

Sept. 19, 1967

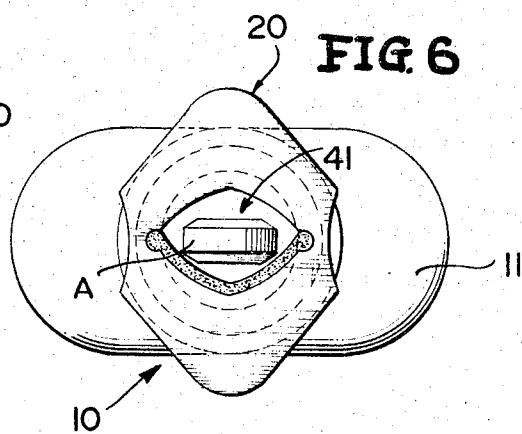
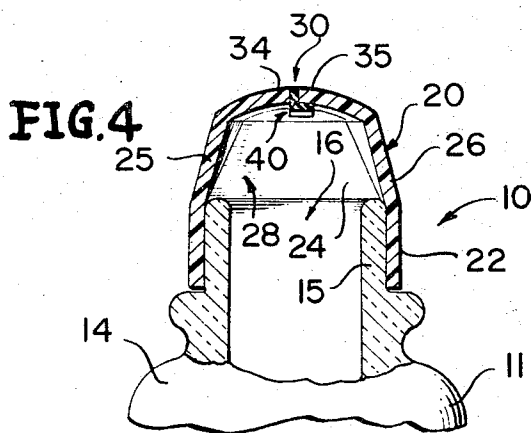
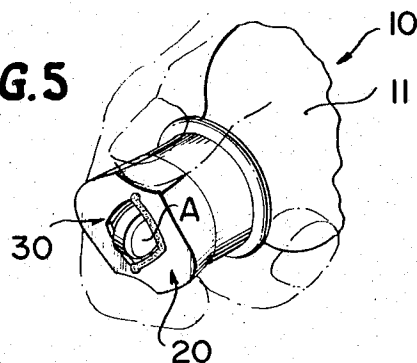
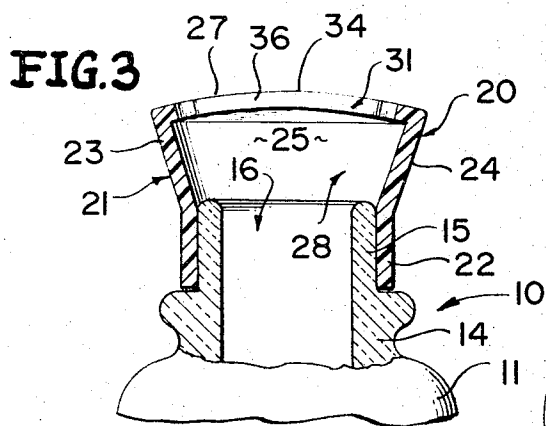
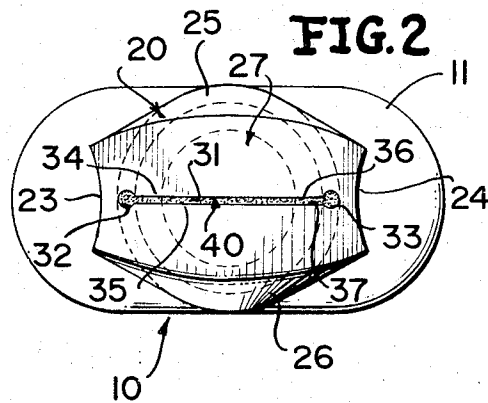
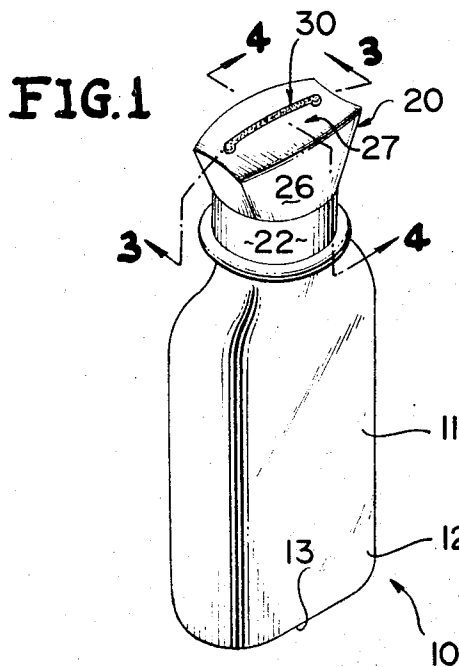
H. S. RUEKBERG ET AL

