Dec. 17, 1963 A. W. SERIO 3,114,484

POURING TOP ASSEMBLY FOR FLUID CONTAINERS

Filed Sept. 14, 1960 4 Sheets-Sheet 1

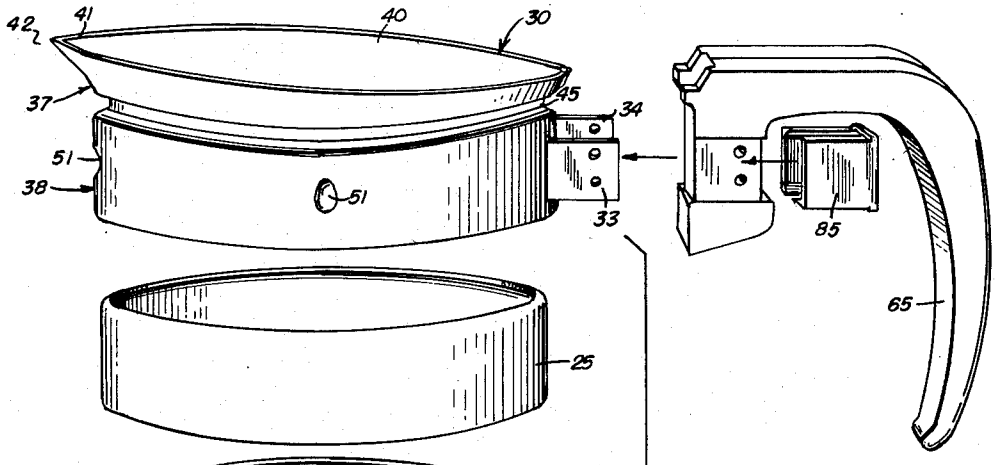


FIG. 1a

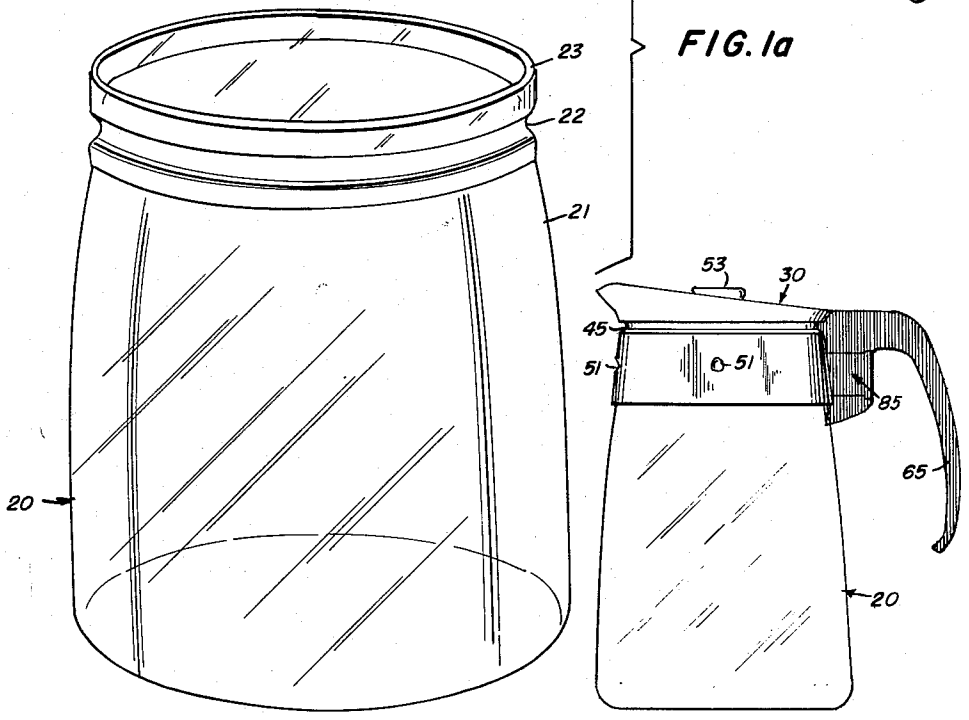


