

July 27, 1965.

H. G. MICHAEL

3,197,089

DRINKING SPOUT

Filed Jan. 6, 1964

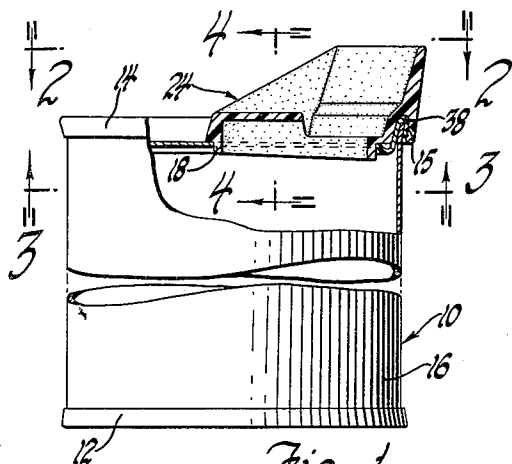


Fig. 1

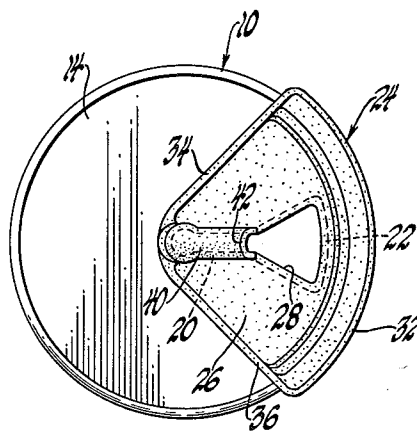


Fig. 2

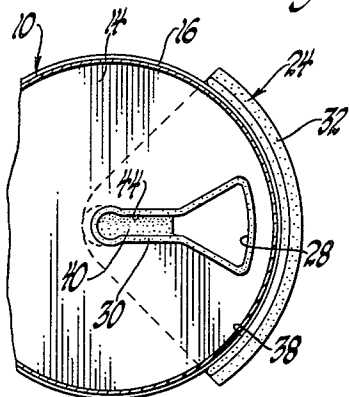


Fig. 3

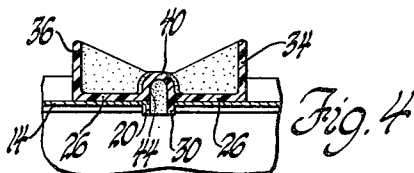


Fig. 4

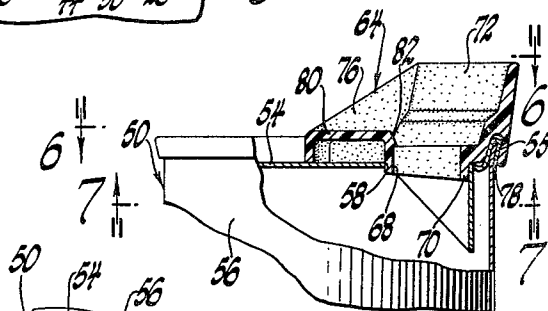


Fig. 5

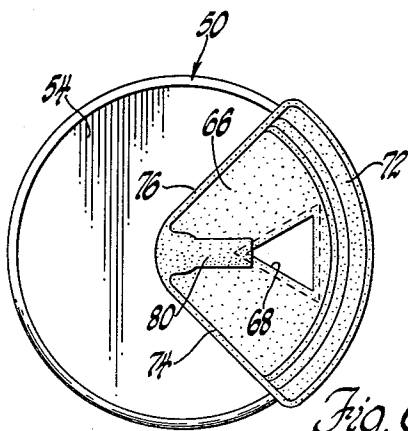


Fig. 6

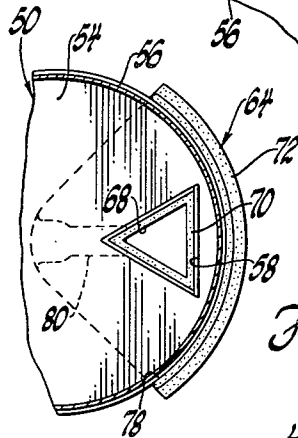


Fig. 7

INVENTOR

Henry G. Michael

BY

Barnard, McElroy & Leising
ATTORNEYS

1

3,197,089

DRINKING SPOUT

Henry G. Michael, Birmingham, Mich., assignor to
Industro-Motive Corporation, Troy, Mich., a corporation of Michigan

