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(54) **A container having a reclosable pour spout mounted thereon.**

Behälter mit einem daran befestigten wiederverschliessbaren Ausguss.

Conteneur à bec verseur refermable

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(56) References cited:
**EP-A- 0 407 746 US-A- 4 909 434
US-A- 5 169 374**

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Description

[0001] The present invention pertains to a pour spout and more particularly, to a container having a reclosable pour spout attached thereto.

[0002] There are various types of devices that have been proposed for attachment to containers to facilitate the emptying of the contents from the container. For example, U.S. Patent No. 4,813,578 discloses a pour spout provided with a flange portion for attaching the pour spout to the exterior surface of a container. The flange portion of the pour spout is attached to the exterior surface by heat sealing the plastic material from which the pour spout is fabricated to the plastic outer coating on the container. Such an arrangement is susceptible to certain improvements because it has been found that the securement of the pour spout to the container may deteriorate somewhat over time. In particular, once the pour spout is attached to a container, it is believed that the plastic layer on the container has a tendency to undergo additional curing or other changes. As a result, the adhesion at the interface between the flange portion of the pour spout and the outer surface of the container may be affected and diminished slightly, e.g., the plastic coating on the container may shrink slightly relative to the flange portion of the pour spout.

[0003] While this consideration is of concern in most all types of pour spouts that are secured to a container, it may be of particular concern in the case of pour spouts which have a flip top type of reclosable cap for closing the pour spout. In the case of pour spouts employing a flip top type of reclosable cap, an upwardly directed force is required to open the cap. If the integrity of the attachment of the pour spout to the outer surface of the container has been diminished in the foregoing matter, the force required to open the cap will contribute to further diminishing the secure attachment of the pour spout to the container.

[0004] U.S. Patent No. 4,909,434 discloses a method of securing a pouring spout in liquid-tight relation to the innermost and outermost surfaces of a carton. The pouring spout is provided with a preformed first flange and a liquid passageway oriented substantially perpendicular to the first flange. The pouring spout is mounted on the carton by inserting the liquid passageway of the pouring spout through a hole that is cut in the carton wall. The first flange is brought into contacting relation with the outer surface of the carton wall while the liquid passageway is deformed to form a second flange parallel to the first flange and lying flat on the interior surface of the carton wall. Sufficient heat and pressure is then applied to the two flanges to continuously fuse the flanges to the innermost and outermost layers of the carton wall around the entire periphery of the hole in the carton. This pouring spout is also susceptible of various improvements.

[0005] U.S. Patent No. 5,069,385 discloses a similar method for securing a pouring spout to the innermost

and outermost surfaces of a carton. As shown in particular in Figs 18 and 19, a spout having a preformed external flange is assembled on a carton and an internal flange is formed so as to lie flat against the interior surface of the carton parallel to the external flange.

[0006] To address the foregoing concerns and others, the present invention provides a pour spout that is attached to the container in a manner that is well suited for helping to ensure that the pour spout remains reliably and securely attached to the container and is not easily pulled from the container.

[0007] The present invention is directed to a container having a pour spout attached thereto, generally of the type disclosed in U.S. Patent No. 4,909,434.

[0008] In accordance with one aspect of the present invention, there is provided a container as defined in claim 1.

[0009] In accordance with another aspect of the present invention, there is provided a method of providing a container with a pour spout as defined in claim 9.

[0010] Reference will now be made to the accompanying drawings, in which:-

Fig. 1 is a cross-sectional side view of one embodiment of the reclosable pour spout according to the present invention attached to a container;

Fig. 2 is a cross-sectional side view of another embodiment of the reclosable pour spout according to the present invention attached to a container;

Fig. 3 is a cross-sectional side view of another embodiment of the reclosable pour spout according to the present invention attached to a container; and

Fig. 4 is a bottom perspective view of the embodiment of the pour spout illustrated in Fig. 1.

[0011] As seen in Fig. 2, the reclosable pour spout 10 embodying the present invention includes a base member 12 and a cap 14. The cap 14 may be integrally connected to and formed in one piece with the base member 12. The cap 14 can be connected to the cap 14 by way of a strip of connecting material 18.

[0012] The base member 12 as illustrated in Fig. 4 is defined by a substantially planar flange member 20, an upwardly extending substantially cylindrical extension 24 and a downwardly extending substantially cylindrical stem 26. Preferably, the cylindrical extension 24, the cylindrical stem 26 and the flange member 20 are all formed integrally and in one piece from a suitable plastic material. In the embodiment illustrated in Figs. 2 and 4, the stem 26 can have a substantially constant thickness along its length. The extension 24 and the stem 26 together define a hollow cylindrical portion and the flange member 20 surrounds that cylindrical portion at a point intermediate the ends of the cylindrical portion.

[0013] To provide the pour spout 10 with an extremely effective airtight and liquid-tight seal, it is desirable that the inner surface of the cap 14 and the outer peripheral

surface of the cylindrical extension 24 interact with one another in the manner illustrated in Fig. 2. Generally speaking, the extension 24 is provided with an annular ridge 32 and an annular recess 34 while the inner surface of the cap 14 is provided with an outwardly tapering part 36 that cooperates with the annular ridge 32 and the annular recess 34.