FIG. 1

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POURING TOP ASSEMBLY FOR FLUID CONTAINERS

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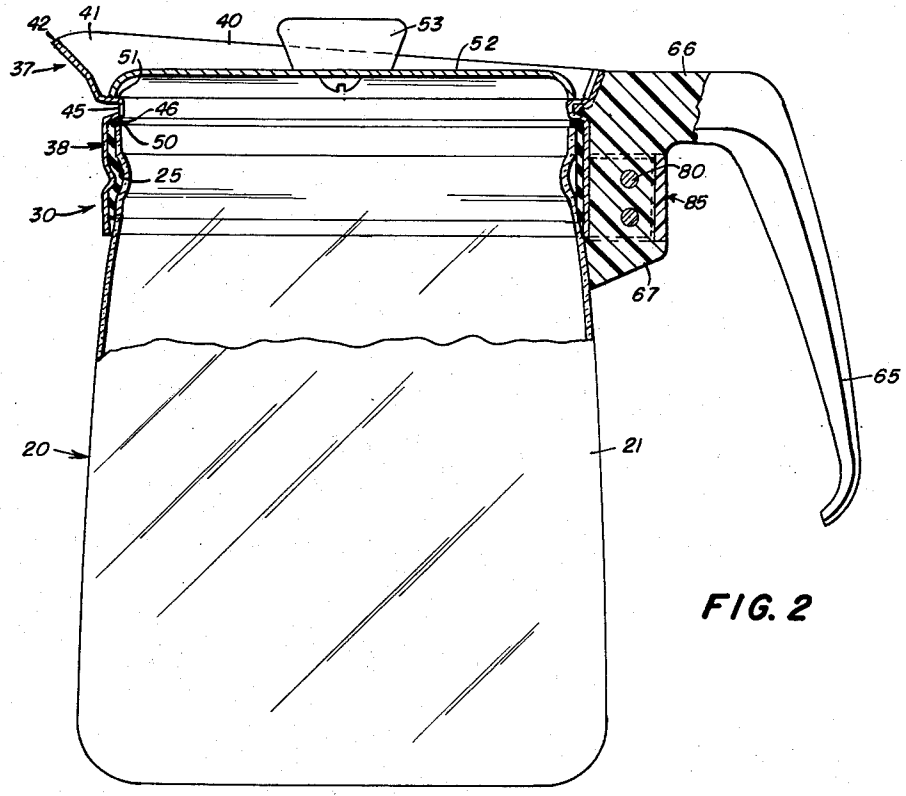