3,342,318

TABLET DISPENSER

Filed Oct. 5, 1965

2 Sheets-Sheet 1



INVENTORS
HERBERT S. RUEKBERG
& WILLIAM E. PHILLIPS

BY

Mason, Porter, Miller & Brown
ATTORNEYS

Sept. 19, 1967

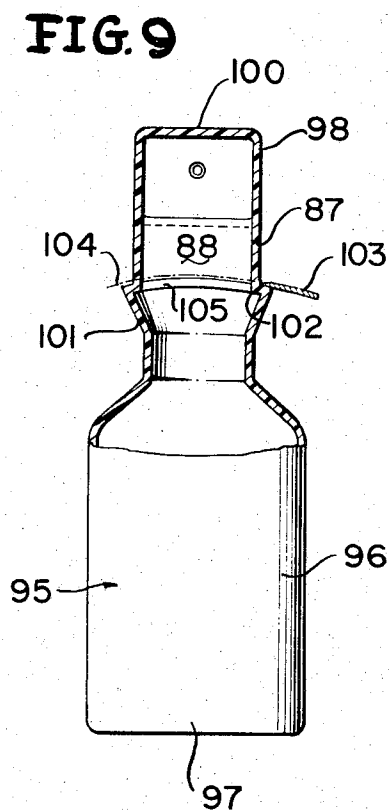
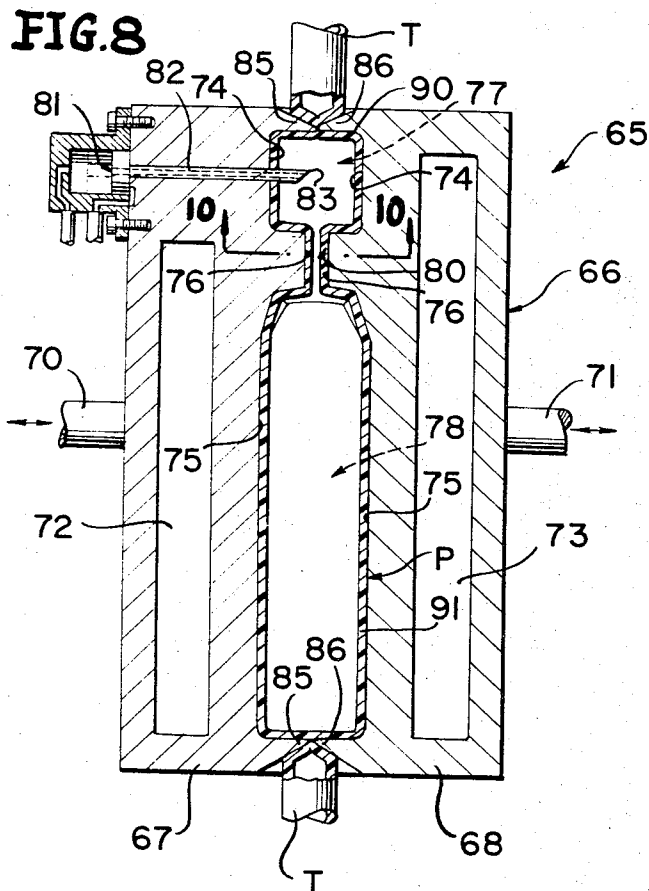
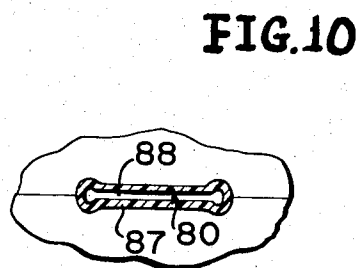
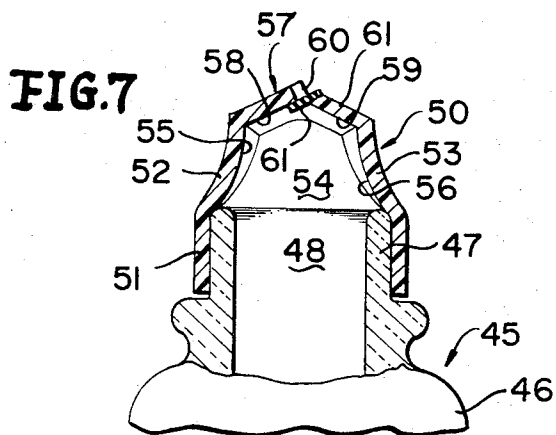
H. S. RUEKBERG ET AL