[0014] One possible way of securing the pour spout 10 to the container 100 is by way of a suitable adhesive. The adhesive can be applied to the bottom surface 28 of the flange member 20 and the facing outer surface of the container 100. To help prevent the adhesive from flowing into the package and contaminating the contents, an annular barrier strip 38 is provided on the exterior surface of the cylindrical stem 26. The annular strip 38 functions as a barrier for inhibiting the adhesive from flowing beyond the barrier 38. The annular barrier strip 38 can be seen in the perspective view of Fig. 4.

[0015] As seen more clearly in Fig. 4, the cylindrical stem 26 is provided with oppositely positioned and generally V-shaped cutout portions 40. Preferably, the portion of the stem 26 below the barrier strip 38 and extending away from the flange member has a reduced thickness accomplished by maintaining the interior dimension identical with the remainder of the stem 26. The generally V-shaped cutout portions 40 help facilitate the process of forming the stem 26 from the initial configuration shown in Fig. 4 to the final configuration depicted in Fig. 2 in which the pour spout 10 is mounted on the container 100. It is to be understood that the description of the pour spout being mounted or secured to a container or a container body is meant to include the pour spout being attached to a container, to a container blank prior to formation into the container, and to a container blank in any intermediate stage of the container formation process.

[0016] Initially, the pour spout 10 is placed on the container 100 by inserting the cylindrical stem 26 into the hole formed in the container 100. Thereafter, a suitably shaped plate is brought into contact with the free end 42 of the cylindrical stem 26 to cause a portion of the stem 26 to turn outwardly and form an outwardly turned portion 25, to turn slightly upwardly toward the wall of the container 100 to form an upwardly turned portion 27, and to turn outwardly again to form another outwardly turned portion 29. As can be seen from Fig. 2, the outwardly turned portion 29 preferably extends somewhat parallel to the wall of the container 100. Additionally, the outwardly turned portion 29 of the stem 26 is preferably in contact with the inner surface of the wall of the container 100. As an alternative to the specific construction shown in Fig. 2, the free end 42 of the stem 26 could be turned upwardly slightly such that the free end 42 of the stem 26 is in contact with the inner surface of the wall of the container 100.

[0017] By forming the stem 26 of the pour spout 10 relative to the container 100 in the manner illustrated in Fig. 2, the pour spout 10 is mechanically secured in

place on the container 100. When an upwardly directed force is applied to the pour spout 10, such as might occur upon opening of the cap 14 or if the container is picked up by the pour spout, the outwardly turned portion 29 of the stem 26 rests against the inner surface of the container 100 and tends to distribute the upwardly directed force across the surface of the container. Thus, even if the interface between the flange member 20 and the outer surface of the container 100 is altered slightly as a result of further curing of the plastic layer on the container, the ability of the pour spout to be pulled away from the container will be substantially inhibited.

[0018] The embodiment of the pour spout shown in Fig. 1 is similar to that illustrated in Fig. 2 except that an annular ledge 30' is included that extends around the entire periphery of the cylindrical stem 26'. The annular ledge 30' is spaced from the bottom surface 28' of the flange member 20' by a distance that generally corresponds to the thickness of the container 100'. During fabrication of the container 100', a hole is formed in the container to receive the stem 26' of the pour spout 10'. It can be readily appreciated that due to the nature of the material from which the container 100' is fabricated, the periphery of the hole in the container 100' can be displaced slightly in the plane of the material when the cylindrical stem 26' is inserted into the hole. The portion of the container wall surrounding the stem 26' becomes positioned between the ledge 30' and the bottom surface 28' of the flange member 20' in the manner illustrated in Fig. 1. As a result, the pour spout 10' is held in place relative to the container 100' in the axial direction so that the pour spout 10' can be securely attached to the container by suitable means. Thus, the ledge 30' helps to maintain the position of the pour spout 10' on the container 100' to help ensure that the pour spout 10' is securely attached to the container 100'.

[0019] It should be readily understood that the annular ledge 30' which extends completely around the outer periphery of the cylindrical stem 26' could be replaced with a plurality of spaced apart ledge segments extend around a portion of the cylindrical stem.

[0020] It can be readily seen from a review of Figs. 1-3 that the outwardly turned portion 29, 29' of the stem 26, 26' is not sealed to the inner surface of the container 100. However, in certain applications, it may be desirable to secure the outwardly turned portion 29, 29' of the stem 26 to the inner surface of the container, such as for example by use of an adhesive.

[0021] To attach the pour spout 10, 10' to the container 100, 100', an adhesive is applied between the bottom surface 28, 28' of the flange member 20, 20' and the facing outer surface of the container 100, 100'. To help ensure that the adhesive does not flow outwardly beyond the outer edges of the flange member 20, 20' and does not flow inwardly between the outer periphery of the stem 26, 26' and the inner periphery of the hole in the container, two annular ridges 46, 46', 48, 48' (shown in exaggerated scale) are provided on the bottom sur-

face 28, 28' of the flange member 20, 20'. However, it may be desirable to eliminate the annular ridge 48, 48' so that adhesive can flow partially down the stem 26 to the annular barrier strip 38, 38' to aid sealing the hole in the container. Alternatively, additional adhesive/sealant can be applied to the stem 26 between the flange members 20, 20' and the annular barrier strip 38, 38' to accomplish essentially the same result while still preventing substantial adhesive in the interior of the carton. The annular ridges 46, 48 are also useful in helping to concentrate the adhesive in a confined annular area to thereby aid in proper securement of the pour spout 10, 10' to the container 100, 100'.

