Oct. 16, 1934. F. A. TALBOT 1,977,360

LIQUID DISPENSING CONTAINER AND PUMP

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Fig. 1.

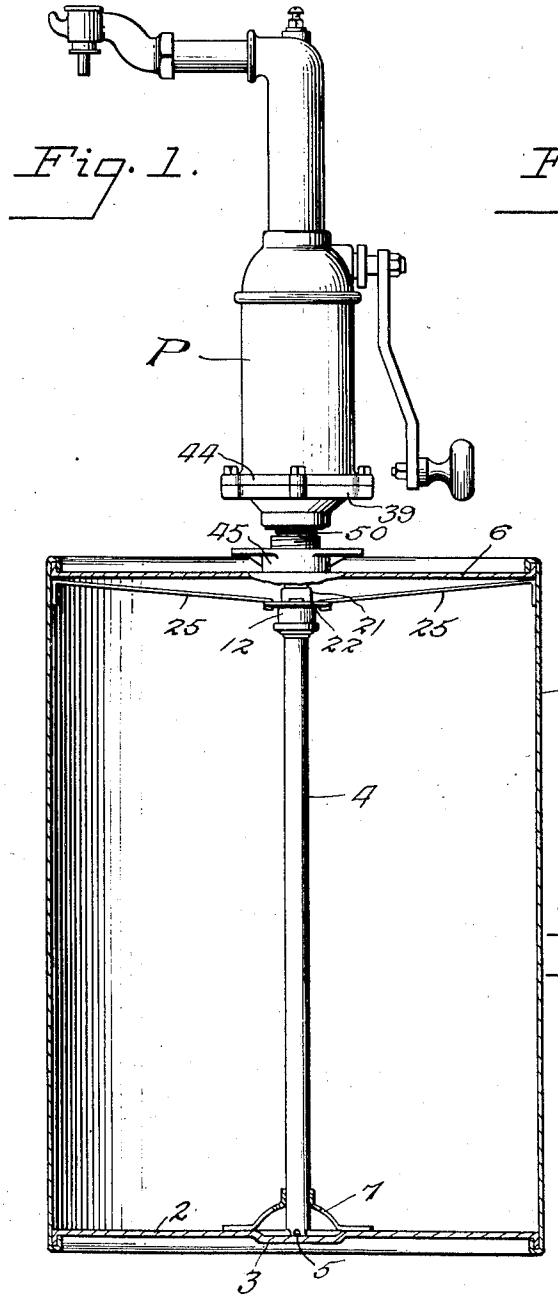


Fig. 4.

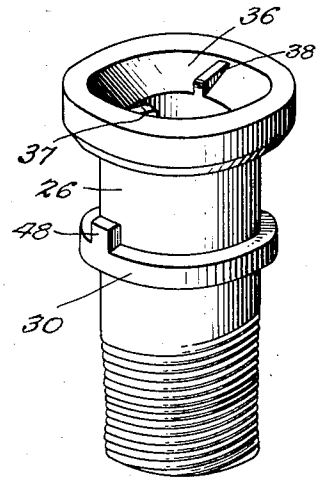
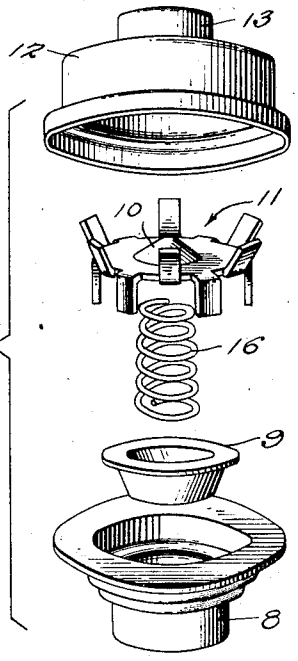


Fig. 5.



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Fig. 2.

