A material is added to a container of liquid from a dispenser that fits onto an open mouth of the container. The dispenser has an open position and a closed position, and includes an outer shell and an inner chamber member within the shell. The shell and chamber member are mounted to rotate relative to each other to align openings therein when in the open position and through which the material exits the chamber member. The material is loaded into the chamber member, and subsequently the dispenser is sealed with a seal that is connected to both the shell and the chamber member to prevent relative rotation of the shell and chamber member and dispensing of the material. The dispenser is inserted into the open mouth, unsealing the seal, and rotating the shell and chamber member relative to each other to open the dispenser and allow the material to flow into the container and mix with the liquid therein.
Fig. 5
DISPENSER AND METHOD

RELATED APPLICATION AND INCORPORATION BY REFERENCE

[0001] This application claims the benefit under 35 USC 119(e) of U. S. Provisional Patent Application No. 61/119,897, entitled “DISPENSER AND METHOD,” filed Dec. 4, 2008. This related application is incorporated herein by reference and made a part of this application. If any conflict arises between the disclosure of the invention in this utility application and that in the related provisional application, the disclosure in this utility application shall govern. Moreover, any and all U.S. patents, U. S. patent applications, and other documents, hard copy or electronic, cited or referred to in this application are incorporated herein by reference and made a part of this application.

DEFINITIONS

[0002] The words “comprising,” “having,” “containing,” and “including,” and other forms thereof, are intended to be equivalent in meaning and be open ended in that an item or items following any one of these words is not meant to be an exhaustive listing of such item or items, or meant to be limited to only the listed item or items.

[0003] The words “substantially” and “essentially” have equivalent meanings.

BACKGROUND

[0004] There are many types of dispensing devices and it would be desirable to have a dispenser that can be detachably connected to a container with a threaded open mouth. For example, a bottle of water comprises an open mouth at a terminal end of a neck of the bottle that is surrounded by a male thread. A bottle cap with an internal female thread is screwed onto the open mouth to close the mouth. After removal of the cap, flavor or other ingredients may be added to the water within the bottle through the now open mouth. A dispenser that (a) is easy to attach to the open mouth of the container and that (b) holds flavor ingredients, or other material to be added to the contents of the container, would be a highly desirable product.

SUMMARY

[0005] Our dispenser and method may be used to dispense essentially any fluid material such as, for example, liquids, powders, solid or hollow beads, and they may be, for example, flavor ingredients, pharmaceuticals, minerals, vitamins, or any other material to be added to the contents of the container to which the dispenser is adapted to be connected. Our dispenser and method has one or more of the features depicted in the embodiments discussed in the section entitled “DETAILED DESCRIPTION OF SOME ILLUSTRATIVE EMBODIMENTS.” The claims that follow define our dispenser and method of dispensing, distinguishing them from the prior art; however, without limiting the scope of our dispenser and method of dispensing as expressed by these claims, in general terms, some, but not necessarily all, of their features are:

[0006] One, our dispenser includes an assembly of a shell and a chamber member adapted to hold material to be dispensed. The chamber member has an open top and a lower section with an opening therein. The material being dispensed may be introduced into the hollow chamber member through the open top. The shell has an open top that receives the chamber member, a lower section with an opening therein, and an upper section. The upper section is adapted to be detachably connected to an open mouth of a container so that at least a portion of the assembly extends into the open mouth and a portion of the assembly projects outward from the open mouth.

[0007] Two, the shell and chamber member are configured and mounted to enable relative rotational movement between the shell and chamber member and to prevent relative axial movement between the shell and chamber member. Rotation in one direction aligns the openings to open the dispenser so material in the chamber flows into the container and rotation in the opposite direction closes the dispenser. In one embodiment, the shell and chamber member are nested together and concentrically mounted to enable relative rotational movement in both clockwise and counter-clockwise directions.

[0008] Three, the openings in the shell and chamber member are at least partially aligned in the open position so material in the chamber member exits the dispenser through the openings and are misaligned when in the closed position. In the closed position, a wall portion of the shell covers the opening in the chamber member and a wall portion of the chamber member covers the opening in the shell.

