United States Patent

Olsson

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[54] **CONTAINER SPOUT**

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[52] **U.S. Cl.** **222/570**

[51] **Int. Cl.** **B65d 5/72**

[58] **Field of Search** ..... 222/570; 220/855 P, 90

[56] **References Cited**

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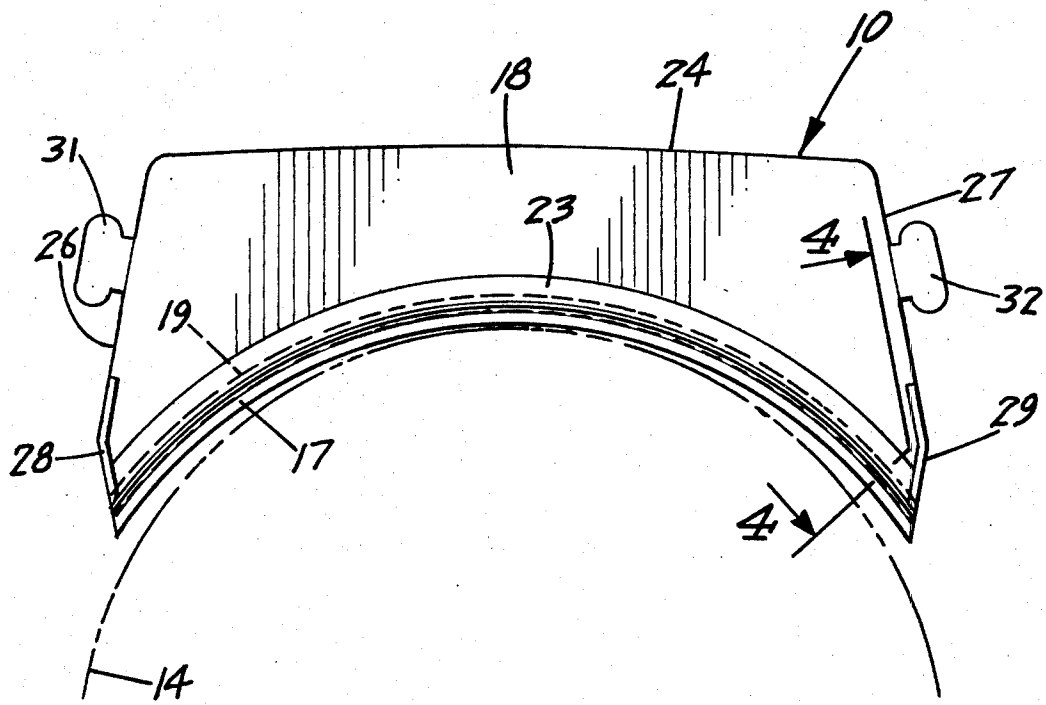
[57] **ABSTRACT**

A pouring spout removably mounted on a container, as a paint can, having an upwardly directed circular lip surrounding the open top of the container. The spout is a one piece pliable plastic member having a base with an arcuate groove with a radius of curvature larger than the radius of curvature of the container lip and a sheet chute member attached to the base. The chute member is flexed to a generally U shaped trough configuration when the base is mounted on the lip of the container.