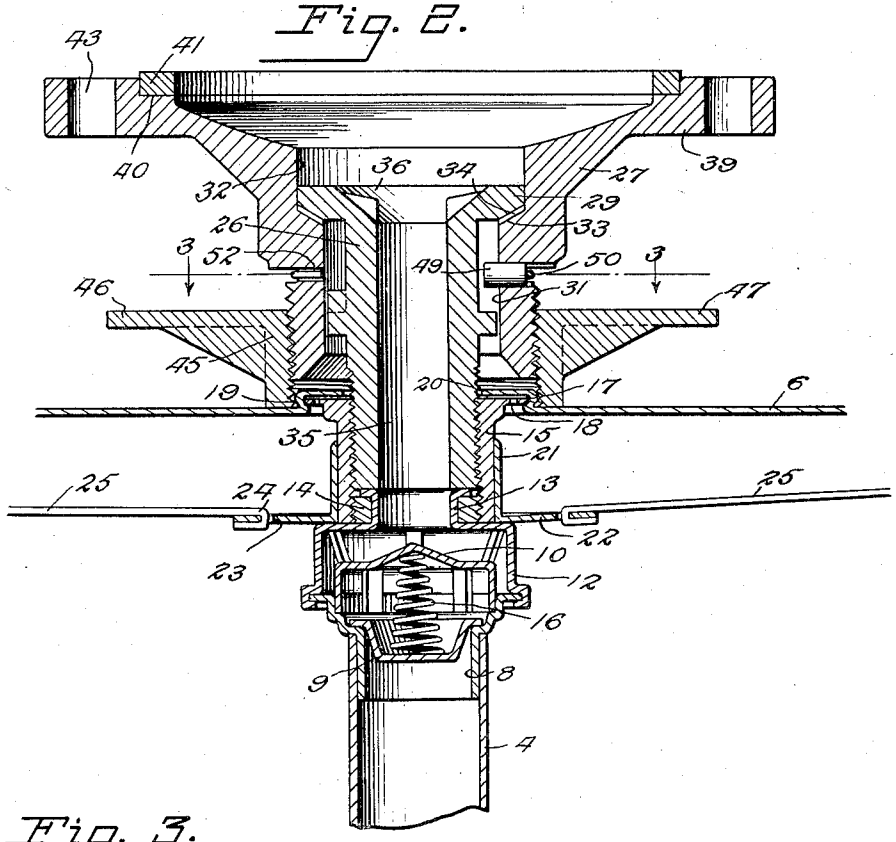
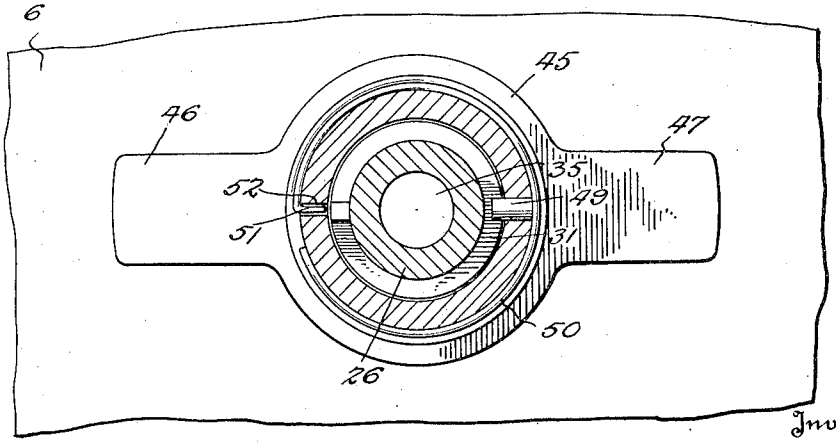


Fig. 3.



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LIQUID DISPENSING CONTAINER AND PUMP

Frank A. Talbot, Baltimore, Md.

Application October 19, 1933, Serial No. 694,357

6 Claims. (Cl. 221—80)

This invention relates to a combined liquid dispensing container and pump in which the connection between the container and pump permits the pump to be swung about an axis perpendicular to the supporting wall of the container and may be locked in any desired position of adjustment about said axis.

The main object of the invention is to provide apparatus of this character having means for connecting the pump to the container including a swivel base which can be readily connected to and detached from a bung hole fitting on the container.

Another object of the invention is to provide the container with a fitting adapted to receive the swivel base of the aforesaid pump, and containing a check valve permitting withdrawal of liquid from the container by said pump, but preventing the passage of liquid in the reverse direction into the container.

A further object of the invention is to provide apparatus of this character in which the aforesaid check valve operates as a check valve for the pump and in which the usual check valve of the pump is eliminated.

Other objects of the invention will become apparent as the detailed description thereof proceeds.

