Sept. 3, 1963 C. O. ULLEVIG 3,102,667

POURING SPOUT

Filed March 9, 1961

FIG. 1

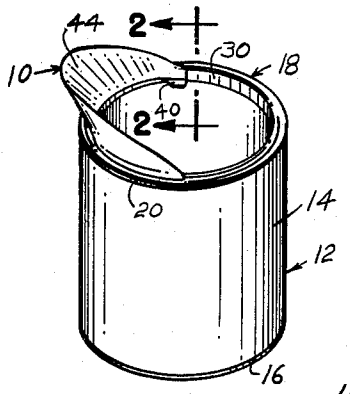


FIG. 2

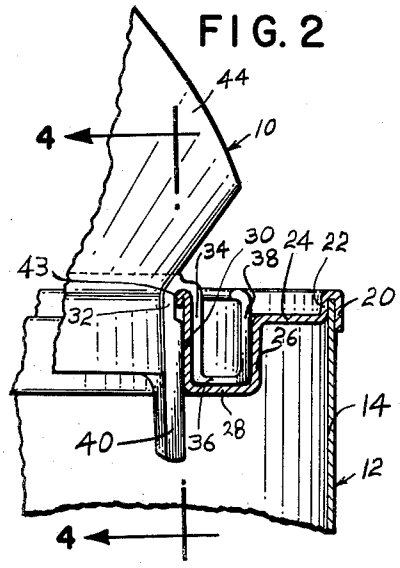


FIG. 3

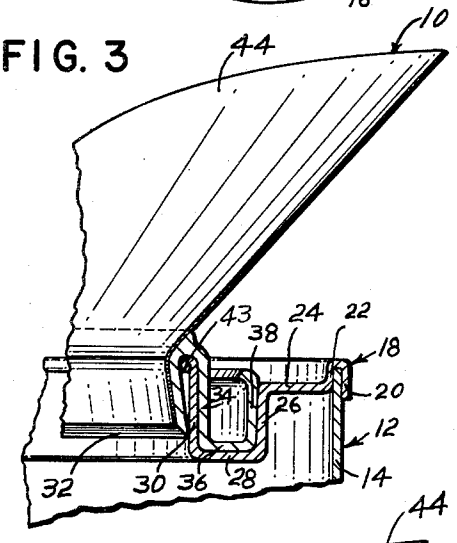


FIG. 4

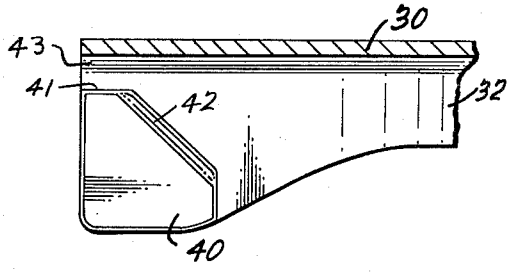


FIG. 5

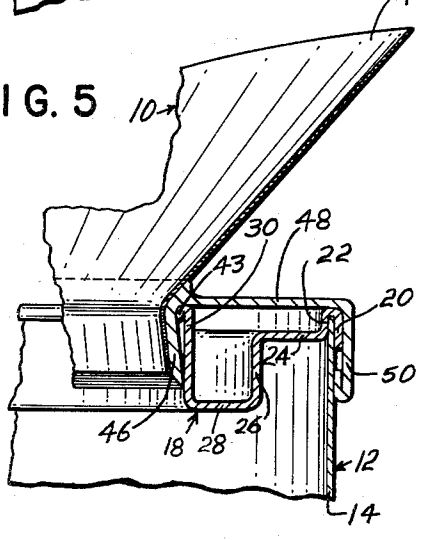
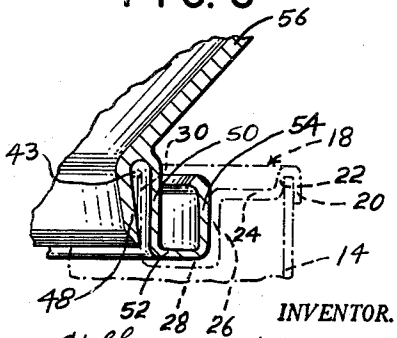


FIG. 6



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POURING SPOUT

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This invention relates to a pouring spout for cans and containers and, more particularly, to such a pouring spout which can be readily attached to the can and also easily detached from the can.