[0022] Turning to Fig. 3, another embodiment of the reclosable pour spout of the present invention is illustrated. To simplify the illustration and description, the integrally formed cap is not illustrated. However, it is to be understood that the cap could be configured in the manner illustrated with respect to the embodiment shown in Figs. 1 and 2.

[0023] As seen in Fig. 3, the reclosable pour spout 50 includes a flange member 52, an axially upwardly extending and integrally formed cylindrical extension 54 and an integrally formed and axially downwardly extending cylindrical stem 56. Although the cylindrical extension 54 is shown as having a slightly different configuration than that illustrated with respect to the embodiments shown in Figs. 1 and 2, it is to be understood that the extension 54 could be configured in the same manner illustrated with respect to the embodiments shown in Figs. 1 and 2.

[0024] In the embodiments shown in Fig. 3, the thickness of the cylindrical stem 56 can decrease from the flange member 52 to the free end 58 of the stem 56. The stem 56 is reduced in thickness to help facilitate the forming of the stem 56 in the manner necessary to result in the configuration shown in Fig. 3. Preferably, in the Fig. 3 embodiment, the V-shaped notches are not provided in the stem 56. Thus, the stem 56 is unbroken such that, from the bottom surface of the flange member 52 to the free end 58 of the stem 56, the stem forms a complete cylindrical member.

[0025] The securement of the embodiment of the reclosable attachment shown in Fig. 3 to the container is effected by inserting the cylindrical stem 56 into the hole in the container 200. An adhesive can be applied between the bottom surface of the flange member 52 and the outer surface of the container 200 to secure the pour spout 50 to the container.

[0026] A tool can then be employed to form the cylindrical stem 56 into the configuration shown in Fig. 3. The tool is such that it causes the stem 56 to flair outwardly at a point 60 just below the flange member 52. This outward flaring of the stem 56 also causes the portion 62 of the container surrounding the hole periphery to flair downwardly toward the interior of the container and slightly outwardly, thereby defining a generally U-shaped crotch 61. In addition to causing a portion of the

stem 56 to be turned outwardly to define an outwardly turned portion 55, the tool also causes a portion of the stem 56 to turn upwardly to define an upwardly turned portion 57. Additionally, the upwardly turned portion 57 is turned in towards the stem 56 so that the free end 58 of the stem 56 fits into the generally U-shaped crotch 61 formed by the turning of the portion 62 of the container. In a slightly altered construction, the upwardly turned portion 57 of the stem could be turned slightly less than that illustrated in Fig. 3 so that the free end 58 of the stem 56 faces and is substantially in contact with the inner surface of the container wall. In this latter alternative, the upwardly turned portion 57 of the stem could be somewhat perpendicularly arranged with respect to the container wall. Generally speaking, in the embodiment of the pour spout shown in Fig. 3, the portion of the stem 56 of the pour spout 50 that has been turned is substantially C-shaped in cross-section.

[0027] As a result of the formation of the stem 56 into the configuration shown in Fig. 3, the portion 62 of the container material surrounding the hole periphery is positioned within a substantially closed region 64 defined by the outwardly and upwardly turned portion of the stem 56. Such an arrangement can be advantageous in that any adhesive that may flow radially inwardly between the outer periphery of the stem 56 and the inner periphery of the hole in the container 200 will be prevented from flowing into the interior of the container and contaminating the contents in the container since it will be trapped within the enclosed region 64.

[0028] The formation of the stem 56 of the pour spout 50 relative to the container 200 in the manner shown in Fig. 3 produces a pour spout 50 that, like the embodiments illustrated in Figs. 1 and 2, is mechanically secured in place on the container 200. Consequently, when an upwardly directed force is applied to the pour spout 50, such as might occur upon opening of the cap (not shown) or if the container 200 is picked up by the pour spout 50, the upwardly turned portion 57 of the stem 56 presses against the inner surface of the container 200, thereby resisting any tendency of the pour spout to be pulled out of the container 200. Thus, even if the integrity of the adhesion at the interface between the flange member 52 and the outer surface of the container 200 is diminished slightly as a result of further curing of the plastic layer on the container as noted above, the contact between the turned stem 56 and the inner surface of the container 200 will tend to prevent the pour spout 50 from being pulled out of the container 200.

[0029] While the embodiment of the pour spout illustrated in Fig. 3 is not illustrated as being provided with annular ridges on the bottom surface of the flange member 52 for purposes of confining the adhesive, it is to be understood that annular ridges similar to the annular ridges 46, 48 shown in Fig. 2 could be provided, if desired.

[0030] Although the embodiment of the pour spout 10 illustrated in Figs. 1, 2 and 4 is described being mounted on the container through use of the described method of forming the upturned portion of the stem 26, it is to be understood that the method described for forming the upturned portion of the stem 56 illustrated in Fig. 3 and for mounting the pour spout 50 on the container could be used as an alternative, thereby resulting in downwardly and outwardly flared portions of the container. Similarly, the method described for mounting the pour spout 10 illustrated in Figs. 1, 2 and 4 on the container could be employed in connection with the mounting of the pour spout 50 shown in Fig. 3.