In the drawings:

Figure 1 is a side elevation of a liquid dispensing container provided with the present invention;

Figure 2 is a vertical transverse section through the check valve fitting of the dispensing container and the swivel base of the pump connected thereto;

Figure 3 is a horizontal section taken on the line 3—3 of Figure 2;

Figure 4 is a perspective view of a coupling element forming part of the swivel base; and

Figure 5 is an exploded perspective of the check valve.

In the drawings, the dispensing device is shown as a drum 1 having a bottom wall 2 provided with a sump 3 receiving the lower end of a well 4. The end of the well 4 is slightly spaced from the bottom of the sump 3 to allow liquid to be drawn upwardly in the well 4 by means of the pump mechanism connected to the head 6 of the drum. The lower end of the well 4 may be provided with suitable braces 7 to maintain the well in position or the braces can be omitted if desired. No particular invention is involved in the provision of the sump 3 or the supporting braces 7 as this construction is common in the art.

The well 4 extends upwardly through the tank 1 and at its upper end receives a cylindrical member 8 shaped to form a seat for a check valve 9. The check valve 9 is reciprocable toward and from a guard plate 10 forming part of a cage 11 (see Figure 5). This cage 11 is secured in a casing 12 suitably shaped for connection to the member 8, and is provided at its upper end with a recess 13 in which is seated an annular nut 14 screwthreaded into a bung hole member 15. A spring 16 interposed between the valve 9 and the guard 10 serves to keep the valve 9 normally closed and is sufficiently strong to prevent the flow of liquid from the container 1 during the handling and shipment thereof. The operation of this check valve mechanism will be apparent from inspection of the drawings.

The upper end of the bung member 15 terminates in an outwardly directed flange 17 which is provided with vent 18. The flange 17 has its periphery securely gripped in a recess 19 formed in the top wall 6 of the drum or container 1. The overhanging recess part of the head 6 is slightly spaced above the flange 17 in order to permit a flow of atmospheric air through the central opening 20 of the recess part 19 of the head 6.

The upper end of this well and check valve mechanism is securely braced to the side wall or head of the tank, as shown in Figure 1. To effect this bracing, the bung member 15 has a sleeve 21 suitably secured thereto and this sleeve has a flange 22 extending outwardly from the lower end thereof. The flange 22 is provided with apertures 23 which receive the hook ends 24 of any desired number of bracing members 25 extending radially toward the wall of the container and suitably secured thereto. It is immaterial whether these reinforcing strips are secured either to the head of the drum or to the wall thereof; they may be rounded over into the chime of the drum. The invention is only concerned with the reinforcing of this particular part of the mechanism and not with any particular means for effecting the reinforcement.

The pump P comprises coupling members 26 and 27 adapted to connect the pump to the head 6 so that the pump can be rotated about the axis of the well 4 to move the spout 28 of the pump over any desired part of the head 6. As shown particularly in Figure 2 of the drawings, the coupling member 26 is externally screwthreaded at its lower end to be received in the internally screwthreaded bung member 15. The upper end of the member 26 is extended outwardly to form a flange 29. The member 26, between the ends thereof, is provided with an annular projection 30 having a free sliding fit in the cylindrical bore 31 of the coupling member 27. The diameter of the projection 30 is less than the diameter of the flange 29; and this flange 29 is mounted to slide in a cylindrical bore 32 which is larger than the bore 31 and co-axial therewith. The lower part of the bore 32 is beveled inwardly to form a sloping shoulder 33 having a gasket 34 seated

thereon. The lower edge of the flange 29 is beveled off to correspond with the bevel of the shoulder 33 so as to form a proper fit therewith on the gasket 34.

The member 26 is provided with a central discharge bore 35 and this bore terminates at its upper end in an outwardly beveled part 36 which is provided at diametrically opposite points with projecting lugs 37 and 38 designed to prevent anything in the nature of a ball valve from closing the discharge bore 35.

The upper end of the member 27 above the bore 32 is outwardly beveled and expanded to form a flange 39 provided with a seat 40 for a gasket 41. The flange 39 is provided with radially extending lugs 42 having apertures 43 adapted to receive bolts for detachably securing the correspondingly shaped base 44 of the pump P to the said flange. The lower reduced part of the coupling 27 is externally screwthreaded to receive a lock nut 45 provided with radially extending handles 46 and 47 to facilitate the manual operation of the said lock nut.

