Feb. 25, 1936. W. J. WARDELL 2,031,623

POURING SPOUT CONTAINER

Filed April 24, 1935

Fig. 1

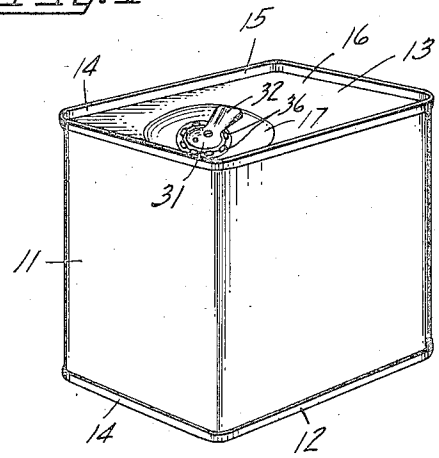


Fig. 2

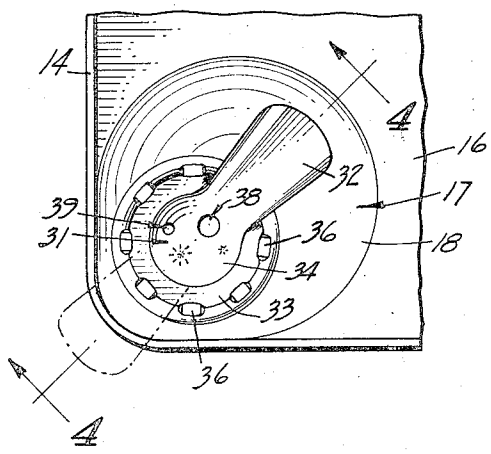


Fig. 6

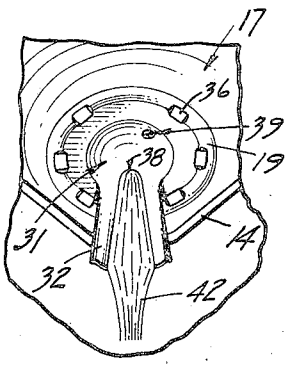


Fig. 4

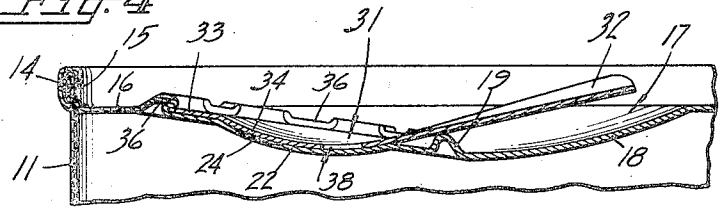


Fig. 5

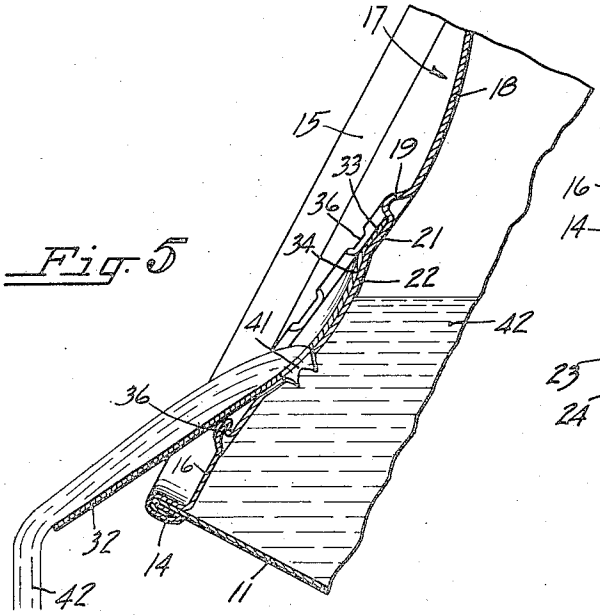
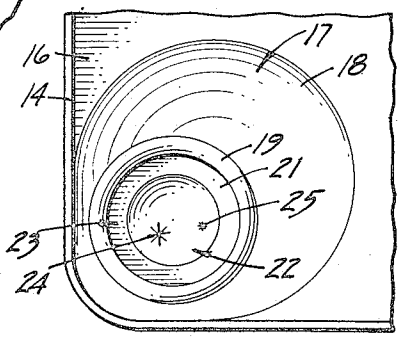


Fig. 3



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POURING SPOUT CONTAINER

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Application April 24, 1935, Serial No. 18,032

4 Claims. (Cl. 221—19)

The present invention relates to container dispensing, and has particular reference to a sealed container or can for liquids which is provided with a pouring spout rotatably confined, in a simple and unique manner, in an end of the can, the spout in one position being disposed within the rim of the can and when moved into pouring position extending beyond the can rim in the latter position of which the can may be opened, the spout unit, following a pouring action, being then adapted to be rotated back into non-projecting position where it functions as a reclosure for the can.

