

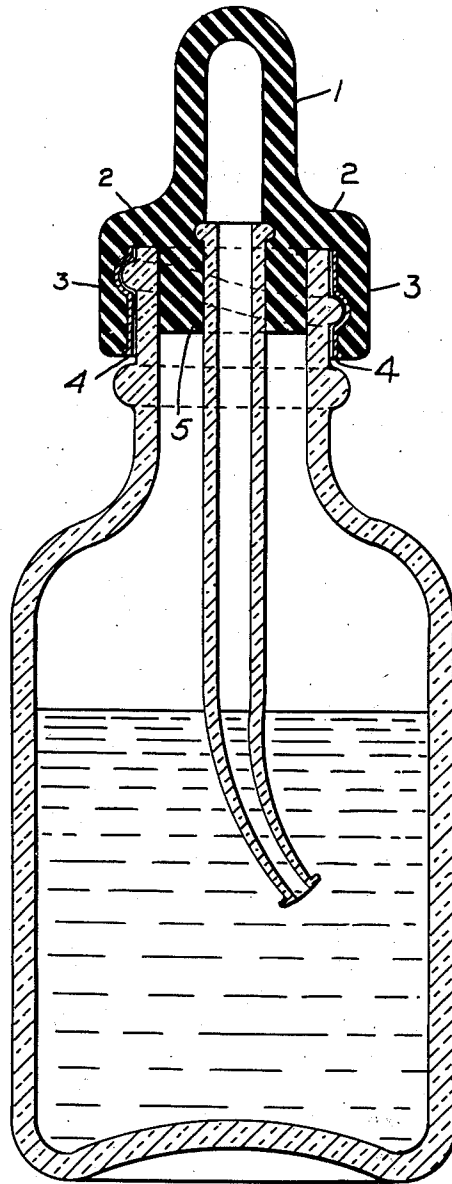
Nov. 29, 1932.

L. J. MAZOYER

1,889,209

COMBINATION SCREW CAP, BOTTLE STOPPER, AND DROPPER

Filed Nov. 30, 1931



Leon J. Mazoyer
INVENTOR

BY *Hauff & Wuland*
ATTORNEYS

UNITED STATES PATENT OFFICE

LEON J. MAZOYER, OF BALDWIN, NEW YORK, ASSIGNOR TO WHITTALL TATUM COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY

COMBINATION SCREW CAP, BOTTLE STOPPER, AND DROPPER

Application filed November 30, 1931. Serial No. 577,927.

My invention relates to a combined screw cap, bottle stopper and dropper and has for its main object the provision of such a device which will insure permanently secure closure for the bottle and which will eliminate breakage of the glass portion of the dropper.

I am aware of the fact that combination screw caps, bottle stoppers and droppers have been proposed prior to my invention. The best of these prior devices, however, have the great drawback that the screw cap is so combined with the bottle stopper that the threads of the screw cap cannot firmly engage the threads on the neck of the bottle. The reason for this is that the rubber bottle-stopping portion of the device is so related to the screw cap, to effect a secure seal on the bottle, that the resiliency of said stopper tends to unscrew the cap. The unscrewing of the cap obviously decreases the sealing effect of the stopper and thus defeats the very purpose of the combination.

Another objection to these prior devices is that the glass portion of the dropper is so arranged with respect to the stopper and the screw cap, that the pressure exerted on the screw cap to close it is taken up to a large extent by the top of said glass portion whereby considerable breakage of said glass portions is incurred.

A further objection to the combination, hitherto known, is the fact that the screw cap is not so arranged as to afford a satisfactory grip for opening and closing, especially when the user's hands are moist as is frequently the case.

The object of my invention, as pointed out above, is to eliminate the above-mentioned objections to devices of this type in use at present.

This and further objects and advantages of my invention will appear in the following detailed description of the accompanying drawing which shows a vertical section of my combined screw cap, bottle stopper and dropper in position in a bottle.

My device consists essentially of a bulb 1 having an offset portion 2 projecting from its sides at a distance from its open end and terminating in a sleeve 3 the inner surface of

which is preferably grooved to receive a threaded collar of metal or the like, 4, which in turn is adapted to engage the threads of a bottle top. If desired the collar may be omitted. The under side of offset portion 2 forms a seat for the top of the bottle and the top of the threaded collar, thereby forming an effective seal for the bottle and at the same time affording no interference with the proper engagement of the threaded collar with the threads on the bottle. The bulb 1 has a portion extending below said offset portion 2 and adapted to engage the top of the tube of the dropper. The outer surface of the portion 5 is shaped to fit the opening in the bottle and cooperates with the under portion of offset 2 to seal the bottle. The top of the tube is preferably so arranged that its upper edge is in a plane above the plane of the upper edge of the bottle and the under side of offset 2, whereby any compression that might be set up in the stopper by the pressure of the bottle top cannot act on the upper edge of said tube.

The threaded collar 4 is preferably firmly secured to sleeve 3 by vulcanizing or by any common cement or glue, in order to prevent relative motion between these two members. It is to be noted that the arrangement of the sleeve 3 outside the collar 4 not only affords a perfect gripping surface for unscrewing the collar 4 but also eliminates the disadvantage of the screw cap becoming disengaged from the stopper when it is unscrewed which disadvantage is inherent in those devices hitherto known and makes the handling of the device somewhat awkward.

Having thus described the nature and objects of my invention and given a specific embodiment of the same which embodiment is to be taken as illustrative rather than limitative, what I claim as new and desire to secure by Letters Patent is:

1. A device of the character described comprising a resilient bulb, a pair of concentric sleeves at the open end of said bulb, a dropper tube arranged in the inner sleeve and a screw threaded collar for a bottle fitted in the outer sleeve.

2. In a combination screw cap, bottle stop-

per and dropper in combination a resilient bulb, an offset portion on said bulb at a distance from its open end, a resilient sleeve extending downwardly from said offset portion and adapted to receive a screw threaded collar, a screw threaded collar fitted in said sleeve and adapted to engage the threads of a bottle top and a dropper tube inserted in the lower end of said bulb.

3. In a combination screw cap, bottle stopper and dropper in combination a resilient bulb, an offset portion on said bulb at a distance from its open end, a resilient sleeve extending downwardly from said offset portion and adapted to receive a screw threaded collar, a screw threaded collar fitted in said sleeve and adapted to engage the threads of a bottle top, a dropper tube inserted in the lower end of said bulb, and an annular space between said sleeve and the lower end of said bulb adapted to form a seat for the rim of a top of a bottle.

4. In a combination screw cap, bottle stopper and dropper in combination with a resilient bulb, an offset portion on said bulb at a distance from its open end, a resilient sleeve extending downwardly from said offset portion and adapted to receive a screw threaded collar, a screw threaded collar fitted in said sleeve and adapted to engage the threads of a bottle top, a dropper tube inserted in the lower end of said bulb, and an annular space between said sleeve and the lower end of said bulb adapted to form a seat for the rim of a top of a bottle, said annular space being in a plane below the plane of the top of the dropper tube.

In testimony whereof I have hereunto set my hand.

LEON J. MAZOYER.