The annular projection 30 has a lug 48 extending upwardly therefrom and parallel to the axis of the bore 35. This lug 48 is arranged to contact with a pin 49 projecting radially through the wall of the coupling member 27 at the upper end of the screwthreaded part thereof. The pin 49 is held in position by a wire 50 which extends around the said screwthreaded part and has its other end provided with a projection 51 extending into a vent aperture 52. The aperture 52 extends radially through the reduced part of the coupling 27 and into the space between the bore 31 and the outer periphery of the coupling member 27.

As previously stated, the projection 30 is mounted with free sliding fit in the bore 31; and the slight space between the projection 30 and the bore 31 is sufficient to permit the air to pass through the vent aperture 52 along side the periphery of the member 26 and through the opening 20 to the vents 18 formed in the flange of the check valve mechanism secured to the head 6 of the drum. It will be apparent from consideration of Figure 2 of the drawings that the check valve within the drum really constitutes a check valve for the pump. This arrangement is designed to serve as a protective means to prevent fraudulent use of the container. The manufacturer of the liquid provides the container properly identified by his trade-marks or advertising matter, and also provides a similarly identified pump. The purpose of this is to prevent the use of that particular kind of pump with a container in which an unscrupulous dealer may have removed or broken off the check valve mechanism within the container. Since this check valve mechanism operates as an only check valve for the pump; and since the pump proper has no check valve capable of seating on the bevel part 36 of the swivel base, it is obvious that destruction of the check valve mechanism within the container would render the pump mechanism itself useless.

The lug 48 is provided so that when the coupling member 26 is raised in the member 27 the coupling member 26 may be rotated merely by rotating the member 27. After the member 26 is properly seated its flange 29 will be properly seated against the gasket 34 to secure an air tight fit between the two coupling members. When this member 26 is seated, the pin 29 will be raised above the lug 48 so that the member 27 can be freely rotated on the member 26 and slid up and down thereon. In order to maintain the proper fit between the members 26 and 27, it is necessary to rotate the lock nut 45. It will be apparent that the lower edge of the lock nut rests on the top 6 of the drum and that rotation of the lock nut will press the beveled shoulder 33 of the member 27 hard up against the gasket 34. Whenever it is desired to rotate the member 27 and the pump carried thereby, it is obviously only necessary to slacken up slightly on the lock nut 35 and rotate the member 27 and lock nut together; and, when the spout of the pump is in desired position, to operate the lock nut by the handles 46 and 47 to lock the coupling member 27 in the desired position on the drum.

While I have described my invention as embodied in concrete form and as operating in a specific maner in accordance with the provisions of the patent statutes, it should be understood that I do not limit my invention thereto, since various modifications thereof will suggest themselves to those skilled in the art without departing from the spirit of my invention, the scope of which is set forth in the annexed claims.

What I claim is:

1. A liquid dispensing container, a discharge pipe fixed to and extending out from said container, a flange on the outer end of said pipe, a sleeve on said pipe having a seat for said flange, said sleeve forming a base for a pump, and means on said sleeve engageable with said container to force the sleeve seat against said flange.

2. A liquid dispensing container having a discharge pipe extending therefrom, a beveled flange at the free end of said pipe, a sleeve slidable axially on said pipe and having a beveled seat for said flange, the lower end of said sleeve being externally screwthreaded, a flange at the other end of said sleeve forming a base for a pump, and a nut adjustable on said lower end for locking the sleeve to the container in angularly adjusted position on said pipe.

3. A liquid dispensing container having a discharge pipe extending therefrom, a flange at the free end of said pipe, a sleeve slidable axially on said pipe and having a countersink to receive said flange, a base on said sleeve adapted to have a pump secured thereto, and means cooperating with said container and sleeve to lock the sleeve in angularly adjusted position on said pipe.

4. A liquid dispensing container having a discharge pipe extending outwardly therefrom, a sleeve rectilinearly slidable and rotatable on said pipe and having a base for a pump formed thereon, and means for locking said sleeve to said container and in angularly adjusted position relative to said pipe.

5. A liquid dispensing container having a discharge pipe extending outwardly therefrom, a sleeve rectilinearly slidable and rotatable on said pipe, a pump mounted on said sleeve, and means for locking said pump and sleeve to said container and in angularly adjusted position relative to said pipe.

6. A liquid dispensing container having a discharge pipe extending outwardly therefrom, a pump rectilinearly slidable and rotatable on said pipe, and means engaging said container to lock the pump in adjusted position on said pipe.

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