[0009] Four, a seal member prevents the relative rotational movement until seal member is detached or broken. In one embodiment the seal member covers the open top of the chamber member to close this top to retain the material within the chamber member. The seal member includes a tab element connected to an outer surface of the shell’s upper section to prevent relative rotational movement until the tab element is detached or broken. In another embodiment a cap member with the seal fits over the portion of the assembly of the shell and chamber member that projects outward from the open mouth the container. The seal is broken when the cap member is detached.

[0010] Five, a substantial portion of the inner chamber member may project outward from the open mouth of a container to which the assembler is attached and interacts with the cap member. Detaching the cap member from the inner chamber member breaks the seal. The cap member may include a living hinge attaching the cap member and the chamber member.

[0011] Six, the chamber member may have a rim section that is positioned next to the open top of the shell upon assembly of the shell and chamber member. The rim section may be at the open top of the chamber member or at an intermediate location disposed between the open top of the chamber member and the lower section of the chamber member.

[0012] Seven, the rim section and the open top of the shell may have complementary connecting components that engage as the shell and chamber member rotate between open and closed positions. The connecting components are pressed tightly against each other in the closed position to provide a liquid tight seal. The connecting components may comprise a curved internal edge in the rim section and a curved elevated lip in the open top of the shell. The edge and lip engage as the shell and chamber member rotate between open and closed positions, with the edge and lip pressed tightly against each other in the closed position to provide the liquid tight seal.

[0013] Eight, to prevent relative axial movement between the shell and chamber member the chamber member may have a terminal end with an axle projecting therefrom. The
The guide element has a predetermined diameter and the axle includes an enlarged, tapered head which at one end has a diameter greater than the predetermined diameter of the guide element and at an opposed end a reduced diameter that is less than the predetermined diameter of the guide element. Consequently, upon passing through the guide element, the axle is held in position so that there is essentially no axle movement between the shell and the chamber member.

Our method of adding a material to a container of liquid having an open mouth comprises the steps of:

(a) loading the material into a dispenser that fits within the open mouth, said dispenser having an open position and a closed position, and including an outer shell and an inner chamber member within the shell and mounted to rotate relative to each other, said shell and chamber member having aligned openings therein when in the open position through which the material exits the chamber member,

(b) subsequent to loading the material, sealing said dispenser with a seal that is connected to both the shell and the chamber member to prevent relative rotation of the shell and chamber member and dispensing of the flavor ingredient,

(c) inserting the dispenser into the open mouth, unsealing said seal, and rotating the shell and chamber member relative to each other to open the dispenser and allow the material to flow into the container and mix with the liquid therein.

These features are not listed in any rank order nor is this list intended to be exhaustive.

DESCRIPTION OF THE DRAWING

Some embodiments of our dispenser and method are discussed in detail in connection with the accompanying drawing, which is for illustrative purposes only. This drawing includes the following figures (Figs.), with like numerals indicating like parts:

FIG. 1 is a perspective view of one embodiment of our dispenser holding a material and with its seal in place and the dispenser closed, preventing any material within the dispenser from escaping.

FIG. 2 is an exploded perspective view of the embodiment of our dispenser shown in FIG. 1.

FIG. 3 is a perspective view of the outer shell of the one embodiment of our dispenser shown in FIG. 1 with the seal completely removed.

FIG. 3A is a plan view taken along line 3A-3A of FIG. 3.

FIG. 4 is a perspective view of the inner chamber member of the one embodiment of our dispenser shown in FIG. 1.

FIG. 5 is a cross-sectional view taken along line 5-5 of FIG. 1 and with the dispenser attached to an open mouth of a container.

FIG. 6A is a perspective view of the embodiment of our dispenser shown in FIG. 1 with the seal removed and the dispenser in the closed position.

FIG. 6B is a perspective view of the embodiment of our dispenser shown in FIG. 1 with the seal removed and the dispenser in the open position.

FIG. 7 is a perspective view of another embodiment of our dispenser holding a material and with its seal in place and the dispenser closed, preventing any material within the dispenser from escaping.

FIG. 8 is a plan view taken along line 8-8 of FIG. 7.

FIG. 9 is a partial exploded perspective view of the embodiment of our dispenser shown in FIG. 7, illustrating the cap removed.