[0031] It is also to be recognized that all of the embodiments of the pour spouts disclosed herein and described above could be provided with a tamper evident and accidental opening preventive feature for indicating if the pour spout has been tampered with and for helping to inhibit accidental opening of the pour spout.

[0032] The principles, preferred embodiments and mode of operation of the present invention have been described in the foregoing specification. However, it is to be understood that variations and changes may be made without departing from the scope of the present invention as defined in the appended claims.

Claims

1. A container for holding pourable material, comprising:

a container body (100, 200) having an exterior surface, an interior surface, an interior for receiving pourable material, and an opening extending through a wall thereof for permitting emptying of the material from the container; and

a reclosable pour spout (10, 50) secured to the wall of the container body, said reclosable pour spout including:

a flange member (20, 52) having oppositely positioned first and second sides, and an aperture extending therethrough, the second side of the flange member being secured to the exterior surface of the wall of the container body;

an extension (24, 54) connected to and extending axially away from the first side of the flange member, said extension having an aperture extending therethrough that communicates with the aperture in the flange member; and

a stem (26, 56) connected to and extending axially away from the second side of the flange member, said stem having an aperture extending therethrough that communicates with the aperture in the flange member, said stem being comprised of a substantially axially extending portion that extends through the opening in the wall of the container body;

characterised in that:

a portion of said substantially axially extending portion extends beyond the interior surface of the wall of the container body toward the interior of the container body; and

an outwardly and upwardly turned portion (27, 57) extends from said substantially axially extending portion back toward the interior surface of the wall of the container body, said outwardly and upwardly turned portion (27, 57) having a thickness which is less than the thickness of the substantially axially extending portion.

2. The container according to claim 1, wherein the upwardly turned portion (27) is connected to the substantially axially extending portion by an outwardly turned portion (25), said stem including another outwardly turned portion (29) positioned adjacent the upwardly turned portion (27), said another outwardly turned portion (29) extending substantially parallel to the interior surface of the wall of the container body (100).
3. The container according to claim 1 or 2, wherein the upwardly turned portion (27) of the stem (26) is connected to the substantially axially extending portion by an outwardly turned portion (25), the upwardly turned portion and the outwardly turned portion having two cutout portions (40) formed therein.
4. The container according to claim 1 or 2, wherein said stem is devoid of cutout portions.
5. The container according to any preceding claim, including an annular ledge (30) around the outer periphery of the substantially axially extending portion of the stem (26), said ledge being spaced a distance from the flange member (20) sufficient to contact the interior surface of the wall of the container body (100).
6. The container according to claim 1, wherein a portion (62) of the wall of the container body (200) surrounding the opening is turned inwardly toward the interior of the container and is turned outwardly to thereby define a crotch (61), the stem (56) having a free end (58) that fits into said crotch.
7. The container according to claim 6, wherein the portion (62) of the wall of the container body (200) surrounding the opening in the wall is flared inwardly towards the interior of the container and outwardly by the substantially axially extending portion of the stem (56).
8. The container according to claim 6 or 7, wherein

said stem (56) decreases in thickness from the flange member toward a free end of the stem.

9. A method of providing a container with a pour spout, comprising the steps of:

providing a pour spout (10, 50) having a hollow cylindrical portion (24, 54) and an annular flange member (20, 52) connected to and extending radially outwardly from an outer peripheral surface of the cylindrical portion, said flange member being positioned intermediate opposite ends of the cylindrical portion, said cylindrical portion having a part positioned between the flange member and one end of the cylindrical portion that defines a stem (26, 56); providing a container (100, 200) having an opening formed in a wall thereof and having inner and outer surfaces; and mounting the pour spout on the container by inserting the stem into the opening in the container wall; characterised by:
mounting the pouring spout on the container wall with a substantially axially extending portion of the stem (26, 56) extending beyond the interior surface of the container wall into the interior of the container; and turning a reduced-thickness portion (27, 57) of the substantially axially extending stem portion outwardly of the latter stem portion and back toward the inner surface of said container wall to form an upwardly turned portion (27, 57) of the stem.

10. The method according to claim 9, including securing the outer surface of the container wall to a surface of the flange member (20, 52) that faces the outer surface of the container wall.

11. The method according to claim 10, wherein said surface of the flange member (20, 52) is secured to the outer surface of the container wall by an adhesive.

12. The method according to claim 9, 10 or 11, wherein the upwardly turned portion (27) of the stem has a free end, and the method includes turning said upwardly turned portion (27) outwardly adjacent the free end thereof to form another outwardly turned portion (29) of the stem.

13. The method according to claim 12, wherein the another outwardly turned portion (29) of the stem is formed to extend substantially parallel to the inner surface of the container wall.

14. The method according to claim 13, wherein said

another outwardly turned portion (29) of the stem engages the inner surface of the container wall.

15. The method according to claim 9, which includes flaring a portion (62) of the container wall that surrounds the opening inwardly toward the interior of the container and outwardly to thereby define a crotch (61), and turning the upwardly turned portion (57) of the stem such that a free end (58) of the stem fits into said crotch.

