April 18, 1939. G. E. WEISSERT 2,154,549

LACQUER DISPENSING VALVE

Filed Aug. 8, 1938

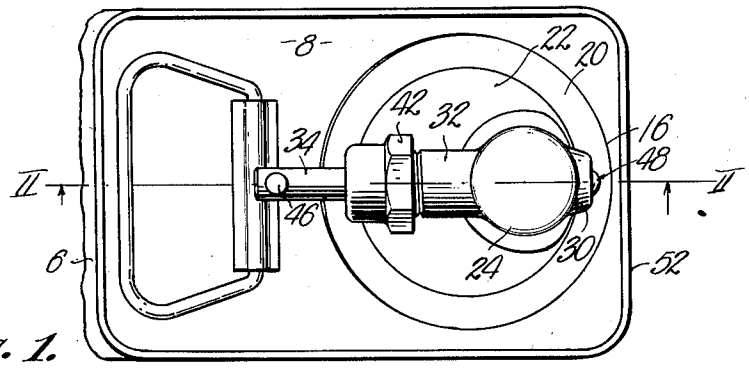


Fig. 1.

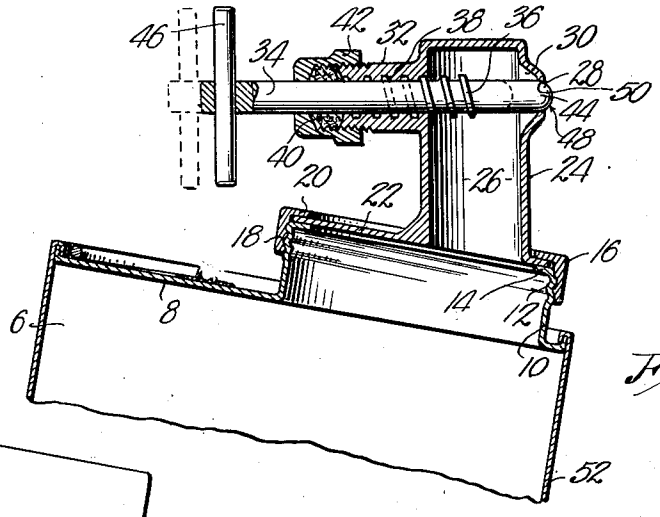


Fig. 2.

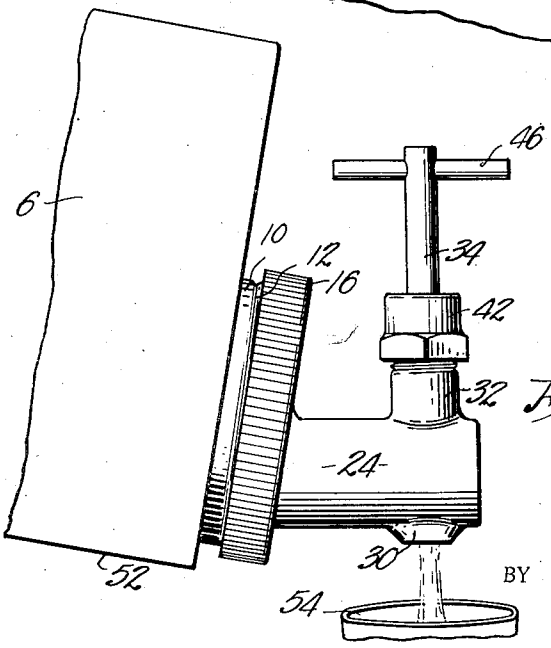


Fig. 3.

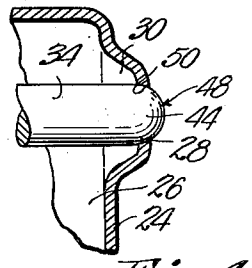


Fig. 4.

INVENTOR.
GERALD E. WEISSERT
BY Howy & Hamilton
ATTORNEYS

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LACQUER DISPENSING VALVE

Gerald E. Weissert, Kansas City, Mo., assignor to Sewall Paint & Varnish Company, Kansas City, Mo., a corporation of Missouri

Application August 8, 1938, Serial No. 223,711

7 Claims. (Cl. 221—22)

This invention relates to valves of the type employed in dispensing lacquer or similar substance from containers, and the primary object is to provide a specially formed valve assembly which may be attached to conventional lacquer containers so that the longitudinal axis of the valve is disposed at an angle to the end of the container in order that substantially all of the liquid therein may be withdrawn when the valve is disposed horizontally.

Another important aim of the instant invention is the provision of a valve assembly for lacquer containers that is particularly useful when the container is mounted upon on inverted rack of the conventional form which is now employed in the paint industry by color mixers.