FIG. 2

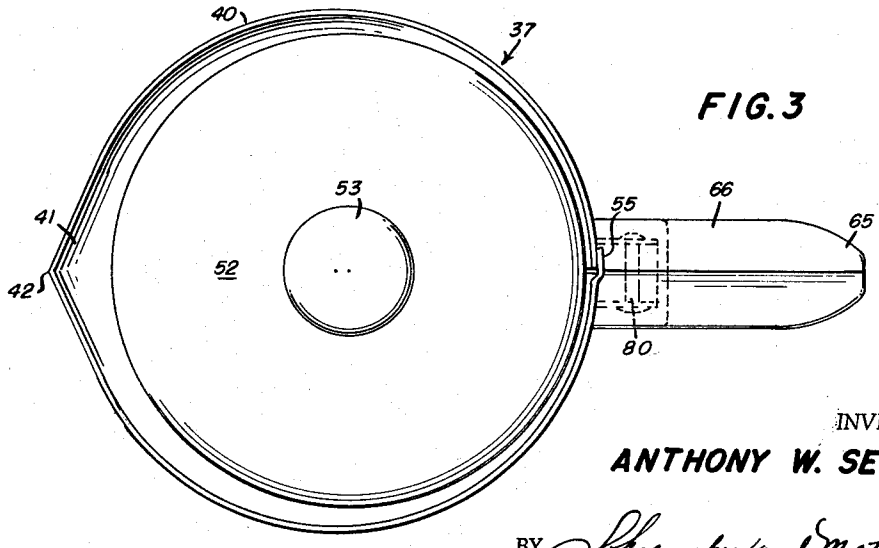


FIG. 3

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POURING TOP ASSEMBLY FOR FLUID CONTAINERS

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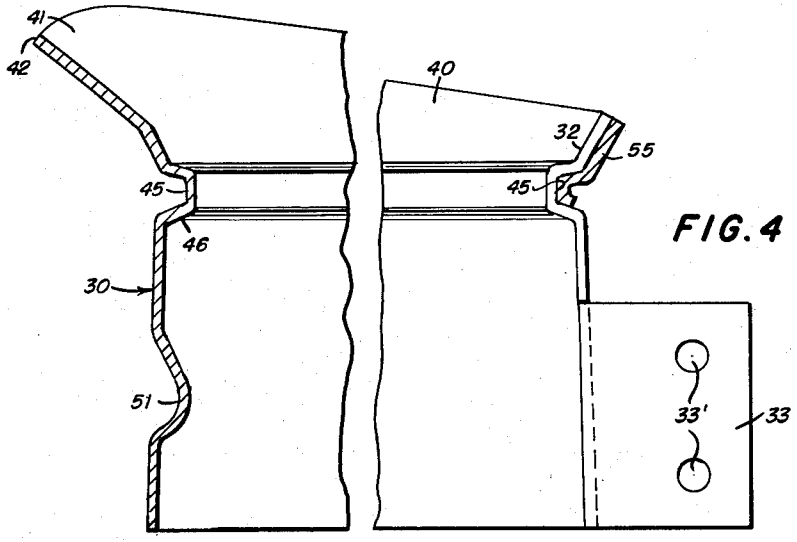


FIG. 4

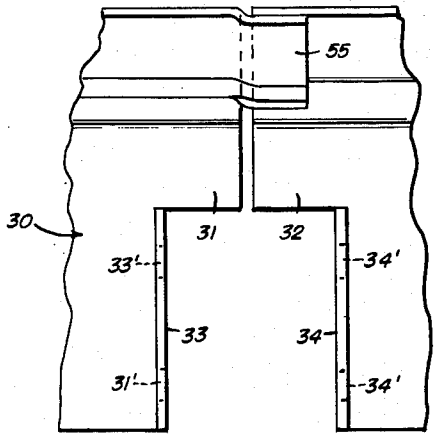


FIG. 6

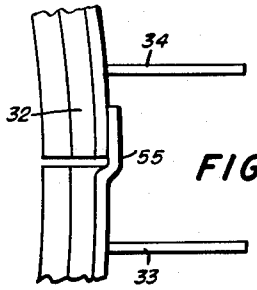


FIG. 5

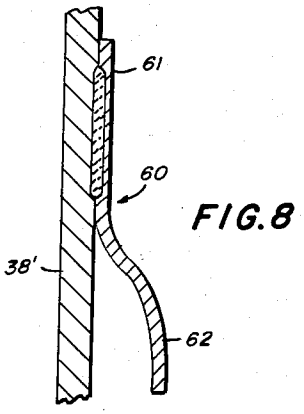


FIG. 8

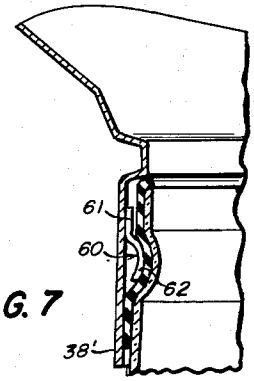


FIG. 7

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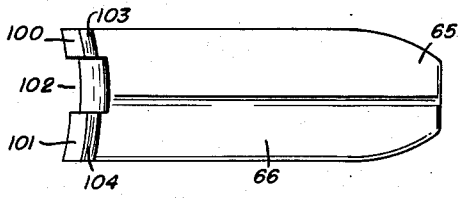
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Dec. 17, 1963 A. W. SERIO 3,114,484