Paint cans, and other similarly constructed containers, have an axially extending annular groove formed in a flange at their mouth to receive a complementary flange on a cover or lid to provide effective sealing of the container. With the lid of such a container removed the annular groove is exposed. With the subsequent use of the contents of the container, there may result some of the contents being deposited in the annular groove. In paint cans, for instance, brush dipping, pouring,, mixing and the other details of handling the paint frequently result in a clogging or a filling of the annular groove with paint. Some of this paint dries in the groove to form a tacky or, even, a hard nob or glob in the groove. When the lid is later placed on the can so that flange of the lid is in the annular groove of the container poor sealing results. As a result of this poor sealing the air, and particularly oxygen, are allowed to enter into the paint can and oxidize the contents into a non-usable film or non-usable contents. Because of this deterioration there may result serious loss of the paint. Furthermore, the efficient handling and the reuse of the paint is impaired because the difficulty of removing lids which have become stuck fast by the drying of the paint in the annular groove. This, in itself, leads to unnecessary expense in the handling of the paint.

This background of the trouble experienced in the clogging of the annular groove in the paint can with the liquid paint and then the formation of a globular material precludes subsequent efficient sealing of the paint can.

I have invented a pouring spout which can be used for pouring paint from a can and in its use prevents the entrance of liquid paint into the annular groove. One of the advantages of this invention is that the pouring spout is inexpensive and, if the user prefers, he can throw it away after using it one time; another particular advantage is that it keeps the paint out of the annular groove, so that a tight seal can be achieved between the cam and the lid at a subsequent date; a further advantage is that the pouring spout directs the paint out of the can to the place the pourer wants the paint to pour, and because of this there is substantially no wastage of the paint; another object is the provision of a pouring spout which is easy to apply to the paint can and actually can be applied by an operator using one hand instead of two; and, another desirable object is the provision of a pouring spout which is easy to remove and can be removed by one hand.

These and other advantages and objects will be more particularly brought forth by reference to the following drawings, detailed specification and the claims.

In the drawings:

FIGURE 1 is a perspective view looking down on a preferred embodiment of the pouring spout constructed in accordance with the preferred teachings thereof, in which a pouring spout is in position on a can;

FIGURE 2, taken on line 2—2 of FIGURE 1, is a fragmentary cross sectional view illustrating the attachment of the pouring spout in the annular groove of the top of the can and, in particular, the locking plate or locking tab for holding the pouring spout in position on the can;

FIGURE 3 is a fragmentary cross sectional view taken at approximately the center ilne of the pouring spout and illustrates the same in position in an annular groove in the upper part of the paint can;

FIGURE 4, taken on line 4—4 FIGURE 2, is a fragmentary cross sectional view illustrating the construction of the tab or locking plate at the end edge of the skirt of the pouring spout;

FIGURE 5 is a fragmentary cross sectional view illustrating another means of attaching the pouring spout to the can; and,

FIGURE 6 is a fragmentary cross sectional view illustrating another form of construction of the pouring spout.

Referring to the drawings it is seen that the invention comprises of pouring spout 10 adapted to be placed on a can 12. The can 12 comprises cylindrical sides 14, a bottom 16, and a rim 18.

The rim 18 comprises a clamping finger 20 skirting the upper outside edge of the cylindrical side 14, the clamping finger 20 bends over the top edge of the side 14 and down into finger 22.

