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M. S. DESSER

1,949,902

BOTTLE CLOSURE

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Fig. 1.

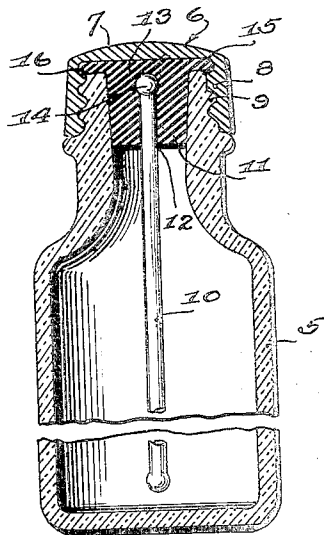


Fig. 2.

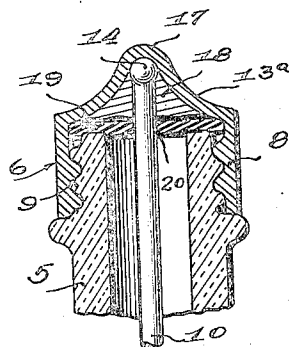
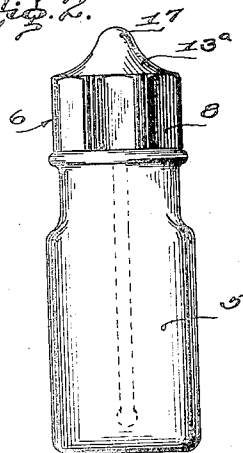


Fig. 3.

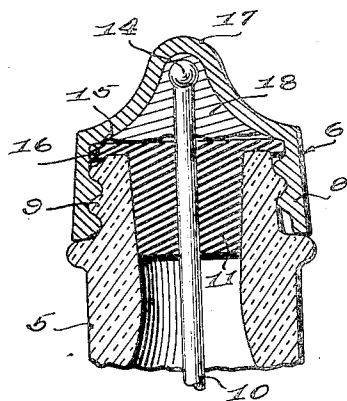


Fig. 4.

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UNITED STATES PATENT OFFICE

1,949,902

BOTTLE CLOSURE.

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Application November 5, 1930, Serial No. 433,551

5 Claims. (Cl. 215-58)

My invention relates to a cap or closure device for a bottle or other container, in combination with a glass rod or other implement attached to the cap and adapted for use in dispensing the contents of the container. At the present day, it is customary to provide bottles with stoppers made of rubber or other material, which stoppers enter the neck of the bottle and have attached thereto a rod which projects downward into the contents of the bottle, as, for example, iodine or other liquid.

An object of my invention is to provide a practical construction permitting such a rod or implement to be used in combination with a screw threaded cap or closure device which comprises a skirt or flange portion threaded on or otherwise secured to the exterior surface of the neck portion of the container.

Other objects of the invention will appear hereinafter.

In the accompanying drawing:

Fig. 1 is a sectional elevation of a bottle, partly broken away, and cap with an implement attached in accordance with the present invention.

Fig. 2 is an elevational view, showing a container with a modified form of cap.

Fig. 3 is a sectional elevation of the cap and a portion of the container shown in Fig. 2.

Fig. 4 is a view similar to Fig. 3, but showing a further modification.

Referring particularly to Fig. 1, a bottle or jar 5 made of glass or other suitable material is provided with a cap or closure device 6. The cap includes a circular top or cover portion 7 and an integral depending flange or skirt 8, the interior surface of which is formed with screw threads to engage corresponding threads 9 formed on the exterior surface of the bottle neck.

An implement 10, such as a glass rod, is attached to the cap 6 by means of a connecting device 11 in the form of a plug or stopper, which may be made of rubber or other material. This stopper is provided with a central bore 12 extending upwardly from the bottom thereof and terminating a short distance below the upper surface 12 of the stopper. The rod 10 extends upwardly within the bore 12 and may be frictionally held in position therein. An enlargement or knob 14 formed on the upper end of the rod assists in holding the rod in position. The upper portion of the stopper 11 comprises an annular flange 15 which fits into a correspondingly shaped annular recess 16 formed in the cap above the threaded portion thereof.

The parts are assembled by forcing the rod 10 upwardly into the bore 12, thus firmly connecting the rod and stopper or plug 11. Said plug may then be inserted into the cap 6, so that the flange 15 seats in the recess 16. If desired, the plug may be cemented to the cap and the rod cemented in the plug, but it is found in practice that friction alone, without the use of cement, is sufficient to hold the parts securely together. When the cap is screwed onto the bottle, the flange portion 15 of the plug or stopper is placed under compression and provides a tight seal.