POURING TOP ASSEMBLY FOR FLUID CONTAINERS

Filed Sept. 14, 1960 4 Sheets-Sheet 4

FIG. 9



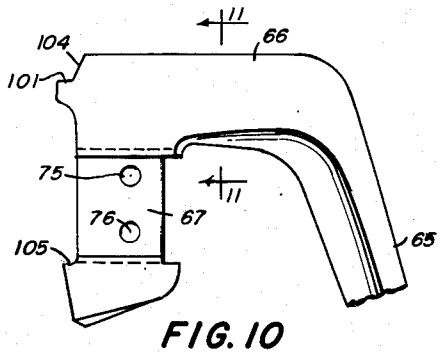


FIG. 10

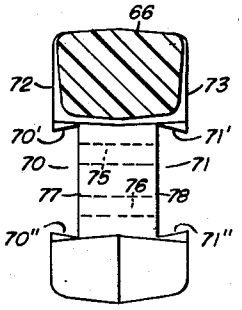


FIG. 11

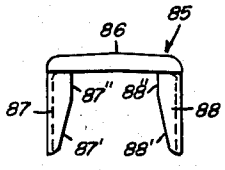


FIG. 12

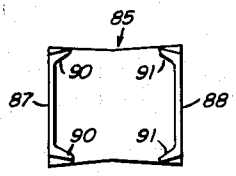


FIG. 13

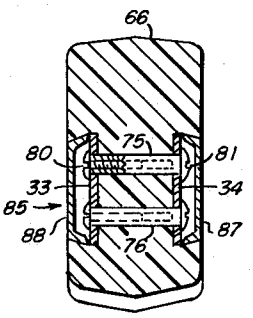


FIG. 16

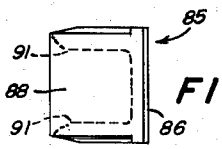


FIG. 14

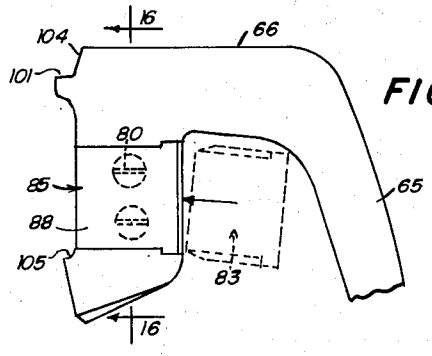


FIG. 15

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United States Patent Office 3,114,484 Patented Dec. 17, 1963

3,114,484

POURING TOP ASSEMBLY FOR FLUID CONTAINERS

Anthony W. Serio, Elmira, N.Y., assignor to Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Filed Sept. 14, 1960, Ser. No. 55,888
10 Claims. (Cl. 222—465)

The present invention relates to a new and novel pouring top assembly for fluid containers and more particularly to a separable pouring top body and handle mechanism which can be attached to an open end portion of a container.

The present invention is especially directed to pitchers and similar containers which are designed to hold fluids and may serve for holding liquids which may be either at elevated temperature or at refrigerated temperatures. For this purpose such containers are generally designed of a heat-resistant material and accordingly are of a relatively expensive construction. It is therefore evident that it is highly important to prevent damage to this type of a container.

In such containers wherein various liquids are disposed, it is desirable to provide a pouring spout portion for facilitating the pouring of the liquid out of the container. In addition, it is also desirable to provide a means which permits a closure member or lid to be seated in position at the upper portion of the container.

Many containers of heat-resistant material have been designed with integral pouring spouts formed in the upper rim portion at the open end of the container. In addition, many of these types of containers are provided with integral handle portions. It has been found that in every day usage, the upper edges of such containers are highly susceptible to damage particularly at the pouring spout portion which is often chipped or broken away either while washing the container or by accidentally striking the upper edge portion of the container against some external object. It is accordingly a principal purpose of the present invention to provide an arrangement which will minimize and in fact substantially eliminate this type of damage to the upper edge portion of these types of containers.

Additionally, when the handle portions are formed integral with the heat-resistant material which may typically be formed of ceramic or other heat-resistant materials such as "Pyrex" manufactured by the Corning Glass Works of Corning, New York, the handle portion itself often becomes chipped, thereby creating sharp, jagged edges which are liable to cut the hands of persons holding the container by the handle portion. The present invention also eliminates this hazard by providing a separable handle means formed of a light-weight material which is not susceptible to such chipping.

In the present invention, a container is provided having an open upper end portion and a pouring top body is disposed about the upper end portion of the container. This pouring top body is formed of a resilient damage-resistant material such as metal, thereby substantially eliminating the possibility of the top edges being chipped, scratched or broken during use.

The pouring top body is formed as a split band which actually is wrapped around the upper edge of the container, the opposite ends of the band being provided with ears which permit attachment of the body means to a separable handle means. When the band is attached to the associated handle, the band is clamped around the upper edge of the container, and a resilient sealing gasket is disposed between the pouring top body and the upper outer surface of the container. This gasket prevents leakage between the pouring top body and the container

which, of course, is important when it is desired to pour liquids from the container. The resilient sealing gasket also serves to prevent scratching or other damage to the material of the container by the pouring top body assembly which may be formed of a much harder material.

The overall arrangement including the resilient sealing gasket and the flexible band which is clamped about the container provides a relatively versatile and flexible arrangement which permits the pouring top assembly to be disposed about containers, the outer dimensions of which may vary slightly. Accordingly, the pouring top assembly is adaptable for use with containers which have varying tolerances as may normally occur during manufacturing procedures.

