June 17, 1924. 1,497,740

S. M. SCHENKEIN

CAPTIVE STOPPER

Filed Dec. 28, 1922

Fig. 1.

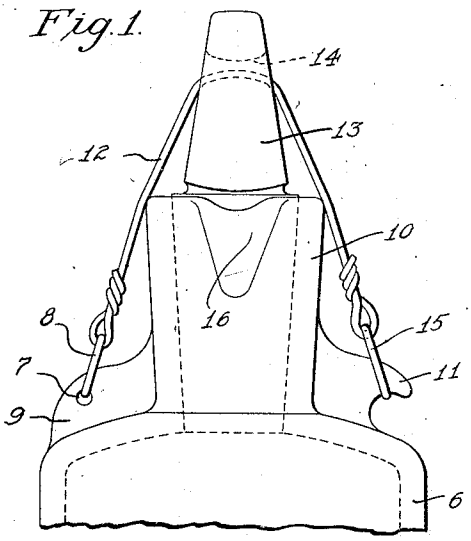


Fig. 2.

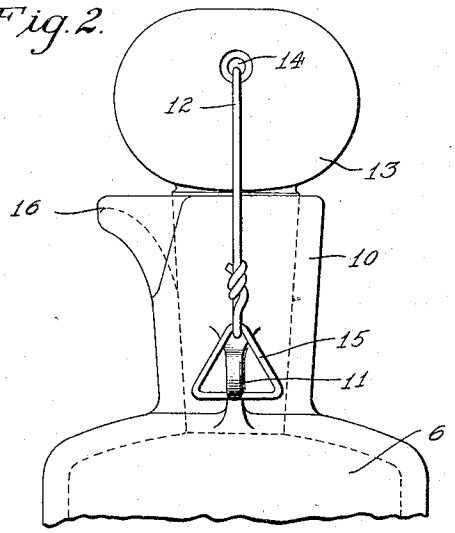
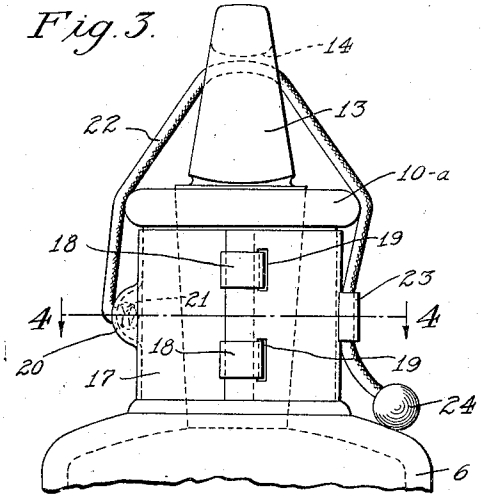
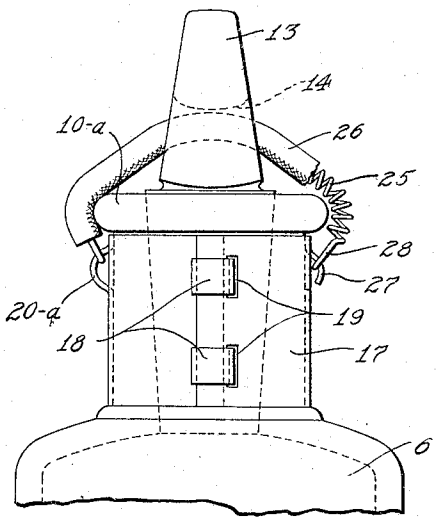


Fig. 3.





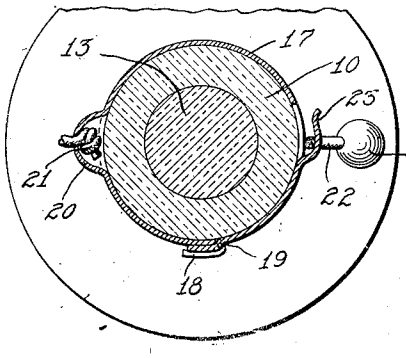


Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE.

SAMUEL MICHAEL SCHENKEIN, OF LYNDHURST, NEW JERSEY.

CAPTIVE STOPPER.

Application filed December 28, 1922. Serial No. 609,414.

To all whom it may concern:

Be it known that I, SAMUEL MICHAEL SCHENKEIN, a citizen of the United States of America, of Lyndhurst, county of Bergen, State of New Jersey, have invented certain new and useful Improvements in Captive Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to glass bottles having captive stoppers and has for its object not only to maintain the stopper captive but also to prevent screwing or turning the glass stopper in the bottle neck when placing the stopper therein and also to exert the necessary retaining pressure on the stopper for holding it to its seat.

When turning a ground glass stopper under pressure in its seat in the bottle neck as is customarily done in placing glass stoppers in their bottles, the stoppers are liable to stick, often times so fast as to prevent removal and by making the stopper captive the user is prevented from doing this.

The holding member, cord or coil spring, that passes through the hole in the glass stopper will exert sufficient pressure to hold the stopper properly to its seat and besides will prevent the stoppers of one bottle from accidentally being exchanged for those of another bottle as no two ground glass stoppers are exactly alike and will only properly fit the bottle they are intended for.

