Dec. 2, 1924. 1,517,644

C. M. KRUGER

INTEGRAL SPOUT AND AIR VENT FOR LIQUID CONTAINERS

Filed Sept. 7, 1923

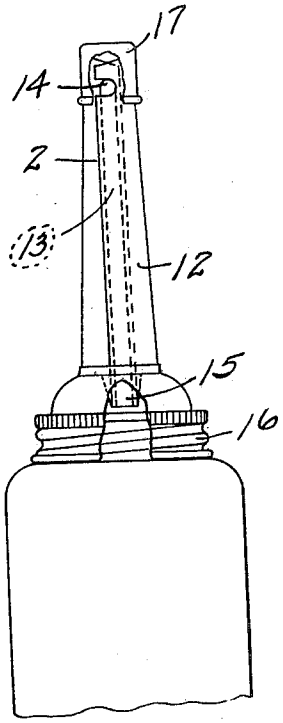

FIG. 1.

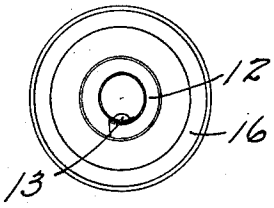

FIG. 2.

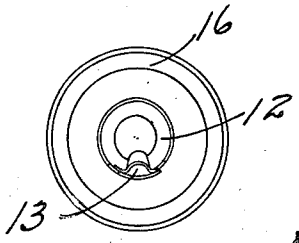

FIG. 3.

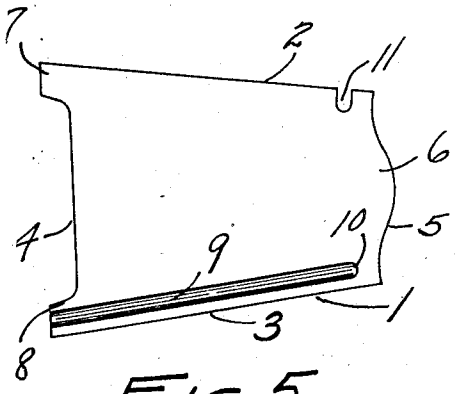

FIG. 5.

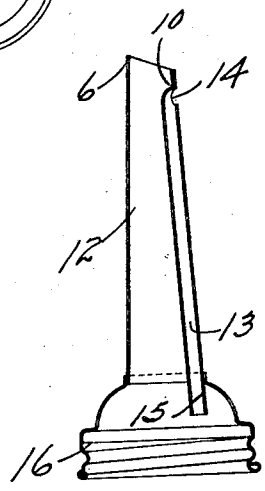

FIG. 4.

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UNITED STATES PATENT OFFICE.

CHARLES MAX KRUGER, OF ST. LOUIS, MISSOURI.

INTEGRAL SPOUT AND AIR VENT FOR LIQUID CONTAINERS.

Application filed September 7, 1923. Serial No. 661,397.

To all whom it may concern:

Be it known that CHARLES MAX KRUGER, a citizen of the United States, residing at St. Louis, in the State of Missouri, has invented certain new and useful Improvements in Integral Spouts and Air Vents for Liquid Containers, of which the following is a specification.

This invention pertains to discharge spouts or tubes for use upon containers of liquids, such as oil bottles, jars or cans; and while the device is primarily designed for use in connection with oil cans and containers for dispensing oils, it may be readily adapted for use upon containers designed to carry and dispense other liquids, such as milk, syrups, liquid paints, and the like. The main object of this improvement is to provide for such containers a spout having a self-contained, integrally formed air-vent, to facilitate the discharge of the liquid from the container by simultaneously admitting air thereinto. A further object is to provide such combined spout and air vent in a form which may be readily protected by a common cap against the entrance of dust and dirt, or any foreign matter.

In the drawing—

Figure 1 is an elevation of the improved spout as adapted for use upon a container having a threaded neck, such as a "Mason" jar, or the like, a section of the dust cap being broken out to show the outer air vent opening, and a section of the base being broken away to show the inner air vent opening;

Figure 2 is a top plan view;

Figure 3 is a bottom plan view;

Figure 4 is a vertical, medial section through the spout and air vent;

Figure 5 is a plan of a sheet metal blank as stamped out integrally to form this combined spout and air vent.