The two fingers 20 and 22 are crimped tightly against the upper part of the circular side 14 so as to position the rim 18. The finger 22 then curves inwardly at approximately a right angle to form ledge 24. The ledge 24 at its inner end bends downwardly at approximately a right angle to form circular wall 26. The wall 26 bends inwardly at approximately a right angle to form the circular base 28 and this base 28 in turn bends upwardly at approximately a right angle to form the circular wall 30.

The pouring spout 10 comprises a circular skirt portion 32. The skirt portion 32 tapers outwardly and downwardly so as to bear against the inner surface of the circular wall 30, that is, that surface facing itself. The upper part of the skirt portion 32 bends over the upper part of the edge 30 and then bends downwardly into annular wall 34. The annular wall 34 bears against the outer surface of the annular wall 30 of the rim 18. Actually, the two annular walls 32 and 34 position the skirt onto the annular wall 30. The annular wall 34 then bends outwardly at approximately a right angle to follow the general confirmation of the base 28 to form the base 36, the pouring spout 10. The base 36 then turns upwardly at approximately a right angle to form the annular wall 38. Actually, the annular wall 34, base 36 and the annular wall 38 of the pouring spout 10 follow the same general configuration as the annular wall 30, the base 28 and the annular wall 26 of the rim 18. The annular walls 34 and 38 of the pouring spout 10 are pressed into position between the annular walls 30 and 26 of the rim 18, and therefore snugly fit in the annular groove of the rim so as to also assist in positioning the pouring spout 10 on the rim. One way of considering the annular wall 34, base 36 and the annular wall 38 is that of a bracing channel portion for the skirt portion 32. It is seen in FIGURE 3 that the lower part of the skirt portion expands outwardly so as to snugly fit against the inner surface of the annular wall 30. By snugly fitting against the inner surface of the wall 30 the skirt 32 prevents paint from working between the skirt 32 and the wall 30 and, possibly, over the upper edge of the wall 30 and into the annular groove defined by the wall 30, base 28 and the wall 26.

The outer surfaces of the end edges of the skirt 32 are enlarged into a locking tab or locking plate 40. This is more particularly brought forth upon reference to FIGURES 2 and 4. The locking plate 40 assists in positioning the skirt onto the annular wall 30. It is seen that this locking plate is thicker than the skirt 32 is thick. As a result this plate bears against the inner surface of the annular wall 30 so as to snugly fit there and more firmly po-

sition the skirt. Also, the upper inner edge of the locking plate 40 is beveled at 42. This is to assist in the removal of the pouring spout 10 from the can 12. The beveled edge 42 makes it easier to remove the skirt 40 from the opening of the can as the bevel functions to let the skirt slide off the can.

To assist in maintaining the spout on the paint can, the upper inner edge of the locking plate 40 has a 90° shoulder 41 ahead of the bevelled shoulder 42. The shoulder 41 locks against the underside of inside lip 43 of the can. When pressure is applied to the pouring spout, viz., the weight of the paint of the spout, the shoulder 41 prevents the unit working up and over the lip 43 and thereby becoming detached from the can.

Overlying the skirt 32 and projecting above the skirt is the spout proper, 44. This spout 44 or bib, if laid flat, would curve from one edge to a peak and then curve back to the other edge. When positioned on the skirt 32 the spout 44 forms a general configuration of an arc of a circle when on the skirt. However, the upper part is in the configuration of a curve and defines the spout proper.

The skirt 32 along with the walls 34 and 38 and the base 36 may be of a number of different materials. One material may be a fine grade of waxed paper having a high degree of strength or may be a paper bonded together by means of synthetic resins, may be pulp pressed into position or pulp bonded together by snythetic resin pressed into proper configuration, may be a plastic such as polystyrene or polyvinyl chloride or polyvinyl alcohol or methyl methacrylate, or may be a more expensive material such as polyethylene or tetrafluoropolyethylene. The pouring spout proper 44 or bib may be of a fine grade of wax paper or paper bonded together by means of a synthetic resin, may be sheet material such as polyvinyl chloride or polyvinyl alcohol or other appropriate sheet materials. A number of suitable materials are commercially available for use in this pouring spout 10. The above are just a few of the available ones. A low cost spout may be made by using molded pulp for the skirt 32, walls 34 and 38 and the base 36, while the spout proper 44 may be of a fine grade of strong waxed paper.