3,342,318

TABLET DISPENSER

Filed Oct. 5, 1965

2 Sheets-Sheet 2



INVENTORS
HERBERT S. RUEKBERG
& WILLIAM E. PHILLIPS

BY
Wm. Porter Miller & Brown
ATTORNEYS

1

3,342,318

TABLET DISPENSER

Herbert S. Rueckberg, Highland Park, Ill., and William E. Phillips, Grand Rapids, Mich., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Oct. 5, 1965, Ser. No. 493,206

9 Claims. (Cl. 206—42)

This invention relates to a novel dispenser for dispensing articles in a single fashion, and is particularly directed to a tablet dispenser of an integral one-piece construction which has no moving parts and which can repeatedly dispense individual tablets in a foolproof manner and which is self-sealing to prevent moisture, contaminants, etc. from entering the dispenser.

An object of this invention is to provide a novel dispensing container having a lower end closed by a bottom wall and an upper end provided with dispensing means for dispensing individual packaged articles, the dispensing means being defined by a flexible housing having a top wall, an elongated slot in the top wall, the slot terminating at opposite ends and being adapted to form a dispensing opening upon the application of opposed forces to the housing adjacent the slot ends, and the dispensing container being of a one-piece molded construction.

A further object of this invention is to provide a novel dispensing container of the type described which includes a gasket sealing the slot in a normal non-dispensing position thereof to prevent atmosphere, moisture, contaminants, etc. from inadvertently or accidentally entering and adversely affecting articles retained in the container.

Still another object of this invention is to provide a novel dispensing container of the type immediately above-described in which the slot is defined by opposing lip portions of the top wall at opposite sides of an axial plane taken through the dispenser and further including means providing for the stress relief of the slot at the slot ends to prevent the tearing of the top wall upon the continued application and termination of the opposing forces.

Another object of this invention is to provide a novel dispensing container of the type immediately above-described in which the stress-relieving means consists of a generally circular opening at each of the slot ends and the gasket is carried by only one of the lip portions and is of a material which is more yieldable than the material from which the dispensing container is molded.

Still another object of this invention is to provide a novel dispensing cap adapted for securement to a container for dispensing discrete articles packaged therein, the dispensing cap including a body provided with means for securing the dispensing cap to a container, the body terminating in a top wall having an elongated narrow slot terminating at opposite ends, the slot being defined by opposing lip portions of the top wall to either side of a longitudinal axial plane of the cap body axis, the cap body being constructed of flexible plastic material whereby the application of opposing forces to the body in directions generally parallel to the axial plane transforms the slot into a dispensing opening which is generally wider and shorter than the respective width and length of the slot prior to the application of the opposing forces, means providing stress relief of the slot at the slot ends to prevent the tearing of the top wall upon the continued application and termination of the opposing forces, and gasket means carried by at least one of the lip portions for sealing the slot closed in the normal non-dispensing position thereof.

A further object of this invention is to provide a novel method of forming a tubular body closed at one end and provided with a relatively small opening at an opposite

2

end including the steps of introducing a tube of softened plastic material into a mold having first and second chambers joined by a restricted chamber portion, partially collapsing the portion of the tube in the restricted chamber portion and sealing the tube closed at opposite sides of the restricted chamber portion, introducing a blow needle into the tube to one side of the partially collapsed portion whereby fluid is introduced into the tube to expand the same at each side of the partially collapsed portion to the shape of the chambers thereby forming a generally double-bodied tubular article joined by an integral restricted connecting portion, retracting the blow-needle, removing the article from the mold, and severing the connecting portion adjacent the body on the side of the restricted connecting portion opposite the one side into which the blow needle is introduced thereby forming an opening contoured to the general configuration of the interior of the connecting portion.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings.

In the drawings:

FIGURE 1 is a top perspective view of a novel tablet dispenser or dispensing container constructed in accordance with this invention, and illustrates a dispensing cap secured to a neck of the container.