In carrying out this improvement in its preferred design, a sheet metal blank 1 is provided in a form which may be termed as substantially a tapered trapezoid, as shown in Figure 5; that is to say, two of the four sides, as 2 and 3, are inclined toward one another, while the remaining two sides, as 4 and 5, stand substantially parallel, except that the shorter side 5 is curved medially outward to form a sort of spout tongue 6. The inclined sides 2 and 3 are lengthened oppositely to the tongue 6 to form inner, air-vent extension tongues 7 and 8. An air-vent groove 9 is pressed along one of the inclined edges of the blank, the said groove starting at a point 10 spaced slightly away from the edge of the side 5 on which the tongue 6 is located and being extended clear out through the tongue 8. An air notch 11 is cut into the opposite edge of the blank 1, at a point spaced away from the edge of the side 5 equal to the distance from the edge of the side 5 to the said starting point 10 of the groove 9. The blank 1, so prepared and formed, is now rolled into the form of a tapered spout 12, with the groove 9 turned outwardly. The opposite edge of the blank is then positioned over this groove 9 and soldered down with the air notch 11 immediately over the end of the groove 9. There is thus provided a spout 12 having an integral and self-contained air-vent 13, which is formed by the positioning of an edge of the blank over the groove 9 creased in the opposite edge, and so sealed, the said first mentioned edge having the air notch 11 cut therein, adapted to register with the said air groove 9 and so afford an outer lateral air port 14 for the air vent 13, while an inner extended mouth 15 is formed by the overlapping of the tongues 7 and 8. The spout so completed may be mounted and sealed upon any suitable base, as 16, adapted for making connection with the particular kind of container employed; the larger end of the tapering spout being, of course, seated in the base and with the inner, extended mouth 15 projected into the base. The threaded base 16 as here shown is adapted for connecting with a container having a threaded neck, as for instance, a "Mason" jar. A round dust cap 17 is provided for seating over the outer end of the spout, and the apron of the cap also acts as a closure for the outer, lateral air port 14, thus closing both the spout proper and also the air vent against the entrance of dust and dirt.

While I have herein described a certain specific manner and method of constructing and assembling the elements of my invention, it is understood that I may vary from the same in minor details, not departing from the spirit of my invention, so as best to construct a practical device for the purpose intended, as defined in the appended claims.

I claim:

1. A rolled, sheet metal spout for containers, and an integrally formed air vent therein, the latter having an air port opening

laterally outward from the spout; the said air vent being formed by overlapping one edge of the metal blank having an air notch cut therein upon a groove formed along the opposite edge, with the air notch positioned over the groove.

2. A rolled, sheet metal spout for containers, and an integrally formed air vent therein, the latter having an air port opening laterally outward from the spout; the said air vent being formed by overlapping one edge of the metal blank having an air notch cut therein upon a groove formed along the opposite edge, with the air notch positioned over the groove; and a dust cap adapted to seat over the outer mouth of the spout with the apron of the cap closing the said lateral air port.

3. A combined tubular spout and lateral air vent tube, both being formed together integrally of the same piece of sheet metal; for this purpose one of the edges of the metal being grooved, the groove being extended entirely through one perpendicular edge but not through the opposite perpendicular edge, and the other edge of the metal being notched to form a lateral air port for the vent tube, and the notched edge being superimposed upon the grooved edge to complete the spout and form the air vent tube.

4. A combined tubular spout and lateral air vent tube, both being formed together integrally of the same piece of sheet metal; for this purpose one of the edges of the metal being grooved, the groove being extended entirely through one perpendicular edge but not through the opposite perpendicular edge, and the other edge of the metal being notched to form a lateral air port for the vent tube, and the notched edge being superimposed upon the grooved edge to complete the spout and form the air vent tube; and a common closure for the mouth of the spout and the lateral air port of the vent tube.

In testimony whereof I affix my signature.

CHARLES MAX KRUGER.

Witnesses:
A. M. Dowd,
Peter Steger.