Referring to the drawings, in which like parts are similarly designated:

Figure 1 is an elevation of the upper part of a bottle embodying my invention;

Fig. 2 is a side view of the same;

Fig. 3 is an elevation of a modification;

Fig. 4 is a section on line 4—4 of Fig. 3 and

Fig. 5 is a further modification.

The bottle 6 shown in Figs. 1 and 2 is provided with a hole 7 in which is secured a ring 8.

The hole 7 is conveniently made in a glass projection, lug or flange 9 on the shoulder of the bottle. On the opposite side of the neck 10 of the bottle I form a hook or projection 11. Secured to the ring 8 or directly in the hole 7 if preferred, is a stopper holding member of cord or wire 12 passing through a hole in the bottle stopper 13 and carrying at its fastening end a loop or triangle 15 incapable of passing through the hole 14 in the stopper. This loop ring or triangle 15 latches over the glass hook 11 and holds the member 12 taut and the stopper to its seat. When the flexible attaching member 12 is made of cord, as in Fig. 3 or is woven or braided or is made as a coil spring as in Fig. 5, the elasticity of this member will exert sufficient pressure on the stopper to hold it properly to its seat. The neck of the bottle may or may not be provided with a pouring or dropping lip 16.

Upon releasing the stopper holding member by releasing the loop ring or triangle 15 from the hook 11 pressure on the stopper is relieved and the stopper 13 is free to be removed from the neck 10 of the bottle while the triangle or other captive means which is larger than the hole 14 in the stopper prevents the stopper from becoming detached from the bottle. This prevents the stoppers of a large number of bottles from becoming mixed and rendering the shipment valueless, while when it is in the user's hands it prevents the stopper from being mislaid and keeps it within ready access for replacement in the bottle.

In the modified construction, Figs. 3 and 4, the usual ground stoppered bottle is used having a customary lip 10^a at the top of its neck 10. I place around the neck of the bottle between the shoulder and lip 10^a a metallic element as a sheet metal sleeve 17. This sheet of metal has at one end tongues 18 integral therewith that pass through slots 19 in its opposite end. The tongues are then bent over and hold the sleeve on the bottle neck with the ends of the blank together as shown.

There is also struck up from the sheet metal a pocket or eye 20 for the reception of a knot 21 on one end of a cord 22 that passes through the hole 14 in the stopper.

Substantially diametrically opposite the eye or pocket 20 I cut from the blank a horizontally directed resilient hook 23 that forms a resilient clamp for the braided cord when drawn under it. A knot ball or bead 24 is placed at the other end of the cord 22 to prevent said other end of the cord form slipping through the hole in the stopper.

In Fig. 5 the cord is replaced by a coil or

spiral spring 25 covered with tubular braid 26.

One end of this spring is fastened in an eye 20ª struck or punched from the sheet metal of the sleeve 17 and the other end of the spring is hooked over a downwardly directed tongue 27. The end of the spring that hooks over this tongue is formed with a curl or ring 28 of larger diameter than the hole in the stopper to hold the stopper captive.

I claim:

1. The combination with a bottle and its stopper provided with a transverse hole, of a flexible holding member connected permanently at one end to the bottle, and passing through the hole in the stopper, said flexible holding member adapted to slide through said hole having at its other end means to prevent said end from passing through said hole when the stopper slides thereagainst and means to detachably connect the flexible member to the bottle.

2. The combination with a glass bottle and its glass stopper having a hole there through; of a flexible holding member arranged to slide through said hole, permanently connected at one end to the bottle and passing through said hole, means on the end of said member larger than said hole to hold the stopper captive when the stopper slides thereagainst and a hook for detachably connecting said member at its other end to the bottle.

3. The combination with a glass bottle and its glass stopper having a hole therethrough; of a metallic element surrounding the bottle neck and having an eye and a hook, a flexible holding member having one end permanently secured to said eye and arranged to slide through said hole, means on the other end of said member to hold the stopper captive when the stopper slides thereagainst, said member detachably engaging the hook to hold the stopper to its seat.

4. The combination with a glass bottle and its glass stopper having a hole therethrough, of a braided holding member arranged to slide through said hole and having one end permanently secured to the bottle, means at the other end to hold the stopper captive and prevent the stopper from sliding off said member and a hook on the bottle for detachably connecting the other end of said member.

5. The combination with a glass bottle and its glass stopper having a hole therethrough, of a braided stopper holding member passing through said hole and having a spiral spring core, one end of said member being permanently secured to the bottle; means on the other end of said member to hold the stopper captive when the stopper slides on the member to said means and a hook on the bottle to detachably connect said other end of the member to the bottle.

6. The combination with a glass bottle and its glass stopper having a hole therethrough; of a metallic sleeve on the bottle neck having at one end tongues and its other slots through which said tongues pass to connect the sleeve on the bottle neck and also having an eye and a substantially opposite hook; a flexible holding member passing through said hole and having one end permanently connected to said eye, means on the other end of said member to hold the stopper captive and prevent it from detachment from said means when sliding thereagainst, said member arranged to engage said hook to detachably connect the other end of the member to the bottle.

In testimony that I claim the foregoing as my invention, I have signed my name.

SAMUEL MICHAEL SCHENKEIN.