Another important feature of this type of apparatus is the fact that it must present a neat and attractive finished appearance since the top assembly along with the container normally will be sold as a unit. The structure of the present invention is especially designed with this in mind, and when in assembled position, a very attractive arrangement is provided, with the attaching screws of the mechanism hidden from view.

An object of the present invention is to provide a new and novel pouring top attachment for containers which facilitates easy pouring from the container.

Another object of the invention is to provide a pouring top assembly which protects the upper edge of the container against damage and which further provides a seat for a cover or lid for the container.

A further object of the invention is to provide a pouring top assembly wherein a fluid-tight seal is provided between the pouring top body and the associated container.

Still another object of the invention is to provide a pouring top assembly including means to prevent scratching or damage of the container by the associated pouring top attachment.

A still further object of the invention is to provide a pouring top assembly which is sufficiently flexible to accommodate itself to containers having slightly varying outer dimensions.

Still a further object of the invention is the provision of a pouring top assembly for fluid containers which is quite simple and inexpensive in construction and yet which is sturdy and provides a neat finished appearance.

Other objects and many attendant advantages of the present invention will become more apparent when considered in connection with the specification and accompanying drawings, wherein:

FIG. 1 is an elevation view of a pouring top assembly disposed in operative position upon an associated container;

FIG. 1*a* is an exploded perspective view of the apparatus shown in FIG. 1;

FIG. 2 is an elevation of the assembled apparatus partly in section illustrating the relative position of the components;

FIG. 3 is a top view of the assembled structure;

FIG. 4 is a sectional view of the pouring top body itself, broken away;

FIG. 5 is an enlarged top view of the free end portions of the pouring top body;

FIG. 6 is an end view of the enlarged portion shown in FIG. 5;

FIG. 7 illustrates a modified form of the invention;

FIG. 8 is an enlarged view of a portion of the structure shown in FIG. 7;

FIG. 9 is a top view of the handle of the apparatus;

FIG. 10 is a front view of the handle shown in FIG. 9;

FIG. 11 is a sectional view taken along line 11—11 of FIG. 10 looking in the direction of the arrows;

FIG. 12 is a top view of a cover member associated with the handle;

FIG. 13 is a front view of the cover shown in FIG. 12;

FIG. 14 is a side view of the cover shown in FIG. 12;

FIG. 15 illustrates the handle and cover in assembled relationship to one another, with the ears of the pouring top body secured in position within the grooves of the handle; and

FIG. 16 is a sectional view taken along line 16—16 of FIG. 15 looking in the direction of the arrows.

Referring now to the drawings wherein like reference characters designate corresponding parts throughout the several views, the assembly in general and interrelationship of the components will firstly become most apparent by considering FIGS. 1, 1*a* and 2.

A container formed of suitable heat-resistant material which may in this case be transparent, is indicated generally by reference numeral **20**, the container including an upstanding side wall portion **21** which has a generally circular cross-section, the container having an annular groove or recessed portion **22** formed therein below the upper edge **23** thereof which defines the upper open end of the container.

A resilient sealing gasket **25** is of ring-shaped construction and preferably is formed of a material such as rubber which is adapted to be slightly compressed to provide an effective seal. When assembling the apparatus, the ring-like sealing gasket **25** is placed about the upper edge portion of the container with a small portion of the sealing gasket extending above the upper edge of the container for a purpose which will hereinafter appear.

The pouring top body is indicated generally by reference numeral **30**, and is formed of a resilient damage-resistant material, and will generally be formed of a metallic substance such as aluminum which is lightweight and yet quite sturdy. The pouring top body actually comprises a split band and as seen in FIG. 6 opposite free end portions **31** and **32** are provided which may normally be spaced from one another. A struck-out ear **33** is formed at end portion **31** and a struck-out ear **34** is formed at end portion **32**, these struck-out ears extending substantially parallel to one another as is clear in FIG. 5, the ears each having a pair of openings **33'** and **34'** formed therethrough respectively, the openings serving as a means for fixedly attaching the ears to an associated handle.

As seen most clearly in FIG. 1*a* and FIG. 2, the pouring top body comprises essentially an upper portion indicated generally by reference numeral **37** and a lower portion indicated by reference numeral **38**, the lower portion **38** defining a depending flange portion which is adapted to fit about the upper end of the container.

The upper portion **37** of the pouring top body includes a lip portion **40** which extends around the major portion of the periphery of the pouring top body, lip **40** having an enlarged height and an outwardly tapering configuration at portion **41** to define a sharp apex portion **42** which serves as a pouring spout in a well-recognized manner.