FIGURE 2 is an enlarged top plan view of the dispensing container of FIGURE 1 and illustrates the normal non-dispensing position of a dispensing slot formed in a top wall of the dispensing cap.

FIGURE 3 is a large fragmentary sectional view taken generally along line 3—3 of FIGURE 1, and illustrates a peripheral skirt of the dispensing cap securing the cap to the neck of the container and the generally outwardly convex configuration of the top wall.

FIGURE 4 is an enlarged fragmentary sectional view taken generally along line 4—4 of FIGURE 1, and illustrates a gasket sealing the slot in the normal non-dispensing position thereof.

FIGURE 5 is a fragmentary perspective view of the dispensing container in the dispensing position thereof, and illustrates in phantom outlines the application of opposing forces causing the transformation of the slot into a generally enlarged dispensing opening.

FIGURE 6 is an enlarged end view of the dispensing container of FIGURE 5 and more clearly illustrates the relationship between the dispensing opening and an article passing therethrough.

FIGURE 7 is a fragmentary sectional view of another dispensing container constructed in accordance with this invention and illustrates a dispensing cap provided with a dispensing slot sealed by a gasket and the converging relationship of a top wall to orient articles during a dispensing operation.

FIGURE 8 is a schematic fragmentary sectional view of a mold for forming a dispensing container constructed in accordance with this invention, and illustrates a softened tube of plastic material expanded to the configuration of a pair of chambers joined by a restricted chamber portion.

FIGURE 9 is a fragmentary schematic side elevational view of the molded article of FIGURE 8, and illustrates a line of severance along which a collapsed central portion of the body is severed to form a dispensing opening in a top wall of the finally formed dispensing container.

FIGURE 10 is an enlarged fragmentary sectional view taken generally along line 10—10 of FIGURE 8, and illustrates the cross-sectional configuration of the restricted portion of the mold and the collapsed portion of the molded body.

A novel article or tablet dispenser or dispensing container constructed in accordance with this invention is best illustrated in FIGURES 1 through 6 of the drawings, and is generally referred to by the reference numeral 10. The dispensing container 10 comprises a generally tubular, elliptical dispenser body 11 constructed from plastic, glass or metallic material which is relatively rigid but may be slightly flexible or resilient. The body 11 includes a first or lower end portion 12 closed by a bottom wall 13 and a second or upper end portion 14 terminating in a neck or finish 15 which defines a mouth or opening 16 of the dispensing body 11.

A plurality of individual articles A, only one of which is illustrated in the drawings, such as candy, medicinal tablets, or similar edible or non-edible articles, are packaged in the body 11 of the dispensing container 10 in a known manner. Each of the articles A are similar in size and shape and are preferably of a generally shallow cylindrical shape, as is best illustrated in FIGURE 6 of the drawings.

A novel dispensing cap which is generally referred to by the reference numeral 20 is carried by the body 11 of the dispensing container 10 for dispensing the articles A in a singular fashion as will appear more fully hereinafter. The dispensing cap 20 is constructed of yieldable resilient plastic material, such as polyethylene, and includes a cap body 21. The cap body 21 has a lower cylindrical peripheral skirt 22 externally surrounding and grippingly engaging the neck 15 of the body 11 and an upper portion defined by opposing end walls 23, 24 and side walls 25, 26 (FIGURE 2). The walls 23 through 26 and a top wall 27 define a housing or chamber 28 (FIGURES 3 and 4) of the dispensing cap 20. The side walls 25, 26 converge upwardly toward the top wall 27 (FIGURE 1) and are generally of an outwardly convexly curved configuration (FIGURE 2). The end walls 23, 24 diverge slightly upwardly (FIGURE 3) toward the top wall 27 and are progressively outwardly concavely curved toward the top wall 27. The top wall 27 of the dispensing cap 20 is convexly curved upwardly and outwardly, as is best illustrated in FIGURE 3 of the drawings.

The dispensing cap 20 is provided with dispensing means, generally referred to by the reference numeral 30, which include a relative narrow, elongated dispensing slot 31 terminating at opposite ends in enlarged generally circular openings 32, 33. The openings or end portions 32, 33 of the slot 31 form stress relief areas in the top wall 27 which prevent the tearing or rupturing of the top wall 27 upon the continued use of the dispensing container 10 as will appear more fully hereafter. The slot 31 is in a plane of the cap body axis which is generally normal to the end walls 23, 24 and parallel to the upper portions of the side walls 25, 26. The slot 31 is defined generally between opposing lip portions 34, 35 of the top wall 27. The lip portions 34, 35 include opposed terminal surfaces 36, 37 which in the normal non-dispensing position of the slot 31 (FIGURE 2) are generally in parallel spaced opposing relationship.