16. The method according to claim 15, including the step of inwardly flaring the portion (62) of the container wall surrounding the opening by the turning of the upwardly turned stem portion (57).

Patentansprüche

1. Behälter zum Aufbewahren von gießbarem Material, mit:

einem Behälterkörper (100, 200) mit einer Außenfläche, einer Innenfläche, einem Innenraum zur Aufnahme von gießbarem Material und einer eine Wand des Behälterkörpers durchlaufende Öffnung, die ein Ausleeren des Materials aus dem Behälter ermöglicht; und einem wiederverschließbaren Ausgießer (10, 50), der an der Wand des Behälterkörpers befestigt ist und aufweist:

ein Flanschteil (20, 52) mit einander gegenüber angeordneten ersten und zweiten Seiten sowie einer es durchlaufenden Öffnung, wobei die zweite Seite des Flanschteils an der Außenfläche der Wand des Behälterkörpers befestigt ist;

eine Verlängerung (24, 54), die mit der ersten Seite des Flanschteils verbunden ist, sich axial von dieser weg erstreckt und durch die eine Öffnung verläuft, die mit der Öffnung im Flanschteil in Verbindung steht; und

einen Steg (26, 56), der mit der zweiten Seite des Flanschteils verbunden ist, sich axial von dieser weg erstreckt und durch den eine Öffnung verläuft, die mit der Öffnung im Flanschteil in Verbindung steht, wobei der Steg einen im wesentlichen axial verlaufenden Abschnitt aufweist, der durch die Öffnung in der Wand des Behälterkörpers hindurchverläuft; dadurch gekennzeichnet, daß:

ein Abschnitt des im wesentlichen axial verlaufenden Abschnitts über die Innenfläche der Wand des Behälterkörpers hinaus zum Innenraum des Behälterkörpers verläuft; und daß ein nach außen und nach oben gewandter Abschnitt (27, 57) sich von dem im wesentlichen axial verlaufenden Abschnitt aus zurück zur Innenfläche der Wand des Behälterkörpers

erstreckt und eine Dicke aufweist, die geringer als die Dicke des im wesentlichen axial verlaufenden Abschnitts ist.

2. Behälter nach Anspruch 1, bei dem der nach oben gewandte Abschnitt (27) mit dem im wesentlichen axial verlaufenden Abschnitt durch einen nach außen gewandten Abschnitt (25) verbunden ist, wobei der Steg einen weiteren nach außen gewandten Abschnitt (29) aufweist, der benachbart zu dem nach oben gewandten Abschnitt (27) angeordnet ist und sich im wesentlichen parallel zur Innenfläche der Wand des Behälterkörpers (100) erstreckt. 5
3. Behälter nach Anspruch 1 oder 2, bei dem der nach oben gewandte Abschnitt (27) des Stegs (26) mit dem im wesentlichen axial verlaufenden Abschnitt durch einen nach außen gewandten Abschnitt (25) verbunden ist, wobei in dem nach oben gewandten Abschnitt und in dem nach außen gewandten Abschnitt zwei Ausschnittsabschnitte (40) ausgebildet sind. 10
4. Behälter nach Anspruch 1 oder 2, wobei der Steg frei von Ausschnittsabschnitten ist. 15
5. Behälter nach einem der vorhergehenden Ansprüche, mit einer Ringleiste (30) um den Außenumfang des im wesentlichen axial verlaufenden Abschnitts des Stegs (26) herum, wobei die Leiste von dem Flanschteil (20) in einem Abstand angeordnet ist, der zum Berühren der Innenfläche der Wand des Behälterkörpers (100) ausreicht. 20
6. Behälter nach Anspruch 1, bei dem ein die Öffnung umgebender Abschnitt (62) der Wand des Behälterkörpers (200) nach innen zum Innenraum des Behälters und nach außen gewandt ist, um dadurch eine Gabel (61) auszubilden, wobei der Steg (56) ein freies Ende (58) aufweist, das in die Gabel hineinpaßt. 25
7. Behälter nach Anspruch 6, bei dem der die Öffnung in der Wand umschließende Abschnitt (62) der Wand des Behälterkörpers (200) durch den im wesentlichen axial verlaufenden Abschnitt des Stegs (56) nach innen zum Innenraum des Behälters und nach außen konisch erweitert ist. 30
8. Behälter nach Anspruch 6 oder 7, bei dem die Dicke des Steges (56) vom Flanschteil zum freien Ende des Stegs hin abnimmt. 35
9. Verfahren zum Versehen eines Behälters mit einem Ausgießer, mit den folgenden Schritten: 40

Bereitstellen eines Ausgießers (10, 50) mit

einem hohlen zylindrischen Abschnitt (24, 54) und einem ringförmigen Flanschteil (20, 52), das mit einer äußeren Umfangsfläche des zylindrischen Abschnitts verbunden ist und sich von dieser aus radial auswärts erstreckt und das zwischen einander gegenüberliegenden Enden des zylindrischen Abschnitts angeordnet ist, wobei der zylindrische Abschnitt einen Teil aufweist, der zwischen dem Flanschteil und einem Ende des zylindrischen Abschnitts angeordnet ist und einen Steg (26, 56) ausbildet;