Filed Jan. 6, 1964, Ser. No. 335,790
15 Claims. (Cl. 222-479)

This invention relates to drinking spouts and more particularly to a device which may be placed on the end of a can to permit a person to drink the contents of the can directly therefrom.

There are many instances where liquids are packaged in a can of the sheet metal type, which liquids may be consumed by drinking. For example, beer, soft drinks, fruit juices and the like are often packaged and sold in such cans. In order to consume the liquid, the can is usually opened by a convenient tool and the contents poured into some suitable drinking vessel. Alternatively, the consumer may drink the contents directly from the can after the can is opened. Generally speaking, when an opening is provided in the can, proper provisions are made to vent the can and permit smooth flow of the liquid therefrom.

Drinking directly from the can has heretofore been objectionable for many reasons. Most obvious is the health problem involved; that is, the cans are seldom sterile and by drinking therefrom, a person's health may be endangered. Furthermore, it is often considered improper etiquette to drink directly from a can. And, people find that a metallic taste is imparted to the liquid contents from the engagement of the mouth with the can.

In the past certain devices have been available which may be received over the end of the can or suitably placed within the opening in the can to permit drinking therefrom. However, such devices are somewhat ineffectual because of the improper or ineffective sealing between the device and the can opening, the person using the device oftentimes having the contents drip on his person or his clothing as a result of the imperfect seal. In order to avoid the lack of sealing, certain devices have been very expensively made and produced which provide better sealing. However, such expensive devices are too expensive to be practical to use. Other devices utilize a spout of some sort which extends into the can and around which the user must place his entire mouth in order to drink the contents of the can. Generally speaking, this is not pleasant for others to watch and no provision is made for the venting of the can within the device itself so that spillage over the person or clothing of the user may still be prevalent.

The device in which this invention is embodied comprises, generally, a spout device having a floor from which extends a drinking flange. In the floor is an opening of substantially the same shape as the opening in the can, and depending from the floor is a flange extending completely around the opening. The flange is relatively resilient and is receivable in the opening in the can in such a manner as to securely engage the edge of the opening and seal the flange and the spout on the can top. In the upper surface of the floor is a ridge extending substantially radially of the floor and which is of sufficient dimension to engage the upper lip of the user as he is drinking from the can. The ridge positions the upper lip of the user relative to the opening to provide the proper and optimum drinking position. The structure may be molded of a suitable plastic material of an inexpensive nature which is easily washed or sterilized for re-use. The device effectively seals the opening of the can and is easily installed and removed from the can. Such device is pleasing in appearance, resembling a portion

2

of a glass or the like that people are accustomed to drink from. Being of plastic material, the device does not leave the metallic taste commonly associated with drinking directly from cans.

These and other advantages will become more apparent from the following description and drawings in which:

FIGURE 1 is a view with parts broken away and in section to illustrate a typical can with the drinking spout mounted thereon.

FIGURE 2 is a plan view of the can and drinking spout assembly illustrated in FIGURE 1 taken substantially along the line 2-2 of FIGURE 1 and looking in the direction of the arrows.

FIGURE 3 is a cross sectional view of the can and drinking spout of FIGURE 1 taken substantially along the line 3-3 of FIGURE 1 and looking in the direction of the arrows.

FIGURE 4 is a cross sectional view of a portion of the assembly of FIGURE 1 taken substantially along the line 4-4 of FIGURE 1 and looking in the direction of the arrows.