Another embodiment of this invention is illustrated in FIGURE 5. In FIGURE 5 it is seen that there is a skirt 46 which is designed to co-fit on the inside of the annular wall 50 bears against the outer face of the cylindrical wardly at approximately a right angle to form ledge 48. The ledge 48 then bends downwardly at approximately a right angle to form the annular wall 50. The annular wall 50 bears against the outer face of the cylindrical wall 14 of the can 12. The ledge 48 and depending annular wall 50 may be considered to be the equivalent of a bracing finger for the skirt 46. Again, the skirt 46 bends outwardly and downwardly so that its lower edge fits snugly against the outer surface of the annular wall 30. In this manner paint or other liquids are prevented from working their way behind the skirt 46, over the upper edge of the annular wall 30 and into the groove defined by the annular wall 30, the base 28 and the annular wall 26. Also, the pouring spout proper or bib 44 is fitted onto or attached onto the skirt 46 so as to act as a funnel or spout for directing liquids and other materials flowing out of the can 12.

In FIGURE 6 there is illustrated still another embodiment of the invention. In this embodiment there is a skirt, annular skirt 48 which fits inside of the wall 30 of the can. The skirt rises upwardly and then bends over the wall to define the downwardly depending annular wall 50. The skirt 48 and the annular wall 50 fit snugly around the wall 30 so as to position the pouring spout on the wall. It is seen that the lower end of the skirt 48 is directed outwardly so as to bear against the inner surface of the wall 30 and thereby prevent liquids flowing between the skirt 48 and the wall 30, up over the wall 30 and down into the annular groove defined by the wall 30, the base 28 and the wall 26. The annular wall 50 on a

slower end bends outwardly at approximately a right angle to form the base 52. The base 52 at its outer end bends upwardly at approximately a right angle to define the annular wall 54. The annular walls 50 and 54 and the base 52 may be considered to be the equivalent of a bracing finger. In this particular embodiment the skirt 48 in addition to bending into the depending annular wall 50 extends outwardly and upwardly to define the pouring spout proper or bib 56. As is seen the pouring spout proper or bib 56 is integral and continuous with the skirt 48. This is in contrast to those embodiments illustrated in the FIGURES 2, 3 and 5 where the pouring spout 44 may be integral with the skirt 32 or the skirt 46 but not continuous with the skirt 32 or the skirt 46. One way of forming the embodiment illustrated in FIGURE 6 is by molding a plastic material. For example the plastic material may be polyethylene or methyl methacrylate or polystyrene to name a few.

Having presented my invention it is to be realized that the pouring spout is not restricted for use with only a paint but may be used for other materials and liquids. A few of such materials and liquids may be considered to be linseed oil in a can, either raw or boiled linseed oil. Also, there may be considered the pouring of molasses, asphaltic materials and coal tar products. These have a tendency to overflow into the annular groove and therefore prevent complete sealing of the lid on the can. By the use of this pouring spout it is possible to prevent this filling of the annular groove with such materials and thereby insure a good seal between the lid and the can. With the pouring spout made of low cost materials such as paper products it is possible to use the pouring spout once and then throw it away.