Gasket means 40 maintain the slot 31 sealed in the non-dispensing position thereof to prevent contaminants, moisture or other deleterious matter from entering the dispensing container 10 through the slot 31 and adversely affecting the articles A packaged therein. The gasket means 40 is preferably constructed from elastomeric material which is much softer and more yieldable than the plastic material from which the dispensing cap 20 is constructed. Soft rubber or resilient foamed plastic material are materials from which the sealing gasket 40 is preferably constructed. The sealing gasket 40 is generally of an inverted L-shaped cross-sectional configuration (FIGURE 4) and is normally slightly wider than the width of the slot 31 in the non-dispensing position thereof. In this manner the portion (unnumbered) of the gasket 40 between the opposing surfaces 36, 37 is compressed slightly to insure a tight hermetic seal in the slot area.

The gasket 40 is secured by suitable adhesives to the lip 35. In accordance with this invention the gasket 40 can similarly be secured to the lip 34, or if desired, a gasket could be secured to each of the lips 34, 35 for sealing contact with each other in a plane parallel to and midway between the terminal surfaces 36, 37 of the respective lips 34, 35.

An article, such as the article A, is dispensed through the dispensing means 30 by first grasping and inverting the dispensing container 10 in the manner best illustrated in FIGURE 5 of the drawings with a thumb (unnumbered) positioned against either of the end walls 23, 24 and an index finger positioned against the other of these two end walls. Manual pressure is applied across the longitudinal plane of the slot 31 creating opposing forces which change the normally generally narrow slot 31 into a substantially oval-shaped dispensing opening, generally referred to by the reference numeral 41. The dispensing opening 41 is sufficiently large in cross-sectional area to permit the passage of the article A therethrough, as is best illustrated in FIGURE 6 of the drawings. In this manner the article or tablet A and remaining articles packaged in the body 11 are dispensed. Upon the release of the manual pressure and the rebounding of the dispensing cap 20 to the configuration shown in FIGURES 1, 2, and 4 of the drawings, the remaining tablets are prevented from passing outwardly through the now sealed slot 31 and atmosphere, contaminants, moisture etc. are prevented from entering the dispensing container 10 by means of the seal effected by the gasket 40.

The operation of the dispensing container 10 just described can, of course, be repeated until the body 11 is depleted of its supply of articles. During the repeated application and termination of the opposing forces which are applied to the dispensing cap 20 the material of the top wall 27 is subjected to strains at the end portions of the slot 31 which, if not otherwise provided for, would tend to rupture or tear the top wall 27. However, the generally circular shaped end portions 32, 33 form gradual curves which relieve the stresses tending to rupture the top wall 27.

Another dispensing container constructed in accordance with this invention is illustrated in FIGURE 7 of the drawings and is generally referred to by the reference numeral 45. The dispensing container 45 is similar to the dispensing container 10 and includes a container body 46 having a lower bottom end portion (not shown) closed by a bottom wall (also not shown) and an upper end portion terminating in a neck 47 defining a mouth or opening 48.

A dispensing cap, generally referred to by the reference numeral 50, is secured to the neck 47 of the body 46 by a generally cylindrical peripheral skirt 51. An upper portion of the dispensing cap 50 includes a pair of opposed side walls 52, 53 and a pair of opposed end walls 54, only one of which is illustrated in FIGURE 7. The side walls 52, 53 and respective inner surfaces 55, 56 thereof converge upwardly from the peripheral skirt 51 and terminate at a top wall 57. The surfaces 55, 56 merge with respective surfaces 58, 59 of the top wall 57 on opposite sides of a slot 60. The surfaces 58, 59 of the top wall 57 converge toward each other toward the slot 60 which is identical in construction to the slot 31 of the dispensing cap 20. A relatively flat elongated gasket 61 is secured to a terminal surface (unnumbered) of one top wall portion 61 of the top wall 57. The gasket 61 is in sealing contact with a portion of the surface 58 of the top wall 57 adjacent to and underlying the slot 60.