Another important object of the invention is to provide a dispensing valve for containers which comprises a hollow body through which is transversely passed a specially formed valve stem having threads thereon, which threads are in the cavity within the hollow body when the valve is closed so that vapors and fumes from within the container may constantly envelop the threads for the purpose of precluding such hardening of the lacquer or paint thereon as would render the valve inoperative after the same had remained unused for an appreciable length of time.

An even further object of the invention is to provide a dispensing valve for containers of lacquer or the like, which has a specially created valve stem one end thereof being provided with a spherical face, a portion of which is projected beyond the hollow body of the valve when in the closed position.

Paint manufacturers and distributors find it necessary to specially mix certain colors of lacquer and paint to meet the requirements of the trade. To accomplish this end, a large number of basic colors are kept in containers which are mounted in racks for the purpose of tipping the containers or inverting them completely to prevent settling during the hours of inactivity. Small quantities of lacquer or paint are drawn from the containers of basic colors and the said quantities thoroughly mixed to produce the desired shade.

The color mixer finds that where valves of the ordinary character are employed, the outlet port thereof usually becomes clogged or filled with hardened lacquer or paint to the extent that drawing the liquid from the container is entirely precluded. In common types of valves it has always been found that the lacquer or paint will coat the threads of the valve stem and render difficult its turning to open and close the valve. In other instances, valves have been applied to containers so that when the valve is in the normal position for drawing lacquer or paint from the container, none is available through the outlet port of the valve, yet there still remains in the container a quantity of the lacquer or paint which must be drained therefrom through some other action than by manipulating the valve.

The valve and its special association with conventional containers embodying the concepts of this invention is intended to overcome the foregoing shortcomings and meet the problems presented in an efficient, economical and desirable manner. The preferred embodiment of the invention is illustrated in the accompanying drawing wherein:

Figure 1 is an end elevation of a conventional lacquer of paint container equipped with a valve assembly made in accordance with this invention.

Fig. 2 is a vertical central section through the valve assembly and portions of the container taken on line II—II of Fig. 1.

Fig. 3 is a side elevation of the valve showing the same attached to a container which has been tipped; and,

Fig. 4 is an enlarged fragmentary detailed sectional view through one end of the valve stem and the seat therefor at the outlet port.

The conventional type gallon container **6** has a flat end wall **8** from which projects a neck **10** provided with screw threads **12**. The free end of neck **10** has an internal flange **14** upon which may be seated a well-known gasket or washer if such is necessary to preclude leakage when applying the valve to neck **10**.

A collar **16** having a screw threaded annular wall **18** engages threads **12** of neck **10** when it is desired to secure the valve in the operative position. Annular inturned flange **20** forming a part of collar **16** is moved against the outer face of plate **22**, the inner face of which rests directly against flange **14** or the gasket carried thereby.

Hollow body **24** may be integral with plate **22** or otherwise formed rigid therewith so that it is positioned eccentrically to the axis of the plate and very near the edge thereof. Cavity **26** formed in body **24** is in communication with neck **10** and therefore, with the interior of container **6**, so that the lacquer or other liquid in container **6** may flow directly into cavity **26** and thence therefrom through outlet port **28** which is formed through the annular wall of body **24**.

A hollow boss **30** is created in that portion of

the wall of body 24 wherein outlet port 28 is formed. An internally threaded boss 32 integral with body 24 and diametrically opposite boss 30 receives valve stem 34 upon which is provided screw threads 36 which engage the internal threads 38 of boss 32.

Packing 40 and packing nut 42 complete the means of maintaining valve stem 34 in the operative position where it may be rotated to move the spherical head 44 thereof toward and from a position closing outlet port 28. This spherical head 44 is formed upon one end of valve stem 34 while a handle 46 is provided at the other end thereof.

The spherical surface 48 on head 44 engages seat 50 which has a contour complementary to that portion of surface 48 which moves thereagainst when the valve is closed. That portion of surface 48 beyond seat 50 is projected outwardly from body 24 through outlet port 28 and therefore may be quickly cleaned by the operator because when the assembly is in the position illustrated in Fig. 3 and the valve is closed, any collected lacquer or paint will form at the extreme end of valve stem 34 in the nature of a globule and the remaining portion of the projected spherical face 48 will free itself from any collection of the material being dispensed.

Plate 22 is disc shaped and hollow body 24 is a thimble-like structure which should be positioned at the lowest portion of disc 22 when the valve is attached to container 6 for use as is the custom when employing tipping racks for the containers. Collar 16 may be turned to tighten plate 22 when hollow body 24 is located as desired. When this collar 16 is turned, plate 22 and its associated parts need not be rotated and therefore quick and efficient attachment to the conventional container 6 is permitted.