FIG. 10 is an exploded perspective view of the embodiment of our dispenser shown in FIG. 7.

FIG. 11 is a cross-sectional view of the dispenser shown in FIG. 7 attached to an open mouth of a container.

FIG. 12 is a perspective view of still another embodiment of our dispenser holding a material within the dispenser from escaping until its cap is removed and its seal broken.

FIG. 13 is a perspective view of the embodiment showing its cap is removed but remaining attached to the body of the dispenser.

DETAILED DESCRIPTION OF SOME ILLUSTRATIVE EMBODIMENTS

There are three embodiments of our dispenser illustrated: one embodiment generally indicated by the numeral 10 and depicted in FIGS. 1 through 6B, another embodiment generally indicated by the numeral 100 and depicted in FIGS. 7 through 11, and a third embodiment generally indicated by the numeral 100a and depicted in FIGS. 12 through 13. The main difference between our dispenser 10 and the dispensers 100 and 100a is that the and the dispensers 100 and 100a have a far greater portion of their individual bodies projecting out from the container to which an individual dispenser 100a or 100b is attached than our dispenser 10. This makes our dispensers 100 and 100a easier for a user to open and close.

In addition to the embodiment depicted, ornamental features may be included in our dispenser. For example, the portions of our dispenser may be in the form of the heads or bodies of cartoon characters such as the Disney’s Mickey Mouse and Donald Duck.

FIGS. 1 Through 6B

As best illustrated in FIGS. 1 and 2, one embodiment of our dispenser is generically indicated by the numeral 10. This dispenser 10 includes a seal 12, a hollow outer shell 14, and a hollow inner chamber member 16 holding a material to be dispensed, for example, a material that flows under the influence of gravity such as a liquid or powder. The shell 14 and chamber member 16 are molded from plastic using conventional injection molding techniques, and may be made of plastics having different physical properties. For example, the shell 14 may be made of a resilient or elastic material and the chamber member 16 may be made of a more rigid material, so that better sealing is achieved. The shell 14 and chamber member 16 are assembled together and concentrically mounted along a centerline CL of the dispenser 10, with the shell 14 and chamber member 16 tightly nested together. The material to be dispensed is first loaded into the chamber member 16 and then the seal 12 is applied to the assembled shell 14 and loaded chamber member 16 to prevent relative rotation. At least partial detachment of the seal 12 enables a user to rotate the shell 14 and chamber member 16 relative to each other in a clockwise or counter-clockwise direction to move between a closed position as shown in FIG. 6A and an open position as shown in FIG. 6B.

As best shown in FIGS. 3 and 5, the outer shell 14 has a substantially cylindrical inner sidewall SW1, an open top section 14a that receives the chamber member 16, and a
domed bottom wall 14b with a pair of pie-shaped opening 18 therein. The pie-shaped openings 18 are essentially identical in shape and are opposed mirror images of each other, each being offset to one side of the centerline CL. The open top section 14a has a top ledge TL and an outer cylindrical sidewall SW2 spaced from the inner cylindrical sidewall SW1. The top ledge TL has therein a circular opening 20 and is substantially at a right angle to the centerline CL, which intersects the center C of the circular opening 20. The top ledge TL connects the outer sidewall SW2 and inner sidewall SW2, which are concentric about the centerline CL. This forms within the top section 14a between these sidewalls SW1 and SW2 an annular recess AR (Fig. 5) that is sized and configured so that an open mouth portion of a container, for example, a bottle full of water, may be inserted therein upon connecting the dispenser 10 to the container (shown in phantom lines). A female thread FT (Fig. 5) on an internal surface SF1 of the outer sidewall SW2 enables the dispenser 10 to be screwed onto the container’s open mouth portion that has thereon a male thread that engages the female thread.