The upper and lower portions **37** and **38** of the pouring top body are connected by what may be termed a recessed channel **45** formed in the outer surface of the body means. By so forming this recessed channel, an inwardly extending shoulder or rib **46** is defined on the inner periphery of the pouring top body. This construction is most evident in FIG. 4, wherein it will be apparent that the shoulder **46** slopes upwardly and inwardly, and the recessed channel **45** tapers inwardly from the outer surface of the pouring top body.

Referring to FIG. 2, it will be noted that when the pouring top body is in clamped operative position, the upper portion **50** of the sealing gasket **25** will be clamped between the under surface of shoulder **46** and the upper edge of the container, the portion **50** of the sealing gasket being so clamped completely around the container. It is apparent that by so clamping the sealing gasket in place an effective fluid-tight seal is obtained between the pouring top body and the container.

It should first be understood that when the ears of the pouring top body are fixedly attached to the associated handle, the pouring top body will be drawn relatively tightly about the container so as to hold the pouring top body on the upper portion of the container.

In order to further lock the pouring top body in place and to ensure that it will not slip off of the upper portion of the body, means is provided for positively locking these elements together. This means in the modification shown in FIGS. 1–6 comprises a plurality of embossed or dimpled portions **51** which are shown as being three in number spaced 90° from one another, these inwardly projecting portions being formed integral with the depending flange portion **38** of the pouring top body. As seen especially in FIG. 2, these inwardly projecting portions will force the adjacent portions of the sealing gasket inwardly into the recessed annular groove formed in the outer surface of the container. In this manner, it is evident that the pouring top body will be positively locked to the container.

As seen in FIG. 2, it will be noted that the upper wall of the recessed annular channel formed in the pouring top body also defines on the inner periphery of the body an upwardly facing shoulder **55** which extends completely around the inner periphery of the body. This shoulder **51** is adapted to receive a cover or lid and provide a good seat therefor. In FIG. 2 a cover **52** is illustrated having a knob **53** formed at the central portion thereof. It is evident that the outer periphery of cover **52** is adapted to seat upon shoulder **51** which is formed in a plane, and accordingly, an effective seat is provided for the cover or lid.

Referring now to FIGS. 4–6, the free end portion **31** of the pouring top body is provided with an integral tongue portion **55** which extends longitudinally from the free end portion **31** and is adapted to abut against and overlap the adjacent portions of the opposite end portion **32** of the pouring top body. As seen especially in FIG. 4, the tongue portion **55** is provided with such a configuration that it is complementary to the adjacent surfaces of end portion **32**, the tongue seating against the outer surface of the upper part of pouring top body **30**, and also being slidably positioned within the recessed channel **45** of the body. It will be apparent that tongue **55** will snugly fit against the adjacent end portion **32** of the body and in this manner the upper portions of the opposite end portions of the pouring top body will always be maintained in intimate contact with one another to prevent leakage of liquid therearound regardless of the fact that the remaining portions of the opposite free ends of the pouring top body may be spaced from one another according to the size of the associated container. Obviously, this is only true within the limits of the tongue **55**, but the tongue is made of sufficient length so as to remain in contact with the opposite end portion of the pouring body in all normal applications.

In the modification shown in FIGS. 7 and 8, instead of providing the integral dimple, or embossed portion **51** in the depending flange portion of the pouring top body, resilient spring members indicated generally by reference numeral **60** may be provided. These spring members may also be three in number as are the embossed portions **51**, a first portion **61** of the resilient members being fixed as by welding to the downwardly extending flange portion **38'** of the pouring top body. Resilient means **60** also includes an inwardly extending arcuate portion **62** which projects toward the recessed groove portion of the container, and in this manner, the pouring top body is locked to the container in a manner similar to that previously described.

Referring now to FIGS. 9–16 of the drawings, the handle mechanism is illustrated, this handle mechanism being adapted for use with the structure previously

described. The handle is preferably formed of a lightweight material such as aluminum and comprises a depending grip portion **65** which is adapted to be manually grasped. The grip portion **65** is formed integral with a top body portion **66** which in turn has a depending body portion **67** formed integral therewith. The entire handle is so formed as to provide a neat and attractive finished appearance.