10 Claims, 5 Drawing Figures



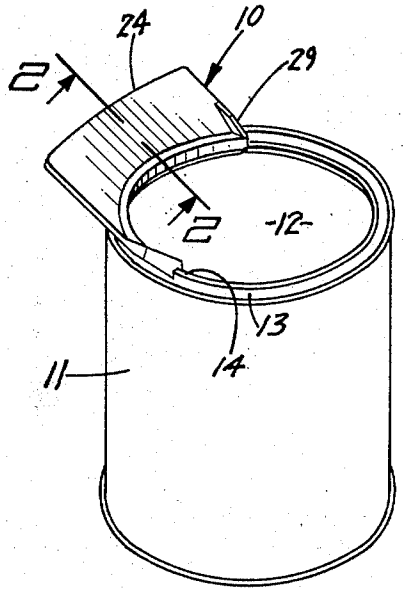


FIG. 1

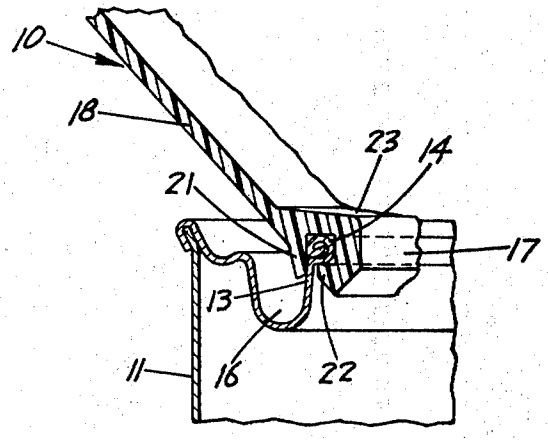


FIG. 2

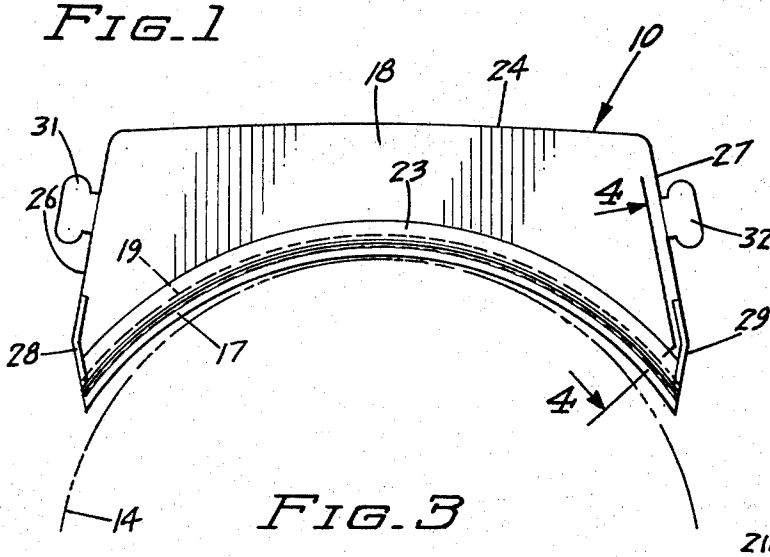


FIG. 3

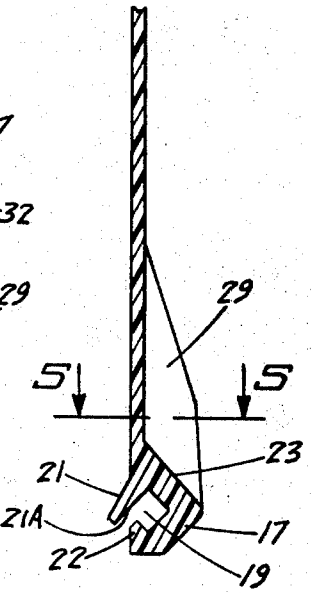


FIG. 4

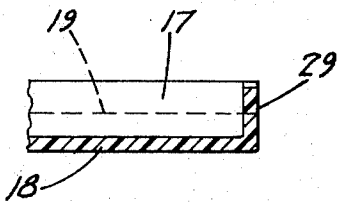


FIG. 5

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CONTAINER SPOUT

BACKGROUND OF INVENTION

Conventional containers for materials and liquids have a generally U shaped annular sealing groove for receiving a cover to close the container. An example of this type of container is a paint can having a sealing groove and a circular lip terminating on an annular bead surrounding the top opening of the can. In the process of mixing and pouring paint from a can it is practically impossible to prevent paint from accumulating in the sealing groove and running down the outside of the can. The top of the pail does not serve as a guide or function as a pouring spout to minimize the spilling of the paint. This problem is present in many containers that are used to store fluids and like materials.

SUMMARY OF INVENTION

The invention is directed to a spout adapted to be releasably mounted on a container to serve as a pouring spout as well as a means to scrape clean or wipe the contents of the container from a tool such as a paint brush. The spout has a base means and chute means attached to the base means. The base means includes an attaching structure to releasably mount the spout on the container adjacent the opening of the container. The base has an arcuate groove for receiving the bead and lip of the container in a manner so that the contents of the container do not spill into the sealing groove for the cover of the container and run on the outside surface of the container.

The chute means comprises a generally flat sheet like member attached to the base means. When the base means is mounted on the container, the chute means is flexed or bent into a generally U shaped or trough like extension which serves as a guide for pouring the contents from the container. The chute means has an upper edge which also functions as a scraping edge to clean and wipe off tools whereby the excess material flows back down the chute means and into the container.

The arcuate groove in the base means has a radius of curvature which is larger than the radius of curvature than the container bead so that when the spout is mounted on the container bead the chute means is flexed into a generally U shaped trough configuration. The lower portions of the opposite sides of the chute means have upwardly directed side walls to direct the contents remaining on the chute means back into the container and prevent the contents from entering into the sealing groove of the container.

IN THE DRAWINGS

FIG. 1 is a perspective view of the spout of the invention mounted on the lip of a container;

FIG. 2 is an enlarged sectional view taken along the line 2—2 of FIG. 1;

FIG. 3 is a top plan view of the spout;

FIG. 4 is an enlarged sectional view taken along the line 4—4 of FIG. 3 and;

FIG. 5 is a sectional view taken along the line 5—5 of FIG. 4.

Referring to the drawing as shown in FIG. 1, the spout of the invention indicated generally at **10** mounted on a container **11**, as a paint can or pail. The

container **11** is shown as a conventional gallon pail or can for storing paint, food products, oil, chemicals, granular materials and the like. The spout **10** is usable with different sized containers, as a quart can, for directing the contents of the container in a defined and controlled manner. Container **11** has an opened top or mouth **12** surrounded by an upwardly directed circular lip **13**. The lip **13** terminates in a circular bead **14**. Located outwardly around the lip **13** is a sealing groove **16** adapted to receive a downwardly directed annular portion of the cover (not shown) for the container.