Bereitstellen eines Behälters (100, 200), in dessen einer Wand eine Öffnung ausgebildet ist und der Innen- und Außenflächen aufweist; und

Befestigen des Ausgießers an dem Behälter durch Einsetzen des Steges in die Öffnung in der Behälterwand;

gekennzeichnet durch:

Befestigen des Ausgießers an der Behälterwand, wobei ein im wesentlichen axial verlaufender Abschnitt des Steges (26, 56) über die Innenfläche der Behälterwand hinaus in den Innenraum des Behälters verläuft; und

Wenden eines mit einer reduzierten Dicke versehenen Abschnittes (27, 57) des im wesentlichen axial verlaufenden Stegabschnittes zur Außenseite des letzteren Stegabschnittes und zurück zur Innenfläche der Behälterwand, um einen nach oben gewandten Abschnitt (27, 57) des Steges auszubilden.

10. Verfahren nach Anspruch 9, mit dem Befestigen der Außenfläche der Behälterwand an einer Fläche des Flanschteiles (20, 52), die der Außenfläche der Behälterwand zugewandt ist. 45
11. Verfahren nach Anspruch 10, bei dem die Fläche des Flanschteiles (20, 52) an der Außenfläche der Behälterwand durch ein Klebemittel befestigt wird. 50
12. Verfahren nach Anspruch 9, 10 oder 11, bei dem der nach oben gewandte Abschnitt (27) des Steges ein freies Ende aufweist, und bei dem das Verfahren das Nachaußenwenden des nach oben gewandten Abschnittes (27) in der Nähe dessen freien Endes aufweist, um einen weiteren nach außen gewandten Abschnitt (29) des Steges auszubilden.
13. Verfahren nach Anspruch 12, bei dem der weitere nach außen gewandte Abschnitt (29) des Steges ausgebildet wird, um im wesentlichen parallel zur Innenfläche der Behälterwand zu verlaufen.
14. Verfahren nach Anspruch 13, bei dem der weitere nach außen gewandte Abschnitt (29) des Steges

an der Innenfläche der Behälterwand anliegt.

15. Verfahren nach Anspruch 9, bei dem ein die Öffnung umgebender Abschnitt (62) der Behälterwand nach innen zum Innenraum des Behälters und nach außen hin konisch erweitert wird, um dadurch eine Gabel (61) auszubilden, und bei dem der nach oben gewandte Abschnitt (57) des Steges derart gewendet wird, daß ein freies Ende (58) des Steges in die Gabel paßt.
16. Verfahren nach Anspruch 15, mit dem Schritt des konischen Erweiterns des die Öffnung umgebenden Abschnitts (62) der Behälterwand nach innen durch Wenden des nach oben gewandten Stegabschnittes (57).

Revendications

1. Conteneur destiné à contenir un produit pouvant être versé, comprenant :
 - un corps de conteneur (100, 200) présentant une surface extérieure, une surface intérieure, un intérieur destiné à recevoir un produit pouvant être versé, et une ouverture s'étendant à travers une paroi de celui-ci permettant de vider le conteneur de son produit ; et
 - un bec verseur refermable (10, 50) fixé à la paroi du corps de conteneur, ledit bec verseur refermable comprenant :
 - un élément formant collerette (20, 52) présentant des premier et deuxième côtés placés l'un en face de l'autre et une ouverture s'étendant à travers, le deuxième côté de l'élément formant collerette étant fixé à la surface extérieure de la paroi du corps du conteneur ;
 - un prolongement (24, 54) relié à et s'étendant axialement à distance du premier côté de l'élément formant collerette, ledit prolongement possédant une ouverture s'étendant à travers qui communique avec l'ouverture ménagée dans l'élément formant collerette ; et
 - un tuyau (26, 56) reliée à et s'étendant axialement à distance du deuxième côté de l'élément formant collerette, ledit tuyau possédant une ouverture s'étendant à travers, qui communique avec l'ouverture ménagée dans l'élément formant collerette, ledit tuyau étant constitué d'une partie s'étendant sensiblement axialement qui s'étend à travers l'ouverture ménagée dans la paroi du corps du conteneur ;
 - caractérisé en ce que :
 - une partie de ladite partie s'étendant sensiblement axialement s'étend au-delà de la surface intérieure de la paroi du corps du conteneur vers l'intérieur du corps du conteneur ; et
 - une partie tournée vers l'extérieur et vers le haut (27, 57) s'étend depuis ladite partie s'étendant sensiblement axialement pour revenir vers la surface intérieure de la paroi du corps du conteneur, ladite partie tournée vers l'extérieur et vers le haut (27, 57) ayant une épaisseur inférieure à l'épaisseur de la partie s'étendant sensiblement axialement.
2. Conteneur selon la revendication 1, dans lequel la partie tournée vers le haut (27) est reliée à la partie s'étendant sensiblement axialement par une partie tournée vers l'extérieur (25), ledit tuyau comprenant une autre partie tournée vers l'extérieur (29) positionnée adjacente à la partie tournée vers le haut (27), ladite autre partie tournée vers l'extérieur (29) s'étendant sensiblement parallèlement à la surface intérieure de la paroi du corps du conteneur (100).
3. Conteneur selon la revendication 1 ou 2, dans lequel la partie tournée vers le haut (27) du tuyau (26) est reliée à la partie s'étendant sensiblement axialement par une partie tournée vers l'extérieur (25), la partie tournée vers le haut et la partie tournée vers l'extérieur présentant deux parties découpées (40).
4. Conteneur selon la revendication 1 ou 2, dans lequel ledit tuyau est dépourvu de parties découpées.
5. Conteneur selon l'une quelconque des revendications précédentes, comprenant une moulure annulaire (30) autour de la périphérie extérieure de la partie s'étendant sensiblement axialement au tuyau (26), ladite moulure étant espacée de l'élément formant collerette (20) d'une distance suffisante pour venir en contact avec la surface intérieure de la paroi du corps du conteneur (100).
6. Conteneur selon la revendication 1, dans lequel une partie (62) du corps du conteneur (200) entourant l'ouverture est tournée vers l'intérieur en direction de l'intérieur du conteneur et est tournée vers l'extérieur afin de définir une fourche (61), le tuyau (56) ayant une extrémité libre (58) qui s'adapte dans ladite fourche.
7. Conteneur selon la revendication 6, dans lequel la partie (62) de la paroi du corps du conteneur (200) entourant l'ouverture ménagée dans la paroi est évasée vers l'intérieur en direction de l'intérieur du conteneur et vers l'extérieur pour la partie du tuyau (56) s'étendant sensiblement axialement.
8. Conteneur selon la revendication 6 ou 7, dans lequel l'épaisseur du tuyau (56) diminue de l'élément formant collerette vers l'extrémité libre du tuyau.