FIGURE 5 is a view of a can with a different type of opening therein and a modification of the drinking spout mounted in the can.

FIGURE 6 is a plan view of the can and drinking spout of FIGURE 5 taken substantially along the lines 6-6 of FIGURE 5 and looking in the direction of the arrows.

FIGURE 7 is a cross sectional view of the can and drinking spout of FIGURE 5 taken substantially along the line 7-7 of FIGURE 5 and looking in the direction of the arrows.

Referring more particularly to the drawings, FIGURES 1 through 4 illustrate a typical liquid-containing can 10 having the usual bottom cover or end plate 12 and top cover or end plate 14 secured thereto. End plates 12 and 14 may be secured to the cylindrical body portion 16 in any suitable manner, as by rolling the edge of the plates 12 or 14 over the ends of cylinder 16. Can 10 is provided with a decanting opening 18 in the upper end plate 14. Opening 18 is shown to be of the well known tear-top type. The opening includes a generally radial portion 20 extending outwardly to a generally triangular portion 22. Such opening may be formed by a key or lever attached centrally of the can cover 14 and which may be pulled to tear the material within the opening 20-22 from the can cover 14 along suitably scored lines. The enlarged triangular portion 22 terminates adjacent the edge of the can cover 14 and provides the opening from which the liquid contents of the can may be poured or drunk.

Received in the opening 18 in can 10 is a drinking spout, illustrated generally by the numeral 24. Drinking spout 24 may be formed of any suitable material, such as molded polyethylene, which has a certain degree of resilience for purposes to become hereinafter more apparent. It is desirable that the material be such that the drinking spout 24 may be easily washed and not softened or deformed by normal dishwashing temperatures.

Spout 24 includes a floor 26, conveniently formed in the shape of a segment of a circle. Floor 26 is provided with an opening 28 of substantially the same shape as the opening 18 in the can cover 14. Extending downwardly from floor 26 and about the opening 28 is a flange 30 which seals the spout 24 in the can cover 14. Flange 30 is a peripheral flange extending completely around opening 28 and when the spout is properly positioned on the can 10, the flange extends into opening 18. The flange is of sufficient resilience to sealingly engage the edges of the opening 18 and prevent any flow of fluid therepast.

Extending upwardly from the outer edge of floor 26 is a drinking lip 32 which may be of generally arcuate con-

3

figuration to blend with the can sides and which may be inclined slightly outwardly, as viewed in FIGURE 1 for ease in use. Flange 32 is positioned adjacent the opening 28 formed in the floor 26. It is apparent that liquid flowing from the opening 28 will flow along the front or inner surface of the flange 32.

Extending from the ends of flange 32 and generally radially inwardly to the apex of floor 26 are side walls 34 and 36. Side walls 34 and 36, along with the flange 32, form a chamber above the floor 26 into which the liquid from the can may dispense and restrict fluid flow to the surface of flange 32.

Adjacent the outer periphery of the lower surface of floor 26 is a groove 38 to receive and sealingly engage the peripheral lip 15 on the end plate 14. Groove 38 serves to position the drinking spout 24 in the proper location on the can 10 and at the same time prevents any possibility of liquid flow between floor 26 and the cover 14.

Extending upwardly from floor 26 and along a portion of the radius thereof is a ridge or rib 40. Ridge 40 is provided with a smooth end surface 42 and extends a sufficient distance from the floor 26 to engage the upper lip of the user of the spout and to properly position the upper lip relative to the opening 28. Rib 40 is provided with a channel 44 extending over the narrow part of tear-top opening 20, channel 44 serving as a vent for the interior of the can. When the liquid contents are decanted, unless there is some vent provision, the material will burble and bubble from the narrow opening as the air rushes in to fill the void left by the liquid. With some liquids this is objectionable, such as with beer, causing a foaming action and irregular flow from the can. As the spout 24 is used, the major portion of the liquid will be decanted through the large part 28 of the opening 18 and the channel 44 serves as a clear passage for incoming air to fill the void left by the liquid.