Referring to FIGS. **3**, **4** and **5**, the spout **10** is a one piece, generally flat, and flexible or pliable member. Preferably, the spout **10** is a one piece molded plastic member made of flexible low cost plastic material, as a low density polyethylene and like material. The chute **10** has an arcuate base **17** and a chute member **18** joined to the convex side of the base. The base **17** has an arcuate concave shape which faces the open top or mouth **12** of the container. The bottom side of the base **17** has an arcuate groove **19** having a generally square cross section configuration. Two arcuate continuous flanges **21** and **22** are located on opposite sides of the groove **19**. Arcuate flange **21** projects outwardly and downwardly from the back side of the base. The lower face **21A** of the flange **21** functions as a locating means and guiding means for directing the bead **14** of the container into the groove **19**. The base **17** has a generally overall triangular cross section with an arcuate top face **23** extended down to the upper surface of the chute member **18**. As shown in FIG. **3**, the radius of curvature of the base **17** and groove **19** is substantially larger than the radius of curvature of the bead **14** of the container when the spout **10** is detached from the container. This relationship exists when the spout **10** is in its generally flat shape. As a specific example the radius of the base **17** can be equal to the diameter of the bead **14**.

Chute member **18** has a transverse top edge **24** and upwardly and inwardly tapering side edges **26** and **27**. The bottom surface of the chute member **18** is flat and continuous with the flat bottom of the base. The opposite sides of the lower portions of the chute member **18** have upwardly directed side walls or gusset wedges **28** and **29** extended forwardly along the sides **26** and **27**. These side walls **28** and **29** function as stops or dams to direct the material over the top face **23** and into the container. This prevents the material from flowing into the sealing groove **16**.

In use, the spout **10** is snapped onto the bead **14** of the container. The bead **14** of the container is located adjacent the mouth of groove **19** by the flange **21**. The lower face **21A** of the flange serves as a guide directing the bead **14** into the groove **19**. The spout **10** being of flexible material follows the curve of the bead **14** which is snapped into the groove **19**. The curvature of the groove **19** being larger than the curvature of the bead **14** holds the flanges **21** and **22** in close sealing engagement with opposite sides of the lip **13**. The chute means **18** is flexed or bent into a generally U shaped trough configuration extending outwardly at an angle at approximately 30° with respect to the horizontal plane at the top of the container.

The spout **10** can be formed with side ears or lugs **31** and **32** used to attach the spout to a display base or card. The ears **31** and **32** are made of relatively thin

plastic material so that they can be readily removed from the sides of the spout. The ears **31** and **32** are adapted to receive fasteners, as staples, to mount the spout on a display card. A number of spouts can be attached to a single display card.

A specific example of the removably mounted spout of the invention is set forth in the following detailed description. The spout can have other sizes and shapes. This spout is a one piece molded flexible plastic member having a base of arcuate configuration approximately 7 inches in circumference with a radius of 5½ inches. The chute member is three sixty-fourths of an inch sheet material having a top width of 5½ inches and a bottom width of 6½ inches. The sides **26** and **27** are 2½ inches long. The side walls **28** and **29** extend approximately 1 inch upwardly from the center of the base means **17**. The groove **19** is a ⅛-inch diamond shaped having a depth of approximately one-eighth inch.

The above description and drawings are directed to a preferred embodiment of the spout. It is intended that various omissions, substitutions, changes in size, changes in dimensions and size of the materials may be made by those skilled in the art without departing from the invention.

The embodiments of the invention in which an exclusive property of privilege is claimed are defined as follows:

1. A spout for a container having an opening and circular lip means surrounding the opening comprising: a one-piece flexible member having a base means, said base means having a generally arcuate shape, an outer convex curved side and an arcuate groove to accommodate an arcuate section of the lip means, said groove having a radius of curvature larger than the radius of curvature of the lip means, arcuate flange means on said base means extended along the outer convex side of said groove for guiding the lip means into the groove, and flexible generally flat chute means attached to the outer convex side of the base means, said base means being releasably mounted on the circular lip of the container means by placing the lip means in the groove whereby the curvature of the base means is reduced and the chute means is flexed to a generally trough-shaped configuration.

2. The spout of claim **1** wherein: the base means and chute means are a one piece flexible plastic member.

3. The spout of claim **1** wherein: the arcuate groove is open to the lower side of the base means.

4. The spout of claim **1** wherein: the chute means is a generally flat member having upwardly directed side walls at least on the lower portion of the opposite sides thereof.

5. The spout of claim **1** wherein: the chute means has upwardly directed side walls at least on the lower portions of the opposite sides thereof.

6. The spout of claim **1** wherein: the chute means has a generally linear transverse top edge and inwardly tapering side edges.

7. The spout of claim **1** wherein: the groove has a generally square cross sectional configuration.

8. The spout of claim **1** wherein: the flange means has an inner face projected in an inward direction.

9. The spout of claim **8** wherein: said inner face forms with an arcuate portion of said base means an inlet opening of the groove, said inlet opening being the narrowest portion of said groove.

10. The spout of claim **9** wherein: the groove has a generally square cross sectional configuration.

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