[0039] The upper end E1 of the cylindrical sidewall SW1 and the inner end E2 of the top ledge TL merge into the circular opening 20, which has a diameter d1 essentially equal to the outside diameter d2 of the inner cylindrical chamber member 16. The diameter d1 is also essentially equal to the inside diameter of the sidewall SW1, so the diameters d1 and d2 are essentially equal. A curved elevated lip 22 positioned between the circular opening 20 and an edge ED1 of the outer cylindrical wall SW2 partially surrounds the circular opening. As best shown in FIGS. 3 and 5, the lip 22 terminates at one end E3 adjacent an indentation 24 in the exterior of the outer sidewall SW2 and nearby this end E3 has molded therein indicia indicating a “close” position. About midway between this one end E3 and the lip’s other end E4, the lip 22 has molded therein indicia indicating an “open” position. As discussed subsequently in greater detail, depending on the relative positions of the shell 14 and chamber member 16, a user will be able to observe the indicia that designates whether the dispenser 10 is opened or closed. The curvature of the lip 22 is essentially that of a segment of a circle and its center is along the centerline CL.

[0040] As best illustrated in FIGS. 4 and 5, the inner chamber member 16 has a substantially cylindrical sidewall SW3 terminating at its top E5 in a circular entryway 26. The bottom end E6 of the chamber member 16 terminates in a domed bottom wall 16b having with a pair of pie-shaped openings 18a therein that are essentially identical in size and shape to the openings 18 in the shell 14. These openings 18a are mirror images of each other and opposed to each other, each offset to one side of the centerline CL. The chamber member 16 has a circular rim section 16a surrounding the entryway 26. An underside US (FIG. 5) of the rim section 16a bears against the top edge ED2 of the lip 22 upon assembly of the shell 14 and chamber member 16 and an outer edge ED3 of the rim section 16a has serrations 28 therein. As shown in Fig. 1, these serrations 28 may be aligned with serrations 28a on an exterior of the outer sidewall SW2 when the dispenser 10 is in the closed or open positions. The rim section 16a surrounds the entryway 26 and its outer edge ED3 may be circular with a gap G therein. The edge ED3 overlaps the lip 22 and is offset slightly from the surface of the top ledge TL of the shell 14. The internal surface of the rim’s underside US presses firmly against the edge ED2 of the elevated lip 22 upon assembly of the shell 14 and chamber member 16. The rim’s underside US and the lip’s edge ED2 bear tightly against each other in the closed position to provide a liquid tight seal 12, with these contacting portions sliding past each other as the shell 14 and chamber member 16 rotate between open and closed positions after removal of the seal 12. Portions of the inside surface of the rim’s edge ED3 and the outside surface of the lip 22 also contact and slide past each other as the shell 14 and chamber member 16 rotate between open and closed positions after removal of the seal 12.

[0041] An axle A projects lengthwise along the centerline CL outward from a center of the domed wall 16a of the chamber member 16. A shaft 30 of the axle A extends through a tubular guide element 14c in the shell 14 at the apex of the domed wall 16b along the centerline CL of the dispenser 10. A tubular passageway P (FIG. 5) of the guide element 14c has a predetermined diameter and the axle A includes an enlarged, tapered head 30a that at one end E7 has a diameter greater than the predetermined diameter of the guide element’s passageway P. At an opposed end E8 the head 30a has a reduced diameter that is less than the predetermined diameter of the guide element 14c. Consequently, upon assembly of the shell 14 and chamber member 16, the axle A is press fitted through the guide element 14c with the reduced diameter end E8 first advancing through the guide element 14c and the enlarged end E7 next advancing through the guide element 14c to lock the axle in position as shown in FIG. 5. The enlarged head 30a may have a conical configuration and its shaft 30 is cylindrical to allow the axle A to rotate within the cylindrical tubular passageway P of the guide element 14c. The shaft length and the length of the guide element’s tubular passageway P are essentially equal, and the diameter of the shaft 30 and the tubular passageway P are essentially equal. This arrangement prevents substantially any axial movement along the centerline CL between the assembled shell 14 and chamber member 16.

[0042] The inside diameter d1 of the cylindrical sidewall SW1 of the shell 14 and the outside diameter d2 of the cylindrical sidewall SW3 of the chamber member 16 are essentially of the same dimensions, which are substantially from 3/4 to 3 inches. The domed bottom walls 14b and 16b are essentially of the same configuration and dimensions so that the sidewalls SW1 and SW3 and domed bottom walls bear against each other and provide a liquid tight seal. When the dispenser 10 is in the closed position, the openings 18 and 18a are misaligned and solid wall portions block these openings 18 and 18a. The dispenser’s bottom is thus closed to prevent escape from the interior of the chamber member 16 any material through the misaligned openings 18 and 18a.