An object of the invention is the provision of a sealed liquid holding container or can having a rotatable pouring spout unit which is rotatably retained in a sunken seat formed in the panel of an imperforate can end that is perforated to open the can, the retaining means being flattened beaded sections struck out as integral parts of the can end wall which hold the spout unit against displacement and at the same time allow for its free rotatable manipulation to cover and uncover the perforations.

Another object of the invention is the provision of a liquid can of the character described wherein the can end is formed with a circular sunken or depressed seat outlined by a peripheral bead formed within the can rim for the reception of the rotatable pouring spout unit, the latter being retained against displacement by flattened sections of the circular bead which overhang the peripheral edge of the spout unit, selective positioning of the spout unit within its seat in the can end providing for free dispensing of the liquid by way of the spout or for reclosing of the opened can.

Yet another object is the provision of a rectangular can having a circular sunken seat surrounded by spaced overhanging ledges formed in the panel of one end adjacent the corner of the can in which is rotatably held a pouring spout unit formed with a circular disc and a spout or trough section which extends laterally and at an angle to the body of the disc, the spout unit being movable in one position to place its spout inside of the plane of the can end rim and in another position to locate its spout across the corner of the can where it projects over the surrounding rim, the first position effecting a temporary closing of the can by sealing off perforations made in the can end when the can is opened, the second position placing the parts for dispensing of the liquid contents through the spout section.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a perspective view of a liquid can embodying the present invention;

Fig. 2 is an enlarged sectional plan view of one corner of the can;

Fig. 3 is a similar view of the can corner as it appears when ready to receive the pouring spout unit;

Fig. 4 is a sectional view taken through the corner of the can as indicated by the section line 4—4 in Fig. 2, this view being on an enlarged scale and showing the spout in non-pouring position and the can sealed as it appears before it is opened;

Fig. 5 is a view similar to Fig. 4 showing the can after opening with its spout in pouring position and the liquid contents of the can being dispensed by way of the spout; and

Fig. 6 is a fragmentary perspective view of the can corner and spout during dispensing of the liquid contents of the can.

In the drawing there is disclosed as a preferred embodiment of the invention a rectangular can body 11 (Fig. 1) preferably formed of metal and provided with an imperforate bottom or end member 12 and an imperforate top end member 13. The ends 12 and 13 may be secured to the body in the usual double seam as indicated at 14 (see also Fig. 4).

The top end 13 of the can is of the usual sunken panel or drawn form required for double seaming with a surrounding wall 15 at right angles to a web wall 16. The web wall 16 is further slightly depressed to form a circular drainage sump 17 the floor of which may take the form of a spherical wall 18 (Figs. 2, 3 and 4). This sump 17 is preferably located adjacent one corner of the can as this is the most desirable position for the spout unit as will be more evident as the description proceeds.

The spherical wall 18 on the side adjacent the corner of the can is further reshaped or drawn as best shown in Figs. 3 and 4 to provide a seat for the rotatable spout member. An annular peripheral bead 19 is formed as an integral part of the spherical wall 18 and encloses an inclined annular and flat wall section 21.

Wall section 21 provides an outer boundary to a spherical depression 22 (Fig. 3) which is located centrally of the peripheral bead 19. It is the parts 19, 21 and 22 that provide a seat 23

for the pouring spout unit of the can. The depression wall **22** is adapted to be perforated for discharging and venting purposes when the can is to be opened and, to insure proper positioning of the openings, the wall is formed with a scored star or similar location point **24** and a second or smaller star section **25**.

The can top wall **16** before the spout unit is applied is formed as shown in Fig. 3, the annular bead **19** being smooth and uniform throughout its sectional area. In this condition it receives the pouring spout unit. The pouring spout unit comprises a disc part **31** and a spout section **32**.

The disc part of the spout is formed as an annular flat wall **33** which is adapted to engage the wall **21** of the spout seat and in inserted position the peripheral edge of this wall is located just inside of the annular peripheral bead **19**. The wall **33** is not continuous throughout its entire circumference but merges at one side into the pouring spout section **32**.

A central depression **34** is formed inside of the wall **33** and is preferably shaped to frictionally engage the spherical depression **22** of the can top. The cooperating engagement between the spout unit and its seat by reason of the incline of the wall parts **21**, **33** permits rotation of the spout unit within its seat from a closed position, as illustrated in Fig. 4 where the end of the spout section **32** is within the rim of the can end formed by the double seam **14** and into an open position where the spout section **32** extends over the corner of the seam **14** as illustrated in Fig. 5.