Referring next to FIGURES 5 through 7, a modification of the drinking spout is illustrated. In this instance the can 50 has a bottom wall, not shown, and a top wall 54 secured to a cylindrical body 56. Formed in top wall 54 is a generally triangular opening 58 formed by a conventional tool. Such tool is provided with a triangular cutting edge and a lug which engages the ridge 55 at the juncture between the top of plate 54 and the can side 56. The tool is then pivoted about the edge 55 to cut its way into the can top 54 leaving a triangular opening 58.

Extending upwardly from the floor 66 and adjacent the outer arcuate surface thereof is a drinking lip 72. Drinking lip 72 blends in with floor 66 adjacent the opening 68 as aforementioned with respect to the modification of FIGURES 1 through 4. Extending generally radially inwardly of the drinking lip 72 are side walls 74 and 76 which blend with the floor 66 and the drinking lip 72 to provide an opening compartment or chamber for the fluid from the can 50.

Formed in the lower surface of floor 66 is an annular groove 78 to receive and sealingly engage the rim 55 on the top cover 54. This prevents the leakage of material from between the spot 64 and the can cover 54.

Extending upwardly from the floor 66 and generally radially thereof is a ridge or rib 80. Ridge 80 is provided with a smooth or inclined forward surface 82 which serves as a positioning means for the upper lip of the user, as described above with respect to ridge 40 of the modification illustrated in FIGURES 1 through 4. With respect to the modification of FIGURES 5 through 7, however, the forward or outward end of the ridge 80 is closed by the downwardly depending flange 70 since the can cover 54 must be vented at some external position.

It will be apparent that in the use of the spout the user may easily place the device on the can 10 when the opening is produced in the upper cover thereof. The spout 24 is positioned over the opening in the can cover

4

with the groove 38 properly positioned over the can edge 15. When properly positioned over both the edge of the can and the opening, the spout 24 then pressed into place so that the flanges 30 properly sealingly engage the edges of the openings. The user may then tip the can toward his lips with his lower lip resting outside the upstanding drinking lip 32 and his upper lip just engaging the ridge 40 to properly position his upper lip relative to the opening in the drinking spout. The can may then be tipped and the liquid poured therefrom.

It will thus be apparent that the drinking device for cans has been provided which is extremely simple to manufacture and produce. The device is made of such a material as to permit proper sealing engagement between the spout and the opening in the can and further means are provided which will properly position the lips of the user relative to the opening for best drinking from the can. The device is of such construction as to make it simple to clean and to use without concern as to sterilization problems are other specifically required washing procedures.

I claim:

1. A drinking spout for a can having an opening in the top thereof and comprising:

a floor receivable on the top of said can and having an upper surface and a lower surface and an opening therein of substantially the same shape as the opening in said can, said floor being positionable on the top of said can with said opening therein in registry with the opening in said can;

sealing means on said lower surface and around said opening in said floor and adapted to engage the edge of the opening in said can;

a drinking lip extending from said upper surface of said floor and adjacent said opening in said floor;

groove means in the lower surface of said floor adapted to receive and sealingly engage a portion of the peripheral edge of said can;

and lip positioning means on the upper surface of said floor and adapted to engage and position the lip of the user of said spout relative to said opening in said floor when the user is drinking from said can.

2. The drinking spout set forth in claim 1 wherein said sealing means includes a resilient flange extending from said lower surface of said floor and about the periphery of said opening in said floor, said flange being receivable in the opening in said can and adapted to seal against the edge thereof.

3. The drinking spout set forth in claim 1 wherein said lip positioning means includes an opening adapted to communicate with the interior of said can for venting said can.

4. The drinking spout set forth in claim 1 wherein said lip positioning means includes an upstanding ridge extending along said upper surface of said floor and along a portion of a line parallel to radius of said can.