[0043] After assembly of the shell 14 and chamber member 16 with the bottom of the dispenser closed, the material is loaded into the interior of the chamber member 16 through the open entryway 26 and then the seal 12 is put into position. Initially upon assembly of the shell 14 and chamber member 16, the gap G in the shell’s rim section 16a is aligned with the indicia on the lip 22 corresponding to the “close” position. And in this aligned orientation, the material is loaded and the seal 12 is applied as shown in FIG. 1.

[0044] A circular body section 12a of the seal 12 covers the open top of the chamber member 16 to close the entryway 26 and retain the previously loaded material within the hollow interior of the chamber member 16. The seal’s circular body...
section 12a has a diameter essentially equal to the diameter d3 of the circular rim section 16a and a tab element 12b that projects outward from the perimeter of the seal’s circular body section 12a. The underside of the seal 12 has an adhesive thereon so when the seal 12 is applied to the rim section 16a subsequent to loading the material and prior to dispensing the material, it adheres to the rim section 16a. As depicted in FIG. 1, with the seal 12 covering the open top of the chamber member 16, the tab element 12b is folded downward into the indentation 24 and adhesively bonding to an exterior of the sidewall SW2. The configuration and dimensions of the tab element 12b correspond to the configuration and dimensions of the indentation 24, so the tab element 12b is received within the indentation and the circular body section 12a covers the entryway 26. This prevents relative rotational movement between the shell 14 and chamber member 16 until the tab element 12b is detached or broken to separate it from seal’s circular body section 12a.

When the tab element 12b is detached or broken, the user can rotate the shell 14 and chamber member 16 relative to each other. Upon rotating the chamber member 16 in a clockwise direction as viewed in FIG. 1, moving from a closed position to an open position, the openings 18 and 18a are at least in partial alignment to allow material loaded in the hollow interior to exit the chamber member 16 through these aligned openings 18 and 18a. Also, the shell 14 and chamber member 16 are repositioned so the indicia indicating an “open” position on the lip 22 is next to the gap G. This tells the user that the material has been dispensed. The seal 12 may be removed entirely after the material within the chamber member 16 has been dispensed into a container attached to the dispenser 10. Thereafter, a user may pour the contents of the container attached to the dispenser 10 directly from the entryway 26 after opening the dispenser. Upon rotating the chamber member 16 in a counter-clockwise direction as viewed in FIG. 1, moving from the open position to the closed position, the solid wall portions of the domed bottom walls 14b and 16b are repositioned relative to each other to close the bottom of the dispenser to prevent the contents of the container from flowing through the dispenser and escaping through the now unsealed entryway 26. Consequently, the user may use the dispenser 10 as an access device for the container. Normally, the unsealed dispenser 10 is closed so the contents of the container cannot escape either through the openings 18 and 18a or through the entryway 26. When so desired, the user opens the dispenser 10 by relative rotation of the shell 14 and chamber member 16 to access the contents of the container via the dispenser through its now aligned opening 18 and 18a and the open, unsealed entryway 26.

FIGS. 7 Through 11

As best illustrated in FIGS. 7 and 11, our dispenser 100 includes a hollow outer shell 114, a hollow inner chamber member 116 holding a material to be dispensed, and a cap 111 having a closed top end 111a including a depression 112 that functions as seal. The outer shell 114 is essentially the same as the outer shell 14 of our dispenser 10, except it is shorter and does not extend very deeply into the open mouth M of a container (FIG. 11) into which it is inserted. The inner chamber member 116 is similar in some aspects to the chamber member 16 of our dispenser 10 and also includes the cylindrical sidewall SW3 with an open top including the entryway 26. In our dispenser 100, however, a circular rim section 116a is along the sidewall SW3 at an intermediate location to divide the chamber member 116 into an upper section US and a lower section LS. As shown in FIG. 9, the chamber member 116 thus has a substantial portion projecting from the shell 114 upon assembly of the shell and chamber member, and the cap 111 fits snug over this portion as shown in FIG. 7. In the embodiment depicted in FIGS. 7 through 11 approximately more than half of the chamber member’s body projects from the shell 114. The cap 111 fits snug on the chamber member 116, sealing it. Removal of the cap 111 unseals our dispenser 100, as discussed subsequently in greater detail.