The operation of the dispensing container 45 is substantially identical to the operation of the dispensing container 10 but with one major distinction. As the dispensing container 45 is tipped in a clockwise or counterclockwise position from that illustrated in FIGURE 7 to the dispensing position thereof articles are gravity-fed along the surface 56, 59 and/or 55/58 toward the dispensing

opening (not shown) formed by the now oval configuration of the slot 60 formed when the end walls 54 are depressed toward each other (not shown). As the articles leave the mouth 48 of the body 47 the curved surface 55, for example, reorients any article on edge to a position with the larger surface area of the article engaging the surface 55 and guided thereby to the surface 58 and outwardly of the dispensing cap 50 through the dispensing opening. Articles tending to preclude the passage of the article outwardly of the dispensing opening are retained or held captive to a certain degree by the portion of the gasket 61 projecting beyond the wall portion 61 of the top wall 57. In this manner a single feeding of articles in a generally flat-fashion is assured.

While the dispensing containers 10 and 45 are of a two-piece construction i.e. the containers bodies 11, 46 and associated dispensing caps 20, 50, it is also within the scope of this invention to form a dispensing container corresponding to the dispensing containers 10 and 45 of a one-piece molded construction. Referring to FIGURE 8 of the drawings in particular, an apparatus 65 is illustrated for blow-molding a tube T of softened extruded plastic material into a dispensing container. The apparatus 65 includes a conventional split mold 66 formed of a pair of mold bodies 67, 68 which are reciprocated between open and closed positions by conventional means (not shown) coupled to respective actuable rods 70, 71. Each of the bodies 67, 68 includes a respective chamber 72, 73 through which fluid coolant from a conventional source (not shown) is circulated.

Each of the mold bodies 67, 68 includes a pair of cavities 74, 75 separated by a restricted cavity portion 76. In the closed position of the mold 66 illustrated in FIGURE 8 of the drawings the opposing cavities 74, 75 define a first chamber 77 while opposed cavities 75, 75 define a second chamber 78, the chambers being connected by a restricted chamber portion 80 defined by the opposing cavities 76, 76. A blow needle 81 having a tubular stem 82 terminating in a point 83 is carried by the mold body 67 and is in fluid communication with a source of pressurized fluid, such as compressed air. The blow needle 81 includes valve means (not shown) of a conventional construction and the stem 82 thereof is reciprocated between the solid and phantom outline positions thereof in a known manner. When the mold 67 is open the stem 82 is retracted (phantom outline position) and when the mold 66 is closed the stem 82 is moved from left-to-right to the solid position during which movement the point 83 punctures a portion of the tube T in the mold 66 and expands the same to the configuration illustrated in FIGURES 8 and 9 of the drawings, as will appear more fully immediately hereafter.

With the bodies 67, 68 in the open position thereof (not shown) the tube T is extruded, the mold bodies 67, 68 are closed and a portion P of the tube T is sealed at opposite ends (unnumbered) by opposing faces 85, 86 of the respective mold bodies 67, 68. During the closing of the mold 66, the portion P of the tube T is partially collapsed in the area of the restricted chamber portion 80, as is shown in FIGURE 8 of the drawings. The restricted chamber portion 80 is of a generally bar-bell shape in cross-section (FIGURE 10), and the closing of the mold bodies 67, 68 imparts a similar bar-bell shape to the partially collapsed portion of the tube T, generally referred to by the reference numeral 87. The partially collapsed portion 87 includes a similar bar-bell shaped passage 88 maintaining fluid communication between upper and lower tube or body portions 90, 91 respectively of the tube portion T.

When the mold bodies 67, 68 are completely closed and the ends of the portion P sealed, the blow needle 81 punctures the tube portion 90, as shown in FIGURE 8 of the drawings. Compressed air enters the interior of the body portion 90 and is communicated through the passage 88 of the partially collapsed portion 87 into the