5. The drinking spout set forth in claim 4 wherein said upstanding ridge has an opening adapted to communicate with the interior of said can through the opening in the top thereof for venting said can.

6. A drinking spout for a can having an opening in the top thereof and comprising:

a floor having a top surface and a bottom surface and forming a segment of a circle, said floor having an opening therethrough of substantially the same shape as the opening in said can;

a downwardly directed flange extending from said bottom surface of said floor and about the periphery of said opening therein, said flange being adapted to extend into the opening in said can and sealingly engage the edges thereof;

an upwardly directed lip extending from said top surface of said floor;

a groove in said bottom surface of said floor adapted to receive and sealingly engage the peripheral edge of said can;

5

and lip positioning means extending radially along said top surface of said floor for positioning the upper lip of the user of said spout relative to said opening in said floor when the user is drinking from said can.

7. The drinking spout set forth in claim 6 wherein said lip positioning means includes an opening adapted to communicate with the interior of said can for venting said can.

8. The drinking spout set forth in claim 6 wherein said lip positioning means includes an upstanding ridge extending along said upper surface of said floor and along a portion of a line parallel to a radius of said can.

9. The drinking spout set forth in claim 8 wherein said upstanding ridge has an opening adapted to communicate with the interior of said can through the opening in the top thereof for venting said can.

10. A drinking spout for a can having an elongated radial opening in the top thereof and comprising:

a floor receivable on the top of said can and having an upper surface and a lower surface and an opening therein of substantially the same shape as the opening in said can;

sealing means on the lower surface of said floor and around said opening in said floor;

a lip extending from said upper surface of said floor and adjacent said opening in said floor and adapted to engage the edge of the opening in said can;

means on said floor for sealingly receiving and engaging the edge of the top of said can;

and lip positioning means on the upper surface of said floor and adapted to engage and position the upper lip of the user relative to said opening in said floor when the user is drinking from said can.

11. The drinking spout set forth in claim 10 wherein said sealing means includes a resilient flange extending from said lower opening of said floor and about the periphery of said opening in said floor, said flange being receivable in the opening in said can and adapted to seal against the edge thereof.

12. The drinking spout set forth in claim 10 wherein said lip positioning means includes an opening adapted to communicate with the interior of said can for venting said can.

13. The drinking spout set forth in claim 10 wherein said lip positioning means includes an upstanding ridge

6

extending along said upper surface of said floor and along a portion of a line parallel to a radius of said can.

14. The drinking spout set forth in claim 13 wherein said upstanding ridge has an opening adapted to communicate with the interior of said can through the opening in the top thereof for venting said can.

15. A drinking spout for a can having an elongated opening formed in the top thereof and comprising:

a floor forming a segment of a circle and having an upper surface and a lower surface and having an opening therein of substantially the same shape as the opening in the top of said can;

a flange extending from the lower surface of said floor and around the periphery of said opening therein, said flange being adapted to be received in the opening in said can and to sealingly engage the edges thereof;

a lip extending from said upper surface of said floor and adjacent said opening in said floor;

a groove in said lower surface of said floor adapted to receive and sealingly engage a portion of the edge of the top of said can;

and a lip positioning ridge extending from said upper surface of said floor and over a portion of said elongated opening in said can, said ridge having an opening therein adapted to communicate with the interior of said can through said elongated opening to vent said can, and said ridge being adapted to position the upper lip of the user of said spout relative to said opening when the user is drinking from said can.

References Cited by the Examiner

UNITED STATES PATENTS

2,456,989	12/48	Polcyn	220—90.4
2,530,253	11/50	Maged et al.	222—567
2,725,732	12/55	Somoza	220—90.6
2,839,229	6/58	Scheswohl	222—567
3,085,710	4/63	McIlroy	220—90.4

FOREIGN PATENTS

811,595	4/59	Great Britain.
---------	------	----------------

EVERETT W. KIRBY, *Primary Examiner.*

LOUIS J. DEMBO, *Examiner.*