The cap 111 and the upper section US have conforming configurations. In other words they look substantially alike with the cap 111 having an exterior surface of essentially the same over all shape but slightly greater dimensions. The cap 111 has a hollow interior with an internal sidewall (not shown) that conforms in shape to the exterior of the upper section US. The cap 111 fits over the upper section US and its lower open end 111b abuts one side of the rim section 116a. The upper section US terminates at an open outer end E9 forming the entryway 26 into the chamber member 116. Material to be dispensed is introduced into this open entryway 26 and then sealed when the cap 111 is put in place. The depression 112 in the end 111a of the cap 111 is shaped to fit snug within this entryway 26 to close and seal our dispenser 100 after filling the chamber member 116 with the material to be dispensed. A pair of straited wing members WM facilitates rotating the shell 114 with respect to the chamber member 116, and the exterior of the cap 111 has corresponding wing members WM'. The wing members WM extend upward from one side of the rim section 116a and run along and are integral with the outer surface of the sidewall SW3. The wing members WM are opposed to each other on opposite sides of the sidewall SW3 and each terminate below the entryway 26 and do not interfere with placing the cap 111 on the assembled shell 114 and chamber member 116.

The bottom end E10 of the chamber member 116 and the bottom end E11 of the shell 114 are essentially the same as in our dispenser 10, and chamber member 116 and the shell 114 interact in essentially the same fashion as the chamber member 16 and shell 14 of our dispenser 10. In other words the domed bottom walls of the ends E10 and E11 that are nested together, and each domed bottom wall includes a pair of pie-shaped openings 18 and 18a that are essentially identical in size and shape. The outer shell 114 includes an edge ED3 that overlaps a lip 22 of the inner chamber member 116. When our dispenser 100 is opened and closed after unsealing to dispense material held within the chamber member 116 from the entryway 26, the edge ED3' and lip 22 interact in essentially the same fashion as similar elements in our dispenser 10.

As shown in FIG. 8, rotation of the cap 111 in the counterclockwise direction breaks the seal on the dispenser 100. The seal in addition the depression 112 may comprise a breakaway lower circular element 125 of the cap 111 that fits tightly over the assembled shell 114 and container member 116 so that they cannot normally rotated relative to each other unless the cap is forcibly turned to break the seal. The cap 111 may also be covered with a shrink wrap that is removed when the user desires to open the dispenser 100 after first attaching it to a container as depicted in FIG. 11. Rotation in the counterclockwise direction causes the pie-shaped openings 18 and 18a to become aligned so that the material in the chamber member flows into the container. Rotation in the clockwise
direction closes the openings 18 ad 18a as discussed above. The cap 111 may be replaced or discarded.

FIGS. 12 and 13

[0050] As best illustrated in FIGS. 12 and 13, our dispenser 100a is similar to our dispenser 100 and includes the hollow outer shell 114 and the hollow inner chamber member 116 holding a material to be dispensed. It uses a different type of cap 200, however. In this embodiment the cap 200 is attached by a lanyard 202 to the circular rim section 116a so that it remains connected to the dispenser after removal.

SCOPE OF THE INVENTION

[0051] The above presents a description of the best mode I contemplate of carrying out our dispenser and method and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains to make and use our dispenser and method. Our dispenser and method are, however, susceptible to modifications and alternate constructions from the illustrative embodiment discussed above which are fully equivalent. Consequently, it is not the intention to limit our dispenser and method to the particular embodiment disclosed. On the contrary, our intention is to cover all modifications and alternate constructions coming within the spirit and scope of our dispenser and method as generally expressed by the following claims, which particularly point out and distinctly claim the subject matter of our invention:

1. A dispenser including an assembly of a shell and a chamber member, said chamber member adapted to hold material to be dispensed and having an open top and a lower section with an opening therein, said shell having an open top which receives the chamber member, a lower section with an opening therein, and an upper section adapted to be detachably connected to an open mouth of a container so that at least a portion of the assembly extends into the open mouth and a portion of the assembly projects outward from the open mouth, said shell and chamber member configured and mounted to enable relative rotational movement between the shell and chamber member so that rotation in one direction aligns the openings to open the dispenser so material in the chamber flows into the container and rotation in the opposite direction closes the dispenser, and a seal member that prevents said relative rotational movement until seal member is detached or broken.