What I claim is:

1. A pouring spout for fitting a can, said spout comprising a skirt portion curved to fit with the mouth of the can, said skirt portion near its free edges having a locking plate, said locking plate being on that surface of the skirt portion facing the mouth of the can and being of a thickness greater than the main body of the skirt portion, said locking plate being bevelled near its upper outer corner for ease of removal of the pouring spout from the can, said skirt portion fitting tightly with the mouth of the can to prevent he contents of the can from working their way between the skirt portion and the mouth of the can, a bracing channel portion connecting with the skirt portion and with the can when the spout is fitted thereon so as to position the skirt portion, a bib connecting with the skirt portion so as to convey and direct the contents of the can to the outside.

2. A pouring spout for fitting a can, said spout comprising a skirt portion curve to fit with the mouth of the can, said skirt portion near its free edges having a locking plate, said locking plate being on that surface of the skirt portion facing the mouth of the can and being of a thickness greater than the main body of the skirt portion, said locking plate being bevelled near its upper outer corner for ease of removal of the pouring spout from the can, said skirt portion fitting tightly with the mouth of the can to prevent the contents of the can from working their way between the skirt portion and the mouth of the can, a bracing channel portion connecting with the skirt portion and with the can when the spout is fitted thereon so as to position the skirt portion, a bib connecting with the skirt portion so as to convey and direct the contents of the can to the outside, and said skirt portion and said bib being of an integral continuous structure.

3. A pouring spout for fitting a can, said spout comprising a skirt portion curved to fit with the mouth of the can, said skirt portion near its free edges having a locking plate, said locking plate being on that surface of the skirt portion facing the mouth of the can and being of a thickness greater than the main body of the skirt portion, said locking plate being bevelled near its upper outer corner

for ease of removal of the pouring spout from the can, said skirt portion fitting tightly with the mouth of the can to prevent the contents of the can from working their way between the skirt portion and the mouth of the can, a bracing channel portion connecting with the can when the spout is fitted thereon so as to position the skirt portion, a bib connecting with the skirt portion so as to convey and direct the contents of the can to the outside, said skirt portion and said bib being integral but of two separate pieces united.

4. A pouring spout for fitting a can, said spout comprising a skirt portion curved to fit with the mouth of the can, said skirt portion near its free edges having a locking plate, said locking plate being on that surface of the skirt portion facing the mouth of the can and being of a thickness greater than the main body of the skirt portion, said locking plate being bevelled near its upper outer corner for ease of removal of the pouring spout from the can, said skirt portion fitting tightly with the mouth of the can to prevent the contents of the can from working their way between the skirt portion and the mouth of the can, a bracing channel portion connecting with the skirt portion and with the can when the spout is fitted thereon so as to position the skirt portion, said bracing channel portion connecting with the upper part of the skirt portion and then bending downwardly into a depending ledge, said depending ledge curving outwardly and upwardly to form a bearing section, said depending ledge and said skirt portion being on opposite sides of the rim of the mouth of the can, said bearing

section being in a recess in the top of the can and which recess is around the mouth of the can.

5. A pouring spout for fitting a can, said spout comprising a skirt portion curved to fit with the mouth of the can, said skirt portion near its free edges having a locking plate, said locking plate being on that surface of the skirt portion facing the mouth of the can and being of a thickness greater than the main body of the skirt portion, said locking plate being bevelled near its upper outer corner for ease of removal of the pouring spout from the can, said skirt portion fitting tightly with the mouth of the can to prevent the contents of the can from working their way between the skirt portion and the mouth of the can, a bracing channel portion connecting with the skirt portion and with the can when the spout is fitted thereon so as to position the skirt portion, said bracing channel portion connecting with the upper part of the skirt portion and then projecting outwardly and then bending downwardly to overlie the side of the can and to fit with the side of the can.

References Cited in the file of this patent

UNITED STATES PATENTS

200,120	Atterbury	Feb. 12, 1878
2,764,325	Pellandini	Sept. 25, 1956
2,765,966	Davis	Oct. 9, 1956
2,767,981	Beadles	Oct. 23, 1956
2,873,052	Atherton	Feb. 10, 1959
2,996,215	Giya	Aug. 15, 1961