate normally closing said vent opening, linking means operatively connecting said valve element to said gate and acting, upon displacement of said gate to open the bottom of said well to the flow of paint from the container, an air vent in the top of said container, a valve element normally closing said vent opening, linking means operatively connecting said valve element to said gate and acting, upon displacement of said gate, to open said air vent, whereby to permit a limited quantity of air to enter the container and thereby meter the paint into said well when said gate is displaced.

2. The structure claimed in claim 1 including spring means normally biasing said gate into sealing contact with the bottom of said well.

3. The structure claimed in claim 1 including spring means normally biasing said gate into sealing contact with the bottom of said well, said spring means comprising a plurality of helical spring elements each connected at one end to a peripheral edge of said gate and at the other end to a finger mounted on said well intermediate the ends thereof.

4. The structure claimed in claim 1 including spring means normally biasing said gate into sealing contact with the bottom of said well, said spring means comprising a leaf spring ele-
ment connected at one end to said gate and at the other end to said well.

5. The structure claimed in claim 1 wherein said well terminates at its upper end in an outwardly flanged lip extending upwardly from the top of said container about a plurality of the sides of said well.

6. The structure claimed in claim 1 wherein the opening in the top of said container is displaced outwardly from the center of said top, and wherein said well is inclined downwardly and outwardly toward a side of said container.

7. The structure claimed in claim 1 wherein the bottom of said container is inclined with the lowermost portion thereof underlying the bottom of said well.

8. The structure claimed in claim 1 wherein the top of said container includes a filling opening closed by a cap.

9. The structure claimed in claim 1 wherein said container is of curved configuration and provided with a belt so that it may be strapped to the waist of the user.

10. In a dispensing device for the purposes described, a container top adapted to make sealing contact with a container body, said top having an opening therein, a wall element extending downwardly from said opening, said well element being open at the top and bottom, a depressible gate covering the bottom of said well and making sealing contact therewith, spring means normally maintaining said gate in sealing contact with the bottom of said well, said gate being depressible against the pressure of said spring means to open the bottom of said well, a vent opening in said top adjacent said well, a spring biased valve normally closing said vent openings, linking means extending between said valve and said gate, said linking means acting upon depression of said gate to open said valve against the spring bias thereof.

No references cited