9. Procédé destiné à munir un conteneur d'un bec verseur, comprenant les étapes consistant :

à fournir un bec verseur (10, 50) ayant une partie cylindrique creuse (24, 54) et un élément formant collerette annulaire (20, 52) relié à et s'étendant radialement vers l'extérieur depuis une surface périphérique extérieure de la partie cylindrique, ledit élément formant collerette étant placé entre les extrémités opposées de la partie cylindrique, ladite partie cylindrique ayant une partie disposée entre l'élément formant collerette et une extrémité de la partie cylindrique qui définit un tuyau (26, 56) ;
à fournir un conteneur (100, 200) présentant une ouverture formée dans une paroi de celui-ci et présentant des surfaces intérieure et extérieure ; et
à monter le bec verseur sur le conteneur en insérant le tuyau dans l'ouverture ménagée dans la paroi du conteneur ;
caractérisé par les étapes consistant :
à monter le bec verseur sur la paroi du conteneur, avec une partie du tuyau (26, 56) s'étendant sensiblement axialement qui s'étend au-delà de la surface intérieure de la paroi du conteneur jusque dans l'intérieur du conteneur ; et
à tourner une partie d'épaisseur réduite (27, 57) de la partie du tuyau s'étendant sensiblement axialement vers l'extérieur de cette partie de tuyau pour revenir vers la surface intérieure de ladite paroi de conteneur afin de former une partie tournée vers le haut (27, 57) du tuyau.

10. Procédé selon la revendication 9, comprenant l'étape consistant à fixer la surface extérieure de la paroi du conteneur à une surface de l'élément formant collerette (20, 52) orientée vers la surface extérieure de la paroi du conteneur.
11. Procédé selon la revendication 10, dans lequel ladite surface de l'élément formant collerette (20, 52) est fixée à la surface extérieure de la paroi du conteneur par un adhésif.
12. Procédé selon la revendication 9, 10 ou 11, dans lequel la partie tournée vers le haut (27) du tuyau présente une extrémité libre, et le procédé comprend l'étape consistant à tourner ladite partie tournée vers le haut (27) vers l'extérieur à proximité de son extrémité libre afin de former une autre partie tournée vers l'extérieur (29) du tuyau.
13. Procédé selon la revendication 12, dans lequel l'autre partie tournée vers l'extérieur (29) du tuyau est formée de manière à s'étendre sensiblement parallèlement à la surface intérieure de la paroi du conteneur.

14. Procédé selon la revendication 13, dans lequel ladite autre partie tournée vers l'extérieur (29) du tuyau vient en prise avec la surface intérieure de la paroi du conteneur.

15. Procédé selon la revendication 9, qui comprend l'étape consistant à évaser une partie (62) de la paroi du conteneur qui entoure l'ouverture vers l'intérieur en direction de l'intérieur du conteneur et vers l'extérieur afin de définir une fourche (61), et à tourner la partie tournée vers le haut (57) du tuyau de sorte qu'une extrémité libre (58) de la tige s'adapte dans ladite fourche.

16. Procédé selon la revendication 15, comprenant l'étape consistant à évaser vers l'intérieur la partie (62) de la paroi du conteneur entourant l'ouverture en tournant la partie (57) du tuyau tournée vers le haut.