2. A dispenser including a hollow outer shell and a hollow inner chamber member at least partially extending into said shell, said outer shell having an open top which receives the chamber member, a lower section with an opening therein, and an upper section with an internal female thread to enable the dispenser to be screwed onto an open mouth of a container having thereon a male thread that engages the internal female thread, said chamber member holding material to be dispensed and having an open top through which the material is introduced into the hollow chamber member and an opening therein in a lower section, said shell and chamber member being nested together and concentrically mounted to enable relative rotational movement in both clockwise and counter-clockwise directions and to prevent relative axial movement between the shell and chamber member, upon rotating in one direction moving from a closed position to an open position and upon rotating in the other direction moving from the open position to the closed position, said openings in the shell and chamber member being at least partially aligned in the open position so material in the chamber member exits the dispenser through the openings and being misaligned when in the closed position so a wall portion of the shell covers the opening in the chamber member and a wall portion of the chamber member covers the opening in the shell, and a seal member that prevents said relative rotational movement until seal member is detached or broken.

3. The dispenser of claim 2 where the seal member covers the open top of the chamber member to close said top to retain the material within the chamber member, said seal member including a tab element connected to an outer surface of the shell's upper section to prevent relative rotational movement until the tab element is detached or broken.

4. The dispenser of claim 2 where a substantial portion of the inner chamber member projects outward from the open mouth of a container to which the dispenser is attached.

5. The dispenser of claim 4 where the seal member is a component of a cap member that covers the portion of the chamber member projecting outward from the open mouth of the container.

6. The dispenser of claim 5 where the seal member connects the cap member to the outer shell in a manner that prevents the cap member from moving relative to the outer shell and inner chamber member until the seal member is detached or broken.

7. The dispenser of claim 5 where the cap member includes a living hinge attaching the cap member and the chamber member.

8. The dispenser of claim 2 where the chamber member has a rim section next to the open top of the shell, said rim section and said open top of the shell having complementary connecting components that engage as the shell and chamber member rotate between open and closed positions, said connecting components being pressed tightly against each other in the closed position to provide a liquid tight seal.

9. The dispenser of claim 8 where the connecting components comprise a curved internal edge in the rim section and a curved elevated lip in the open top of the shell, said edge and lip engaging as the shell and chamber member rotate between open and closed positions, with the edge and lip pressed tightly against each other in the closed position to provide a liquid tight seal.

10. The dispenser of claim 8 where the rim section is at the open top of the chamber member.

11. The dispenser of claim 8 where the rim section is at an intermediate location disposed between the open top of the inner chamber member and the lower section of the inner chamber member.

12. The dispenser of claim 4 including a pair of wing members attached to an outer sidewall of the chamber, said wing members opposed to each other on opposite sides of said outer sidewall.
13. The dispenser of claim 2 where the shell and chamber member each have a cylindrical sidewall with the shell having an inside diameter and the chamber member having an outside diameter, said diameters being essentially the same so the shell and chamber member fit snug with each other when nested together yet are able to rotate relative to each other.

14. The dispenser of claim 2 where the chamber member has a terminal end with an axle projecting therefrom along a centerline of the dispenser.

15. The dispenser of claim 14 where the axle extends through a guide element in the shell at the lower section, said guide element being along the centerline of the dispenser.

16. The dispenser of claim 15 where the guide element has a predetermined diameter and the axle includes an enlarged, tapered head which at one end has a diameter greater than the predetermined diameter of the guide element and at an opposed end a reduced diameter that is less than the predetermined diameter of the guide element so that, upon passing through the guide element, the axle is held in position so that there is essentially no axle movement between the shell and the chamber member.

