July 29, 1958 L. HENRY 2,845,201

POSITIVE LOCKING SPOUT FOR SEALED CANS

Filed April 18, 1955

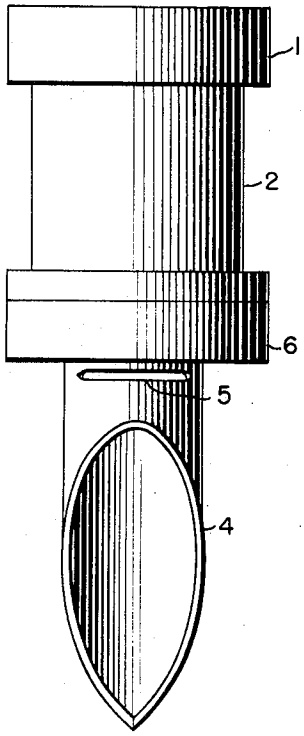


FIG. 1

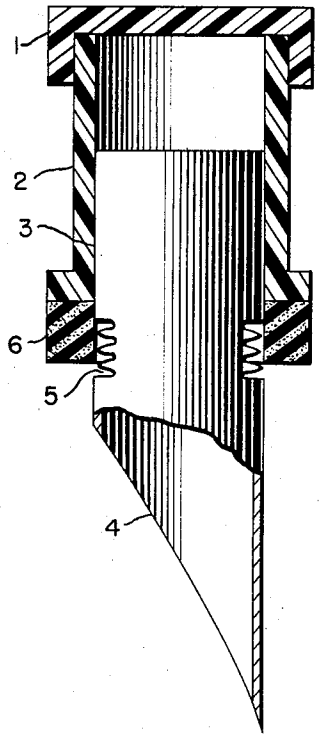


FIG. 2

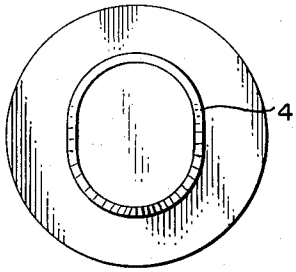


FIG. 3

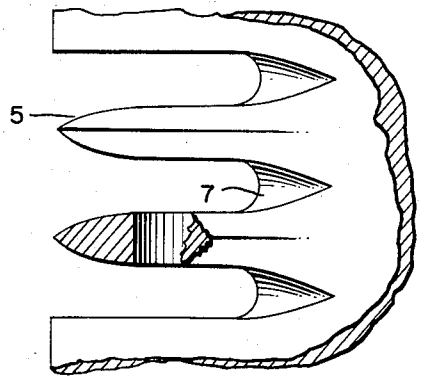


FIG. 4

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# POSITIVE LOCKING SPOUT FOR SEALED CANS

Louis Henry, Carlton, Oreg.

Application April 18, 1955, Serial No. 501,978
1 Claim. (Cl. 222—89)

My present invention relates to a can spout that can be pushed into the top of a can containing a liquid and which possesses features that permit a positive locking action together with a positive seal so long as the user elects to leave the device in the can. Spouts observed to be in use presently are either cumbersome and expensive or are of such uncertain lock and seal as to be in fact unstable and leaky.

In the accompanying drawing there is shown one complete example of the physical embodiment of the invention according to the simplest and most practical mode thus far devised; it will be understood that various changes and alterations may be made to the exemplified structure within the scope of the appended claim.

In the drawing:

Fig. 1 is an elevational view of the device of my invention.

Fig. 2 is a sectionalized view as in Fig. 1 except that the device is shown rotated 90 degrees from the position occupied in Fig. 1.

Fig. 3 is a bottom view.

Fig. 4 is a greatly enlarged view of the ribbed portion of a device of this type, viewed from an angle similar to that from which Fig. 2. is seen.

Referring to the drawing, Fig. 1 and Fig. 2 show that the device consists of a metal tube **4**, force fitted into a hollow body **2**, the said hollow body **2** being fitted with a cap **1** that is of pliable plastic to enable a convenient friction grip upon the body **2**. The tube **4** is cut off at an angle as shown in Figs. 1 and 2, so that a sharp pointed edge is provided. The tube **4** contains two or more fins or ribs on each side, per Fig. 2 at **5**, that are milled all of the way into the interior of the tube and further are so milled that the outer edges of these ribs are rounded to a sharp condition. The sponge rubber (or other elastic) gasket **6** is of such consistency that it can be compressed without unreasonable pressure. In relation to the ribs **5** it will be seen that this gasket covers most of the ribs except for the very lowest ones. Fig. 3 portrays the oblong nature of the shape of the tube **4**. Generally speaking (although not truly a critical proportion) the depth of the ribs **5** is such that it is one half the difference between the horizontal and vertical diameters of the tube **4** as viewed in Fig. 3. Fig. 4 shows the indentations **7**, wherein it is seen that the ribs **5** are so milled as to begin gradually, the relieved areas **7** merging, from right to left in Fig. 4, into deep cuts that expose the interior of the tube.



From the above description it will be apparent that the user effects operation of the spout as follows: The tube **4** is pressed, by hand, into the thin metal top of a can until the gasket **6** is seated lightly thereon. The tube has cut an oblong hole in the can top, roughly of the size and shape of the cross section of the tube itself.

The spout is next pressed downward even farther; this action compresses the gasket tightly and at the same time places the edges of the hole in the top of the can in the vicinity of the upper ribs. At this time a twisting motion of the hand is used. The broad diameter of the tube thus begins to occupy the small diameter of the hole in the can top. The edges of the thin metal can top, guided by the relieved areas **7** and by the sharp edges of the ribs **5**, enter the space between certain of the ribs. The precise ribs that come into play at this stage will depend entirely upon the degree of downward pressure exerted by the operator. The device, once having been rotated one third or one fourth turn, has thus become locked in place. The hand may be removed. When the can is empty, a reverse twisting motion and an upward pull remove the spout from the can.

In use, liquid is poured via the spout; the ribs act as additional passages for liquid entering the tube over and above that entering the large angle-cut end of the same. The latter action permits drainage of the full amount of liquid in the can. A further function of the ribs is the air vent action that they obviously provide.

I am aware that, prior to this time, can spouts have been made wherein pressure would cause them to enter cans as the sharp edges cut mating holes in the can tops. I am aware that conventional threads, dents and springing devices have been used to secure these spouts to the cans while in use. I do not claim such combinations broadly; what I claim as new and desire to secure by Letters Patent is:

A re-usable spout for metal cans comprising a hollow cylindrical body fitted with a removable cap, a rounded metal tube of oval cross-section fitted securely into the said body, the protruding end of said tube cut on an angle for reasonable penetrating characteristics, two sets of slots cut laterally in the said tube on each side of the same and at right angles to the longitudinal axis of the same, beginning where the tube emerges from the body described and diametrically opposite one another across the broadest diameter of the tube, a sponge elastic gasket over the tube and resting against the shoulder of the body, the said gasket of such thickness that it covers a majority of the said slots, whereby the sharp end of the tube can be forced into a liquid container cutting an oval hole therein, in turn making it possible by subsequent pressure to compress the above-mentioned gasket and, finally, by a twisting motion, to cause the above-mentioned slots to mate with the cut edges of the container across the narrower dimension of the hole cut in the same thus providing a spout locked and sealed in place but which can be removed at will by a reverse of the insertion process.

**References Cited** in the file of this patent

UNITED STATES PATENTS

477,308 MacFarland ---------- June 21, 1892