body portion 91 causing the tube portion P to expand to the configuration of the chambers 77, 78. The chamber 78 is contoured to the general configuration of the dispensing container 10, including the dispensing cap 20. The mold 66 is then opened and the molded article which is in the form of a partially completed dispensing container 95 (FIGURE 9) is removed therefrom. The partially completed dispensing container 95 (FIGURE 9) includes a body 96 closed at a lower end portion 97 and a body 98 closed by a wall 100 at an upper end portion (unnumbered) of the partially completed dispensing container 95. The body portions 96, 98 are joined together by the partially collapsed portion 87 (FIGURE 10) defining the bar-bell shaped passage 88 opening into an upper end portion 101 of the body 96 through a top wall 102 thereof. The upper end portion 101 of the body 96 is identical in construction to the dispensing cap 20 of the dispensing container 10. The body 96 is then separated from the body 98 and the collapsed portion 87 by severing the collapsed portion 87 with a blade or similar severing mechanism 103 along a severance line 104 across the upper exposed surface of the top wall 102. The severing of the collapsed portion 87 results in the formation of a dispensing slot 105 in the top wall 102 of the body 96. The slot 105 is similarly bar-bell shaped in configuration and forms dispensing means corresponding to the dispensing means 30 of the dispensing container 10. Thereafter, suitable gasket means, such as the gasket means 40, is positioned in the slot 105 to complete the formation of the dispensing container.

An important feature of the above-described method of forming an integral one-piece dispensing container is the simultaneous formation of stress-relieving openings in the top wall 102 corresponding to the openings 32, 33 of the dispensing cap 20. That is, by forming the chamber 80 of a bar-bell configuration the ends of the passage 80 are generally circular in shape (FIGURE 10) and a similar circular shape (not shown) is imparted to the ends of the slot 105.

From the foregoing, it will be seen that novel and advantageous provisions have been made for carrying out the desired end. However, attention is again directed to the fact that additional variations may be made in this invention without departing from the spirit and scope thereof as defined in the appended claims.

We claim:

1. A dispensing container comprising a container body, said container body having opposite upper and lower end portions, said lower end portion being closed by a bottom wall, said upper end portion including dispensing means for dispensing individual packaged articles from said container body, said dispensing means being defined by a yieldable housing having a top wall, an elongated slot in said top wall, said slot terminating at opposite ends and being adapted to form a dispensing opening upon the application of opposed forces to said housing adjacent said slot ends, and a separate-flexible gasket of elastomeric material softer than the material of said container body sealing said slot in a normal non-dispensing position thereof.

2. A dispensing container comprising a container body, said container body having opposite upper and lower end portions, said lower end portion being closed by a bottom wall, said upper end portion including dispensing means for dispensing individual packaged articles from said container body, said dispensing means being defined by a yieldable housing having a top wall, an elongated slot in said top wall, said slot terminating at opposite ends and being adapted to form a dispensing opening upon the application of opposed forces to said housing adjacent said slot ends, a separate-flexible gasket of elastomeric material softer than the material of said container body sealing said slot in a normal non-dispensing position thereof, and said dispensing container including said body and housing being of a one-piece molded construction.

3. A dispensing cap adapted for securement to a con-

tainer for dispensing discrete articles packaged therein comprising a cap body, means for securing said cap body to a container, said cap body including a top wall, an elongated narrow slot in said top wall, said slot having opposite ends, said slot being defined between opposing lip portions of said top wall, separate flexible gasket means of elastomeric material softer than the material of said cap body carried by at least one of said lip portions for sealing said slot in a normal non-dispensing position thereof, and said cap body being yieldable whereby the application of opposing forces to said body adjacent said slot ends forms a dispensing opening and the termination of said opposing forces causes the automatic return of said slot to the normal non-dispensing position thereof and the resealing of said slot by said gasket means.

4. A dispensing cap adapted for securement to a container for dispensing discrete articles packaged therein comprising a cap body, means for securing said cap body to a container, said cap body including a top wall, an elongated narrow slot in said top wall, said slot being in a plane of the cap body axis and terminating at opposite ends, said slot being defined by opposing lip portions of said top wall at opposite sides of said plane, said cap body being constructed of flexible material whereby the application of opposing forces to said body in directions generally parallel to said plane forms a dispensing opening which is generally wider and shorter than the respective width and length of said slot prior to the application of said opposing forces, means providing stress relieving of said slot at said slot ends to prevent the tearing of said top wall upon the continued application and termination of the opposing forces to said cap body and separate flexible gasket means of elastomeric material softer than the material of said cap body carried by at least one of said lip portions for sealing said slot closed in a normal non-dispensing position thereof.