As seen particularly in FIG. 11, a pair of grooves **70** and **71** are formed in opposite side faces **72** and **73** respectively of the handle. It will be noted that the upper walls **70'** and **71'** of the grooves taper upwardly toward the central portion of the handle while the lower walls **70''** and **71''** taper downwardly and inwardly toward the central portion of the handle. In other words, the upper and lower walls of each of the grooves are tapered oppositely to one another and form what may be termed dovetail grooves which coact in a novel manner with the associated structure as hereinafter described.

Also as seen in FIG. 11, a pair of openings **75** and **76** are provided between the inner walls **77** and **78** of the two grooves. When in assembled position, the ears **33** and **34** of the pouring top body are received in the grooves formed in the handle and are disposed at the bottom of the grooves as seen in FIG. 16. The ears are fixedly attached to the handle by means of screw assemblies, each of which includes a first threaded screw member **80** which threads into an internally threaded tubular member **81**, each of members **80** and **81** having enlarged heads formed at the outer ends thereof.

In order to provide a neat finished appearance and to completely hide the attaching screws from view, a cover member is provided, this cover member being shown in FIGS. 12, 13 and 14 and being indicated generally by reference numeral **85**. As seen in FIG. 12, cover member **85** is substantially U-shaped in top plan and includes a rear wall portion **86** and a pair of side leg members **87** and **88**. As seen from the top in FIG. 12, each of side walls **87** and **88** includes an inwardly tapered portion **87'** and **88'** which joins integral portions **87''** and **88''** respectively adjacent the rear wall portion **86** of the cover. Portions **87'** and **88'** are spaced from one another slightly less than the spacing of the side walls **77** and **78** of the grooves formed in the handle. The cover is preferably formed of a slightly flexible material such as plastic and accordingly when the cover is inserted in operative position, friction will be developed between surfaces **87'** and **88'** and the adjacent surfaces **77** and **78** on the handle to hold the cover in operative position.

As seen in FIGS. 13 and 14, the legs **87** and **88** are relatively thin at their central portions, and the upper and lower edge portions **90** of leg portion **87** extend inwardly to define inwardly extending flanges while the upper and lower edge portions **91** of leg portion **88** also extend inwardly to form inwardly extending flanges. The upper and lower surfaces of these inwardly extending flanges **90** and **91** are tapered in a manner complementary to the taper formed in the upper and lower walls of the grooves formed in the handle.

It will be also noted in FIG. 16 that the construction of the cover is such as to permit reception of the enlarged heads of the attaching screws between the flanges formed at the upper and lower portions of the legs of the cover.

It will be evident that the cover can be slidably removed from its operative position as seen in FIGS. 15 and 16 by pulling the rearward ends to the dotted line position shown in FIG. 15. Of course, when it is desired to assemble the cover in operative position, it is slipped into position in the direction of the arrows shown in FIG. 15, and when in such position, the outer surface of the cover means fits flush with the outer surface of the handle.

The forward face of the handle adjacent to the pouring top body is so configured as to seat flush against the adjacent free end portions of the body. The handle includes a pair of forwardly projecting lugs **100** and **101**, the outer ends of these lugs being so configured so as to snugly fit within the recessed channel formed in the outer surface of the pouring top body.

Lugs **100** and **101** are connected by sloping wall portions **103** and **104** respectively to the upper surface of the portion **66** of the handle. These sloping surfaces **103** and **104** are adapted to fit snugly against the adjacent portions of the pouring top body.

As seen in FIG. 9, a cut-out portion **102** is provided between these forwardly projecting lugs, this cut-out portion **102** being provided for receiving the tongue **55** formed on one free end of the pouring top body. It will be evident that when in assembled position as seen in FIG. 3, the tongue **55** is disposed within the cut-out portion **102** of the forward portion of the handle thereby providing a compact relatively flush structure.

As seen in FIGS. 10 and 15, the downwardly extending portion **67** of the handle is also provided with a forwardly projecting shoulder **105** which is adapted to fit under the lower edge of the adjacent free end portions of the pouring top body, and in this manner the handle is adapted to fit snugly against and around the adjacent portions of the pouring top body.

When it is desired to assemble the apparatus, as mentioned previously, the gasket **25** is first disposed in operative position about the container with a small portion thereof extending above the top edge of the container. The pouring top body is then placed around the sealing gasket and pressed down into the sealing position shown for example in FIG. 2. In this position, the tongue portion **55** will be slidably positioned against the opposite end portion **32** of the pouring top body.