The spout unit is rotatably held within its seat by a spaced flattening of inner face sections of the peripheral bead **19** which flattenings provide lugs or overhanging ledges **36**. These lugs are formed after the spout unit has been placed within its seat and are preferably equally spaced around the inner periphery of the bead throughout a substantial part thereof.

Lugs **36** are produced by a rebending of that portion of the bead wall and are made in suitable manner by a simple form of die. These lugs prevent displacement of the spout unit from its seat while allowing for its easy rotation. The lugs hold the spherical parts **22**, **34** and the flat wall parts **33**, **21** in relatively close frictional engagement. This prevents spilling of the liquid contents after opening of the can. The depressed center **34** of the spout unit is provided with a dispensing opening **38** and with a vent opening **39**, which are cut through the wall at that place.

The spout unit **31** is in the position disclosed in Figs. 1 and 2 when a filled can is received by the ultimate consumer. The can is fully sealed and the openings **38**, **39** of the spout are out of register with the indicated scored star elements **24**, **25** formed in the can end.

When the liquid from the can is to be dispensed the can is first opened by rotating the spout unit within the seat to bring the spout part **32** into the dotted line position shown in Fig. 2. The opening **38** is then in alignment with the scored star **24** and the opening **39** is similarly aligned with the smaller star **25**. The can is then opened by puncturing the wall of the depression **22** by pressing a sharp instrument down through the scored stars **24**, **25**.

The metal of the wall **22** of the can end is thus pushed back to provide pouring and venting perforations which, at the time these perforations are made are in alignment with the openings **38**, **39** formed in the spout. Fig. 5 illustrates how a discharge opening **41** would look when punched in the can top. It is through this opening that the liquid, indicated by the numeral **42**, may be dispensed from the opened can. This is easily brought about by a simple tilting of the can with the spout **32** overhanging its corner as shown by the dotted line position of Fig. 2 and the full line position of Fig. 5. At the same time the can is vented by air passing into the can through the opening **39** and through the opening formed when the star **25** is punctured through.

By reason of the construction of the can end and its pouring spout unit only the two parts are needed to provide a movable spout which functions when in one position to properly dispense the contents of the can and when turned into another position to close the openings made in the can. By reason of the lugs **36** formed in the peripheral bead **19** a simple overhanging and spout retaining feature is incorporated which provides against displacement of the spout but the the same time allows for easy movement of rotation.

At the same time there is maintained a proper frictional engagement between the spout unit and the top of the can which functions to prevent leaking of the contents either during the dispensing of the liquid through the spout or after the can has been temporarily closed by turning the spout to shut off the openings.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A liquid container, comprising an imperforate end member having a sunken panel surrounded by a rim, a depressed seat formed in said sunken panel and surrounded by an annular bead, and a rotatable pouring spout unit located in said seat and confined within said annular bead, the latter being flattened at spaced intervals to provide overhanging ledges for retaining the pouring spout unit in its rotatable position, the pouring spout of said unit being within the rim of said can end when the unit is in non-pouring position and being extended over said rim when in pouring position.

2. A liquid container, comprising an imperforate end member having a sunken panel surrounded by a rim, a depressed seat formed in said sunken panel and surrounded by an annular bead, and a rotatable pouring spout unit located in said seat with the peripheral edge of a disc section inside of said annular bead, the latter being flattened at spaced intervals to provide overhanging ledges for retaining said pouring spout unit in its rotatable position, said unit also having a pouring spout extending laterally from said disc section, said pouring spout unit being movable to position its pouring spout within the rim of said can end and in non-pouring position or to place the spout over said rim and in pouring position.

3. A liquid container, comprising an imperforate end member having a sunken panel surrounded by a rim, a depressed seat formed in said sunken panel and surrounded by an annular bead, and a rotatable pouring spout unit mounted in said seat with the peripheral edge of a

disc section of the unit abutting said annular bead, the latter being flattened at spaced intervals to provide overhanging ledges for retaining said pouring spout unit in its rotatable position, said spout unit also having a pouring spout extending laterally from its disc section, the latter being cut through with an opening adapted to register with an opening formed in the said end member at the time the can is opened and when said pouring spout is in pouring position where it extends above said rim.

4. A liquid container, comprising a body, an imperforate end member secured to said body and having a depressed seat surrounded by an annular bead, the wall of said seat being scored to indicate discharge and vent openings which are adapted to be made in the seat when the can is perforated by pressing in the scored parts, and a pouring spout unit mounted on said end member and rotatably disposed in said seat and having movement into pouring and non-pouring position, said annular bead being flattened at spaced intervals to provide overhanging ledges which engage confined parts of said spout unit and retain it in its rotatable position, said spout unit having a discharge opening and a vent opening which are adapted to register, when the spout unit is in pouring position, with the said discharge and vent perforations made in the can end seat at the time the can is opened, said spout openings being movable out of register when the spout unit is in non-pouring position.

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