17. The dispenser of claim 1 where the openings in the shell and chamber member are offset to one side of a centerline of the dispenser.

18. A dispenser including a hollow outer shell and a hollow inner chamber within said shell, said outer shell having an open top which receives the chamber member, a lower section with an opening therein, and an upper section with an internal female thread to enable the dispenser to be screwed onto an open mouth of a bottle having thereon a male thread that engages the internal female thread.

said chamber member holding material to be dispensed and having an open top through which the material being dispensed is introduced into the hollow chamber member and an opening therein in a lower section, said shell and chamber member being nested together and concentrically mounted to enable relative rotational movement in both clockwise and counter-clockwise directions and to prevent relative axial movement between the shell and chamber member, upon rotating in one direction moving from a closed position to an open position and upon rotating in the other direction moving from the open position to the closed position.

said openings in the shell and chamber member being at least partially aligned in the open position so material in the chamber member exits the dispenser through the opening and being misaligned when in the closed position so a wall portion of the shell covers the opening in the chamber member and a wall portion of the chamber member covers the opening in the shell, and a seal member covering the open top of the chamber member to close said top and retain the material within the chamber member, said seal member including a tab element connected to an outer surface of the shell's upper section to prevent relative rotational movement until the tab element is detached or broken.

19. A dispenser including a hollow outer shell having a substantially cylindrical sidewall and a hollow inner chamber member having a substantially cylindrical sidewall, said shell and chamber member being assembled together and concentrically mounted along a centerline of the dispenser to enable relative rotational movement in both clockwise and counter-clockwise directions to move between an open position and a closed position, said outer shell having an open top section which receives the chamber member, a domed bottom section with an opening therein offset to one side of the centerline, said open top section having a cylindrical outer wall spaced from the cylindrical sidewall of the shell, said outer wall and cylindrical sidewall being concentric with the centerline, a female thread on an internal surface of the cylindrical outer wall to enable the dispenser to be screwed onto an open mouth of a container having at the container's open mouth a male thread that engages the internal female thread, said top section including a ledge connecting said cylindrical outer wall and cylindrical sidewall of the shell, said assembled shell and chamber member being tightly nested together with said cylindrical sidewall of the shell having a predetermined inside diameter and the cylindrical sidewall of the chamber member having a predetermined outside diameter, said predetermined diameters being essentially of the same dimensions, and said domed bottoms being essentially of the same configuration and having predetermined dimensions so that the sidewalls and domed bottoms bear against each other and provide a liquid tight seal, said chamber member adapted to hold a material to be dispensed and having a top with an entryway through which said material being dispensed is loaded into the hollow chamber member prior to being dispensed and said domed bottom section having an opening therein that is offset to one side of the centerline, said chamber member having a rim section surrounding the entryway, said rim section having an underside that bears against the ledge and an axle projecting from a center of the domed bottom section of the chamber member along the centerline of the dispenser through the center of the domed bottom section of the shell, upon rotating in one direction moving from a closed position to an open position and upon rotating in the other direction moving from the open position to the closed position, said openings in the open position being at least partially aligned in the open position so material in the chamber member exits the dispenser through the opening and being misaligned when in the closed position so a wall portion of the shell covers the opening in the chamber member and a wall portion of the chamber member covers the opening in the shell, and a seal member covering the open top of the chamber member to close said top and retain the material within the chamber member, said seal member including a tab element connected to an outer surface of the shell's upper section to prevent relative rotational movement until the tab element is detached or broken.

20. A method of adding a material to a container of liquid having an open mouth, said method comprising the steps of (a) loading the material into a dispenser that fits within the open mouth, said dispenser having an open position and a closed position, and including an outer shell and an inner chamber member within the shell and mounted to rotate relative to each other, said shell and chamber member having aligned openings therein when in the
open position through which the material exits the chamber member, (b) subsequent to loading of the material, sealing said dispenser with a seal that is connected to both the shell and the chamber member to prevent relative rotation of the shell and chamber member and dispensing of the flavor ingredient, (c) inserting the dispenser into the open mouth, unsealing said seal, and rotating the shell and chamber member relative to each other to open the dispenser and allow the material to flow into the container and mix with the liquid therein.

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