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SEALING MEANS FOR LIQUID CONTAINERS

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Fig. 1.

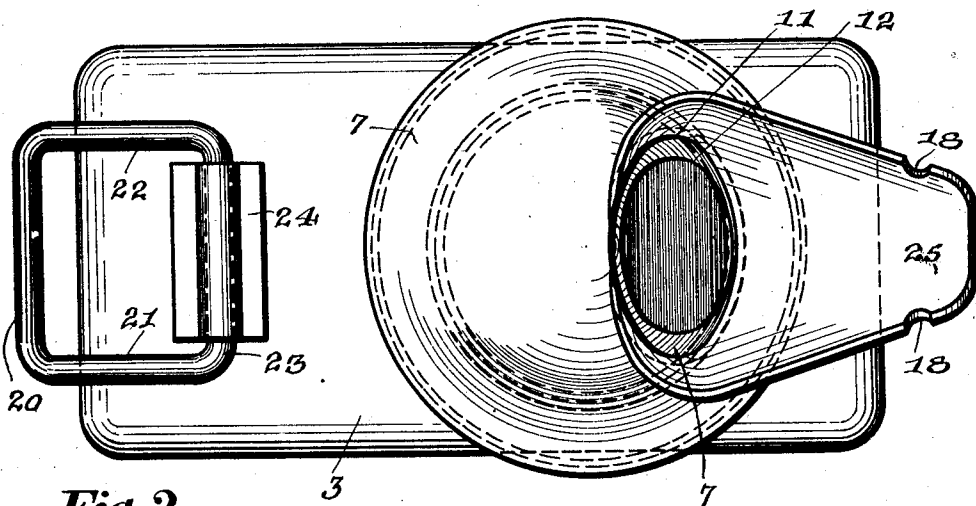
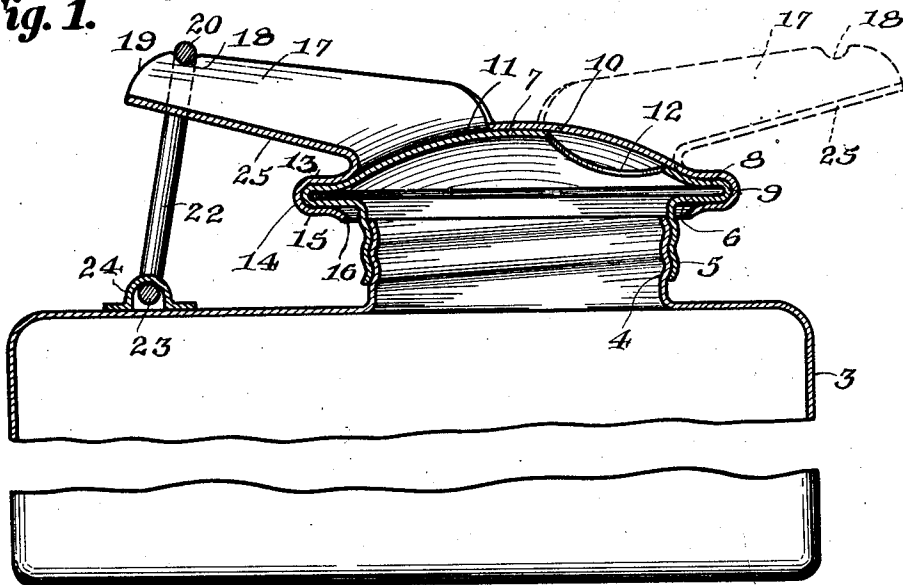


Fig. 2.

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SEALING MEANS FOR LIQUID CONTAINERS

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The present invention relates to improvements in sealing means for liquid containers, and is particularly adapted for use in connection with such liquids as paint, which deteriorates upon contact with the atmosphere.

An object of the invention is to provide a combined closure and pouring means for the container in which an effective seal is provided against the admission of air and foreign matter when the device is in the closed position.

Another object of the invention resides in providing a simply constructed and compact container closure wherein the parts are secured in sealed and closed position, but are constructed for quick release and opening.

It is a further object of the invention to provide an improved container closure and pouring spout arrangement in which the container may be closed by rotating the spout member to one angular position and opened by the simple rotation of the spout member to a different angular position, and wherein the parts are placed under tension and held against rotary movement when in the closed position to effect a tight sealing of the container.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a vertical section, with parts shown in elevation, of an improved device constructed in accordance with the present invention and shown in full lines in the closed and in dotted lines in the open position, and

Figure 2 is a top plan view showing the parts in the open position.

Referring more particularly to the drawings 3 designates a can or container body of sheet metal or other material and 4 represents the upstanding threaded neck through which the liquid contents is received and removed.

In accordance with the present invention a threaded flange 5 is shown as engaged with

the threaded neck 4, the engagement being preferably an air tight one. The flange 5 depends from the lower horizontal wall 6 on the rim portion of the cover 7. The upper wall 8 of the rim portion is spaced above the wall 6 and connected therewith only at the outer edges of the walls by a rounded or curved edge connecting member 9. The cover 7 is preferably of concavo-convex form, with its concavity presented to the interior of the container and its upper convex face providing a support for the complementally formed cap member 10.

Both the cover 7 and cap 10 are preferably of resilient metal and the cap 10 is rotatably mounted on the cap about an axis which coincides substantially with the axis of the neck 4. This enables the opening or orifice 11 at the base of the spout 25, carried by the cap 10, to move into and out of registry with the orifice or vent 12 made in the convex cover 7 offset from the axis of rotation. The cover 10 is provided with the rim wall 13 which lies in a substantially horizontal plane and upon the upper rim wall 8 of the cover 7. This wall 13 connects by a rounded connecting rim piece 14 with the lower wall or flange 15 having the inwardly and downwardly curved edge 16.