The ears at the free end portions of the pouring top body are then slid longitudinally into the grooves formed in the handle through the open end of the grooves at the forward portion of the handle. The openings through the handle are then aligned with the openings in the ears and the screw attaching means are screwed into position to thereby rigidly attach the ears to the handle and to further tightly clamp the pouring top body about the sealing gasket and upper portion of the container.

The cover **85** is then placed in covering relationship within the grooves formed in the body means, the device then being ready for operation. It is apparent that this assembly of the apparatus can also be effected expeditiously by reversal of the procedures hereinabove described.

It is apparent from the foregoing that there is provided a new and novel pouring top assembly for fluid containers wherein an attachment is provided which facilitates easy pouring from the container. The pouring top attachment protects the upper edge of the container against damage and provides a good seat for a cover or lid. The sealing gasket of the present invention provides an effective fluid-tight seal to prevent leakage between the pouring top body and the container and further is effective to prevent scratching or damage of the container by the pouring top body. A flexible arrangement is provided which allows for slight variances in the size of the associated container since the pouring top body is of resilient material, and further the sealing gasket is formed of a readily flexible substance. The structure is quite simple and inexpensive in construction and yet is sturdy and provides a neat and attractive finished appearance. In addition, an arrangement is provided which positively prevents the pouring top body from slipping off the open end of the associated container.

As this invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, the present embodiment is therefore illustrative and not restrictive, and since the scope of the invention is defined by the appended claims, all changes that fall within the metes and bounds of the claims or

that form their functional as well as conjointly cooperative equivalents are therefore intended to be embraced by those claims.

I claim:

1. A pouring top assembly for use with containers having an open upper end, comprising a one-piece pouring top body formed of resilient damage-resistant material, said body comprising a band having an upper edge portion and a lower edge portion and being split completely from said upper edge portion to said lower edge portion to define opposite free ends of the band independently movable relative to one another whereby the entire band is adapted to expand and contract, attaching means at said ends for securing said body to a handle, said body including a pouring spout formed thereon at the upper edge portion thereof, said body including an integral depending flange portion adapted to fit about the upper part of an associated container, said body including a circumferential inwardly extending portion defining a downwardly facing shoulder extending around the inner periphery of said body and adapted to overlie and protect the upper edge of a container, said opposite ends having upper edge portions corresponding to the upper edge portion of the body and having interengageable upper portions for providing a liquid seal therebetween to prevent leakage of liquid, the lower edge portions of said opposite ends being spaced from one another.

2. The assembly as defined in claim 1, wherein said circumferential inwardly extending portion also defines an outwardly facing recessed channel in the outer surface of said body, an integral tongue portion being formed at one end of said body and extending laterally therefrom, said tongue portion fitting within an adjacent portion of said recessed channel formed at the opposite end of said body.

3. The assembly as defined in claim 1, wherein said attaching means at the ends of the body comprise at each end of the body an attaching ear extending laterally from the body, a handle including a pair of grooves for receiving said ears, and means securing said ears in place within said grooves for attaching the pouring top body to said handle.

4. The assembly as defined in claim 3, wherein said circumferentially inwardly extending portion also defines an outwardly facing channel formed in the outer surface of said body, said handle having portions fitting within said channel.

5. The assembly as defined in claim 4, wherein said body includes an integral tongue portion formed at one end thereof and extending laterally therefrom, said tongue portion fitting within an adjacent portion of said channel, said handle including a cutout portion receiving said tongue portion.

6. The assembly as defined in claim 3, wherein said depending flange portion has formed integral therewith an inwardly projecting portion for locking the pouring top body on the upper portion of a container.

7. The assembly as defined in claim 3, wherein the upper and lower walls of the grooves formed in said handle are tapered oppositely to one another and including a cover of generally U-shaped configuration, said cover including oppositely extending legs which fit within said grooves, said oppositely extending legs also having the upper and lower edges thereof tapered oppositely to one another such that the legs of said cover fit snugly within said grooves.

8. The assembly as defined in claim 7, wherein said handle also includes an outwardly extending shoulder which fits beneath the lower edge of the opposite free ends of said body.

9. The assembly as defined in claim 1, wherein said depending flange portion includes inwardly extending integral embossed portions thereon for locking the pouring top body on a container.

10. The assembly as defined in claim 1, wherein said body includes means for locking the pouring top body on a container, said locking means comprising an inwardly extending resilient member attached to the inner periphery of said depending flange portion of the pouring top body.

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