FIG. 1

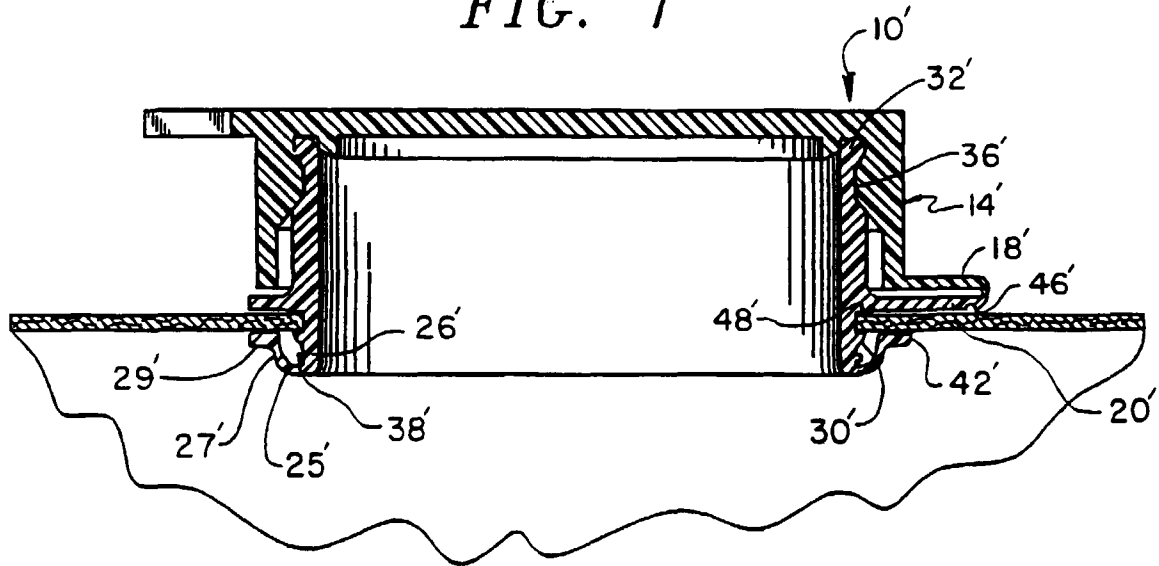


FIG. 2

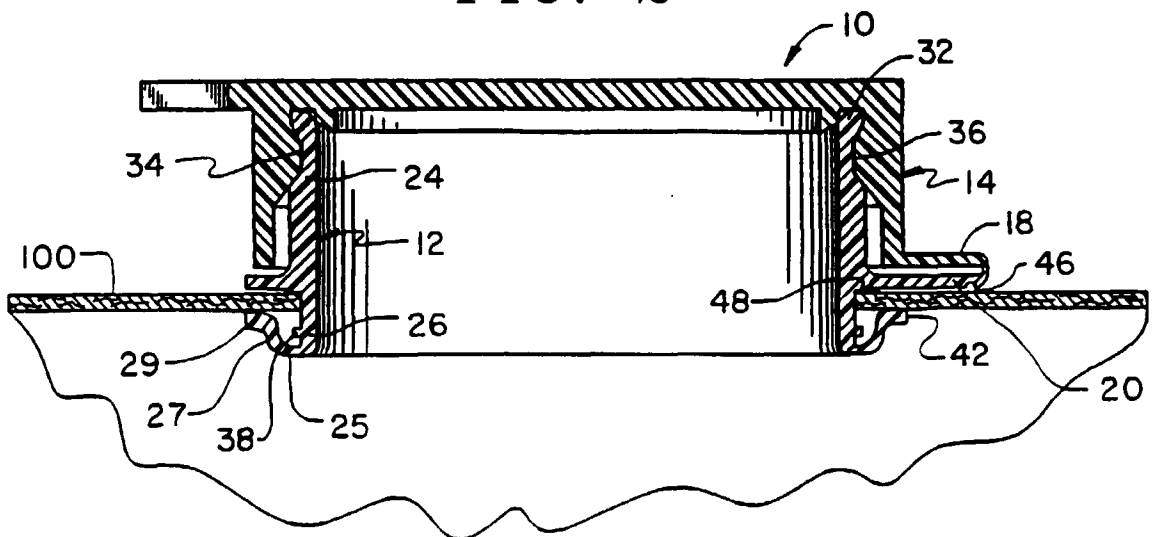


FIG. 3

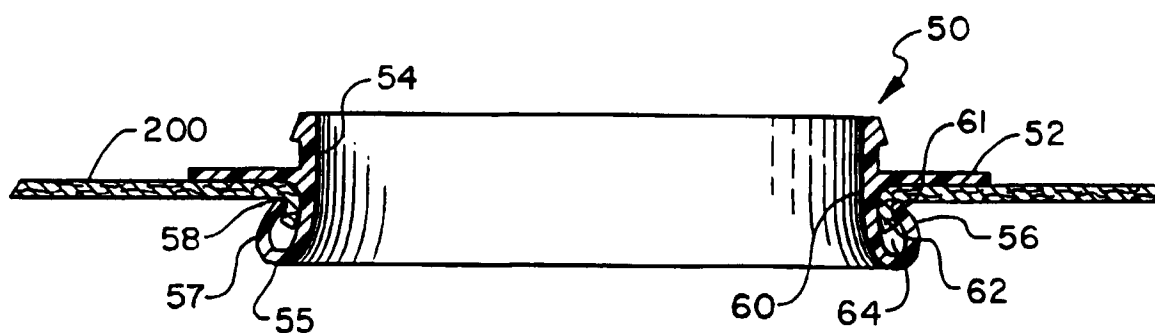


FIG. 4