The lower wall 15 engages with the lower wall 6. The lip portion 16 enables the trough or flange made up of the parts 13, 14 and 15 to be sprung over the rim portions 6, 8, 9 of the cover; and the parts thus become interlocked together although permitting of a rotary movement of the cap upon the cover.

The side walls 17 of the trough are preferably formed with the notches 18 near the outer ends of the side walls which outer ends 19 are curved or in the form of cam surfaces. A handle member on the container is provided with a connecting bar 20 for riding up the cam edges 19 and settling in the notches 18. This bar is carried by the side arms 21 and 22 which in turn are secured to the hinge bar 23 held in the casing 24, which is affixed to the upper portion of the container 3 in any suitable manner and in position to engage the spout 25 when the same is in the closed position shown in Figure 1.

In the operation of the device, the parts are shown in Figure 1 in the closed and locked position, while in Figure 2, they are shown in the open pouring position.

5 In Figure 2 the openings 11 and 12 are in registry so that on tilting of the container, and the handle 20 is useful for this purpose, the liquid contents of the container will issue through the openings 11 and 12 and onto the 10 trough-like spout 25. When the container is again set upright and it is desirable to close the same, the cap 10 is rotated to shift the spout from the dotted line position in Figure 1 to the full line position and thereupon the 15 rectangular open handle member is swung up from the position shown in Figure 2 to that shown in Figure 1.

In so doing the bar 20 will engage the cam edges 19 and will act to depress the spout 20 member 25. The spout member and the cap 7 are thus placed under tension. This tension is useful for causing the notched portion 18 of the spout member to snap against the locking bar 20, but even in this position the 25 tension will not be entirely relieved but a certain tension will still be communicated to the members 7 and 10, whereby the blank portion of the cap 10 will fit tightly about the vent 11 and cause an effective sealing of 30 the container both against the admission of air and foreign substances which would tend to contaminate and cause deterioration of the contents of the vessel.

The container may be quickly opened by 35 slightly depressing the outer end of the spout member 25 and in forcing the locking bar 20 off the end of the spout; or by simply performing the latter act which will cause the bar 20 to ride up the curved edges of the 40 notches 18 and depress the spout sufficiently to permit escape of the bar. When the spout is free of the container, it may be rotated with the cap 7 to the dotted line position shown in Figure 1. The expansion of the resilient 45 walls 6 and 8 upon the resilient walls 13 and 15 will prevent entrance of air about the rim and flange portion.

I do not wish to be restricted to the size, form and proportions of the various parts, 50 and obviously changes could be made in the construction herein described without departing from the spirit of the invention, it being only necessary that such changes fall within the scope of the appended claims.

55 What is claimed is:—

1. In a container, a perforated cover, a spout rotatable with respect to said cover into and out of registry with the perforated portion of the cover, and means for holding the 60 spout in the non-registering position and drawing said spout down with tension on the cover.

2. In a container, a cover having an outlet orifice, a spout rotatable with respect to 65 the cover for moving into and out of regis-

try with said orifice for opening and closing the container, and means for engaging said spout and placing the same under tension when in the closed position to seal the container.

3. In a container, a yieldable cover having an outlet vent, a yieldable and rotatable cap on the cover for closing said orifice and having a spout opening through the cap to the orifice in one angular position of the cap, and 70 means for engaging said spout for holding the cap against angular movement and for also flexing the cap down upon the cover for sealing the orifice. 75

4. In a container, a convex resilient cover 80 having a vent therein, a concave resilient cap rotatably fitted on the cover for closing the vent, a spout on said cap opening through the cap and adapted to register with the vent in one angular position of the cap, and means 85 engaging the spout for holding the cap against rotation and for placing a tension upon the resilient cap and cover to seal the vent.

5. In a container, a fixed upwardly convex resilient cover having a vent offset from its center, a resilient concave cap interlocked with said cover but adapted to rotate relatively thereto, a spout on the cap offset from the center of rotation and 90 opening through the lower face of the cap for placing the spout in communication with the vent in one angular position of the cap, and means on the container for moving into and out of engagement with the spout when the vent is closed by said cap 95 for holding the spout and cap against rotary movement. 100

6. In a container, a perforated cover, a rotatable cover thereon having a spout at one side for alining with the perforated portion 105 of the cover, and a swinging member adapted to engage the spout in one angular position thereof for holding the spout against rotary movement. 110

7. In a container, a perforated cover, a cap rotatable with respect to the cover and having a spout adapted to register with the perforated portion of the cover and having 115 a notched portion, and a swinging handle for engaging in the notched portion of the spout against rotation.

8. In a container, a perforated cover, a cap rotatable with respect to the cover and having a spout for moving into and out of alignment with the perforated portion of the cover, said spout having a trough and side walls with notched upper portions and rounded 120 outer end portions, and a substantially rectangular handle hinged on the container and adapted to swing about said spout for engaging the rounded end portions and to interlock in said notches, said handle adapted 125 to draw the spout resiliently toward the con-

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tainer for placing the cap and cover under tension.

9. In a container, a container body having a threaded upstanding neck, a perforated cover having a overhanging rim composed of spaced double walls and provided with a downwardly extending threaded flange for engaging the threaded neck, a cap having a flanged portion enveloping the rim of the cover, a spout carried at one side of the cap, and a bail for slipping over the end of said spout in one position thereof.

In testimony whereof, I have affixed my signature.

WILLIAM S. MEGGITT.

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