5. A dispensing cap adapted for securement to a container for dispensing discrete articles packaged therein comprising a cap body, means for securing said cap body to a container, said cap body including a top wall, an elongated narrow slot in said top wall, said slot being in a plane of the cap body axis and terminating at opposite ends, said slot being defined by opposing lip portions of said top wall at opposite sides of said plane, said cap body being constructed of flexible material whereby the application of opposing forces to said body in directions generally parallel to said plane forms a dispensing opening which is generally wider and shorter than the respective width and length of said slot prior to the application of said opposing forces, means providing stress relieving of said slot at said slot ends to prevent the tearing of said top wall upon the continued application and termination of the opposing forces to said cap body, separate flexible gasket means of elastomeric material softer than the material of said cap body carried by only one of said lip portions, and said gasket means being in sealing contact with the other of said lip portions for sealing said slot in a normal non-dispensing position thereof.

6. A dispensing cap adapted for securement to a container for dispensing discrete articles packaged therein comprising a cap body, means for securing said cap body to a container, said cap body including a top wall, an elongated narrow slot in said top wall, said slot being in a plane of the cap body axis and terminating at opposite ends, said slot being defined by opposing lip portions of said top wall at opposite sides of said plane, said cap body being constructed of flexible material whereby the application of opposing forces to said body in directions generally parallel to said plane forms a dispensing opening which is generally wider and shorter than the respective width and length of said slot prior to the application of said opposing forces, and separate flexible gasket means of elastomeric material softer than the material of said cap body carried by at least one of said lip portions for sealing said slot closed in a normal non-dispensing position thereof.

7. The dispensing cap as defined in claim 6 wherein said lip portions each include inner, outer and terminal surfaces, said terminal surfaces being in generally parallel opposed relationship in the non-dispensing position of said cap, and said gasket means normally being in sealing contact with the terminal surface of the other of said lip portions in the non-dispensing position of said cap.

8. A dispensing cap adapted for securement to a container for dispensing discrete articles packaged therein comprise a cap body, said cap body having upper and lower portions, said lower portion including a peripheral skirt adapted to be received to the neck of a container, said upper portion being defined by opposing end and side walls and a top wall, said side walls being generally outwardly concavely curved adjacent said top wall, said top wall being outwardly convexly curved, an elongated narrow slot in said top wall, said slot being in a plane of the cap body axis and terminating at opposite ends, said slot being defined by opposing lip portions of said top wall at opposite sides of and generally parallel to said plane, said slot being generally normal to said end walls and parallel to said side walls, said slot being of a predetermined length and width, said slot end being in the form of circular open portions forming stress relief areas of said top wall for preventing the rupture thereof under continual application and termination of opposing forces applied to said end walls, said cap being constructed of flexible material whereby the application of opposing forces to said end walls transforms said slot into a dispensing opening which is generally wider and shorter than the respective width and length of said slot prior to the application of opposing forces to the end walls, and separate flexible gasket means of elastomeric material softer than the material of said cap body between said lip portions for maintaining said slot closed in the normal non-dispensing position thereof.

9. A dispensing cap adapted for securement to a container for dispensing discrete articles packaged therein comprising a cap body, said cap body having upper and lower portions, said lower portion including a peripheral skirt adapted to be received to the neck of a container, said upper portion being defined by opposing end and side walls and a top wall, said side walls being generally outwardly concavely curved adjacent said top wall, said top wall being outwardly convexly curved, an elongated narrow slot in said top wall, said slot being in a plane of the cap body axis and terminating at opposite ends, said slot being defined by opposing lip portions of said top wall at opposite sides of and generally parallel to said plane, said slot being generally normal to said end walls and parallel to said side walls, said slot being of a predetermined length and width, said slot end being in the form of circular open portions forming stress relief areas of said top wall for preventing the rupture thereof under continual application and termination of opposing forces applied to said end walls, said cap being constructed of flexible material whereby the application of opposing forces to said end walls transforms said slot into a dispensing opening which is generally wider and shorter than the respective width and length of said slot prior to the application of opposing forces to the end walls, separate flexible gasket means of elastomeric material softer than the material of said cap body between said lip portions for maintaining said slot closed in the normal non-dispensing position thereof, and said gasket means being carried by only one of said lip portions.

References Cited

UNITED STATES PATENTS

2,141,752	12/1938	Hoarle	229—44
2,802,608	8/1957	Gassaway	222—490
3,084,396	4/1963	Abt	264—94
3,179,301	4/1965	Lucht	222—490

70 THERON E. CONDON, *Primary Examiner*.

75 WILLIAM T. DIXSON, JR., *Examiner*.