The cap 6 in the form herein shown is molded and may be made of any suitable material such as that extensively used at the present day for making bottle caps and the like. The invention, however, is not limited to the use of a molded cap, as caps made of sheet metal and various other materials might be used and come within the scope of my invention.

Figs. 2 and 3 illustrate a modification in which the top cover portion 13^a of the cap is shaped to provide a dome 17 extending upward a substantial distance above the upper edge of the flange 8. The interior of this dome provides a pocket or recess into which the upper end of the rod 10 extends. The rod is preferably secured in the cap by means of a cement 18. A disk 19 which may be made of rubber or of a comparatively hard fibrous material, or the like, is provided with a central opening 20 through which the rod extends. The diameter of the disk is substantially the same as the interior diameter of the cap flange 8 so that the disk fits snugly in the cap and may be held therein by friction, but preferably is firmly secured in position by the cement 18.

Fig. 4 illustrates a further modification in which a plug or stopper 11, such as described in connection with Fig. 1, is used in combination with a cap of the shape shown in Fig. 3, comprising the dome 17. A cement 18 is preferably used with this form of construction.

Modifications may be resorted to within the spirit and scope of my invention.

What I claim is:

1. The combination of a bottle cap comprising a top and a depending annular flange, a rod having a knob at one end thereof, means for securing the rod to the cap comprising a resilient compressible plug within the cap, and means for securing the plug to the cap, said plug having a central bore extending upward from the bottom of the plug and terminating at a point spaced below the top surface of the plug, into which bore the knob carrying end of the rod extends, said

rod having a tight fit in said bore, whereby the rod is securely attached to the plug, the resiliency of the plug being sufficient to permit said knob to move through said bore in assembling the parts.

2. The combination of a bottle cap comprising a top and a depending annular flange, a rod having a knob at one end thereof, means for securing the rod to the cap comprising a resilient compressible plug within the cap, and means for securing the plug within the cap comprising an annular flange portion formed integral with the plug at the upper end thereof, the cap being formed with an annular recess in which said flange portion seats and by which the plug is secured to the cap, said plug having a central bore extending upward from the bottom of the plug and terminating at a point spaced below the top surface of the plug, into which bore the knob carrying end of the rod extends, said rod having a tight fit in said bore, whereby the rod is securely attached to the plug, the resiliency of the plug being sufficient to permit said knob to move through said bore in assembling the parts.

3. The combination of a bottle having an exteriorly screw threaded neck, a cap comprising a top portion and a depending flange portion formed with screw threads to engage the threads on the bottle neck, a rod having a knob at one end thereof, and means for sealing the bottle and securing said rod to the cap comprising a resilient compressible plug secured within the cap, the body portion of said plug being shaped to conform to the interior of the bottle neck substantially throughout the length of the plug and to be thereby held under compression when the cap is screwed onto the bottle neck, said plug having a central bore extending upwardly from the bottom of the plug and terminating at a point spaced below the top surface of the plug, into which bore the knob carrying end of the rod extends, said rod having a tight fit in said bore and being thereby secured to the plug, the resiliency of the plug being sufficient to permit said knob to move through said bore in assembling the parts.

4. The combination of a bottle having an ex-

teriorly screw threaded neck, a cap comprising a top portion and a depending flange portion formed with screw threads to engage the threads on the bottle neck, a rod having a knob at one end thereof, and means for sealing the bottle and securing said rod to the cap comprising a resilient compressible plug having an integral annular flange portion at the upper end thereof arranged to seat on the upper end surface of the bottle neck, said flange being held under compression when the cap is in position on the bottle, thereby providing a seal between the cap and bottle neck, said cap formed with an annular recess between the top of the cap and the threaded portion of the flange, in which recess the peripheral marginal portion of said plug flange is seated and by which the plug is secured to the cap, said plug having a central bore extending upwardly from the bottom of the plug and terminating at a point spaced below the top surface of the plug, into which bore the knob carrying end of the rod extends, said rod having a tight fit in said bore and being thereby secured to the plug.

5. The combination of a bottle having an exteriorly screw threaded neck, a cap comprising a top portion and a depending flange portion formed with screw threads to engage the threads on the bottle neck, means for sealing the bottle comprising a resilient compressible plug having an integral annular flange portion at the upper end thereof arranged to seat on the upper end surface of the bottle neck, said flange being held under compression when the cap is in position on the bottle, thereby providing a seal between the cap and bottle neck, said cap formed with an annular recess between the top of the cap and the threaded portion of the flange, in which recess the peripheral marginal portion of said plug flange is seated and by which the plug is secured to the cap, and a rod having a knob at one end thereof, said knob being embedded within said plug and spaced below the top surface of the plug with the rod extending downward from the plug into the bottle.

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