The horizontal axis of hollow body 24 extends outwardly from plate 22 at an angle of the plane of said plate. This angle is preferably as illustrated, so that when outlet port 28 and the axis of body 24 is on a horizontal plane, the central longitudinal axis of container 6 will extend upwardly and outwardly from the valve. In other words, if the longitudinal axis of hollow body 24 is extended, it will intersect the side 52 of container 6 close to the line of attachment between side 52 and end wall 8.

In Fig. 3, body 24 of the valve assembly is in the position where the operator is drawing liquid from container 6 and causing such liquid to enter a small container 54 which is positioned upon any suitable support below the valve. This container 54 should be carried by a horizontal support, for in this business, measuring instruments are employed to insure accuracy and therefore the container 54 must be placed as just set down.

The valve assembly having a head 44 through an outlet port 28 in the nature of that previously described, permits withdrawing exceptionally small quantities of liquid from container 6. The liquid is withdrawn when container 6 is in the inclined position illustrated in Fig. 3, and the rack holding the container 6 maintains the said container in the position shown so long as it is desired to withdraw liquid therefrom. Manifestly, when container 6 is inclined as shown, and the valve is in the proper position thereon, a very small amount of liquid need be left in the container when the valve can no longer withdraw liquid therefrom. Such disposition of valve and container therefore not only insures that practically all of the liquid is withdrawn from the container when the valve is in the normal position (Fig. 3) but the position of valve stem 34 and handle 46 is always the same and convenient to the operator.

One skilled in the art will find additional advantages when using a dispensing valve made in accordance with this invention, and while the preferred embodiment has been illustrated and described, it is desired to be limited only by the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A dispensing valve for containers having a flat end-wall and a neck extending outwardly from the said wall, comprising a plate having one side thereof bearing against the free end of said neck; means to secure the plate in position against the neck; and a hollow body having an outlet port in the side thereof, extending outwardly from the other side of the plate, said hollow body being eccentrically positioned on the plate near the edge thereof.

2. A dispensing valve assembly for containers having a flat end wall and a threaded neck extending outwardly from the said end adjacent to its line of juncture with the side wall of the container, comprising a plate having one side thereof bearing against the free end of said neck; a collar having an inwardly directed flange overlying the marginal edge of the plate in screw threaded engagement with the threaded neck to hold the plate in a selected position against the neck; a hollow body having an outlet port in the side thereof extending outwardly from the other side of the plate from a point adjacent to the edge thereof; and a valve stem movable to open and close the outlet port, the extended longitudinal axis of said hollow body intersecting the side of said container when in the operative position.

3. A valve for dispensing lacquer or the like from containers, comprising a hollow body providing a cavity in communication with the container and an outlet port in the side of the body; a valve stem extending transversely through the body with a portion thereof in the cavity; a head on one end of the valve stem movable to and from a position against the edge of the body around the outlet port for closing the said outlet port; and threads on that portion of the valve stem extending through the cavity when the head is in position to close the outlet port.

4. A valve for dispensing lacquer or the like from containers, comprising a hollow body providing a cavity in communication with the container and an outlet port in the side of the body; a valve stem extending transversely through the body with a portion thereof in the cavity; and a spherical head formed on one end of the valve stem movable to and from a position closing the said outlet port, a portion of said spherical head being exteriorly of the hollow body when the head is in position to close the outlet port.

5. A valve for dispensing lacquer or the like from containers, comprising a hollow body providing a cavity in communication with the container and an outlet port in the side of the body; a valve stem extending transversely through the body with a portion thereof in the cavity; and a spherical head formed in one end of the valve stem movable to and from a position closing the said outlet port, a portion of said spherical head being exteriorly of the hollow body when the

head is in position to close the outlet port, said body having a seat for the head formed on the edge of the body around the outlet port, said seat having a contour complementary to the spherical surface of the head.

6. A valve for dispensing lacquer or the like from containers, comprising a hollow body providing a cavity in communication with the container and an outlet port in the side of the body; a valve stem extending transversely through the body with a portion thereof in the cavity; a spherical head formed on one end of the valve stem movable to and from a position closing the said outlet port, a portion of said spherical head being exteriorly of the hollow body when the head is in position to close the outlet port; and threads on that portion of the stem extending through the cavity when the head is in position to close the said outlet port.

7. A valve for dispensing lacquer or the like from containers, comprising a thimble-like body having diametrically disposed openings formed through the side thereof near the closed end of the body; internal screw threads formed on the body along the surface around one of said openings; and a valve stem in screw threaded engagement with the said screw threads of the body extending transversely through the body, one end of said valve stem having a spherical face formed thereon, a portion of said spherical face being seated against the body at the other opening when the remaining portion extends outwardly through that opening beyond the said body, the other end of said valve stem having an operating handle thereon.

GERALD E. WEISSERT.