SANITARY MEDICAL BOTTLE

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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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SANITARY MEDICAL BOTTLE

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This invention relates to sanitary medicine bottles in which the stopper or closure member may be removed without effecting manual contact with the same.

The primary object of the invention is the provision of manipulative means which may be easily attached to a bottle for removing the stopper of the latter before using the contents of the bottle and for again replacing the stopper after using the said contents or any part thereof.

Another object of the invention is to provide an attachment for a bottle which includes a guide for retaining the stopper in the same vertical position, relative to the neck of the bottle, while being removed and during return of the stopper for again closing the bottle.

A further object of the invention is to provide retaining means, at a distance from the mouth of a bottle for the stopper which has been removed therefrom, so that the stopper may again be easily replaced in the mouth, after removal of the contents of the bottle or any part of the same.

A still further object of the invention is to obviate the necessity of placing a stopper, which has been removed from a bottle, on any adjacent surface, thereby maintaining the stopper in a sanitary condition, free from impurities which might be present on such adjacent surface, and ready for subsequent insertion in the top opening of the bottle.

With these and other objects in view, the invention resides in certain novel construction and combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing in which—

Figure 1 is a side elevational view of my improved bottle, the stopper removing attachment being shown in full lines while in connection with the stopper in the closed position, and in dotted lines in the open position.

Figure 2 is a top plan view of the same.

Figure 3 is an enlarged vertical sectional view on the line 3—3 of Figure 1.

Figure 4 is an enlarged detail sectional view on the line 4—4 of Figure 3.

Referring particularly to the drawing by reference characters, the numeral 20 designates the complete bottle which, constructed of glass or other suitable material, includes a body portion having a neck 12, the top opening or mouth 13 of which receives a stopper 14.

The neck 12 is provided with a circumferential groove 15 for accommodating a band or collar 16 of resilient metal, while the stopper 14 is also provided with an annular groove, the latter being designated by the numeral 17, in which another collar 18, also of resilient metal is fitted. The collar 16, which is provided with terminal ears 19, is springingly and out of position on the neck of the bottle, and is provided with a screw bolt 20 which passes through said ears for clamping the collar in the engaged position, while the collar 18 of the stopper is likewise provided with ears 19' and a screw bolt 20' for a like purpose.

Opposite the ears 19, the collar 18 has attached thereto, as by welding, a projecting arm or member 21, the rear side of which is formed with a pair of spaced ears 22, while a vertically disposed aperture 23 is also provided in said arm. Mounted on opposite sides of the lower collar 16 is a pair of pins 24, on which the respective legs 25 of a manipulating lever 26 are fulcrumed, one of said legs being disposed on each side of the bottle. A link 27, pivoted at its top end on a pin 28 between the ears 22, and pivoted at its bottom end on a pin 29 between the rear terminals of the legs 25, operatively connects the arm 21 with the lever 26, while the collar 16 has fixedly attached thereto, as by welding, a vertically disposed rod 30.

Seated on the top surface of the stopper 14, and attached at its opposite ends to the collar 18, is a metal strap 31 which has formed with, or attached thereto, a catch member 32. Fixedly mounted at the top of the rod 30 is a stopper retaining device 33, which includes a cylindrical housing 34, a spring actuated member 35 having a convex or pyramidal head, and a sleeve 36, the latter being slidably
in said housing. A coil spring 37 presses the member 35 outwardly, while a bead or flange 38 on the housing 34 contacts with the shoulder 39 of the sleeve 36 to retain the latter in said housing. The stopper is shown in the engaged position in Figure 1 of the drawing. On downward manual operation of the lever 26, to move the same into the position shown in dotted lines in said figure, the arm 21, which is slidable on the rod 30, carries the stopper vertically upward. At the end of the upward movement the curved or inclined surface 40 of the catch 32 contacts with the head 35 and, pressing the latter inwardly against the action of the spring 37, engages above the end surface of said head, the stopper 14 being thereby retained in the elevated position distant from the opening 13 of the bottle. While open, the bottle may be used in the usual way, either by removing part of the contents of the bottle while the latter rests on any convenient surface, or by moving the bottle to allow the contents to be poured therefrom. To return the stopper, the handle of the lever is moved upwardly to the original position, whereupon the surface 40 presses the head inwardly to release the catch 32.

On a bottle or container which may be frequently used, the attachment may be constantly retained, but when a bottle is used only on a single occasion, or for any other reason, the attachment may be removed after having been used on that occasion and attached to another bottle for further use. The screws 20 are easily removable, and the attachment may be used without the said screws, if so desired.

While I have described what I deem to be the most desirable embodiment of my invention, it is obvious that many of the details may be varied without in any way departing from the spirit of my invention, and I therefore do not limit myself to the exact details of construction herein set forth nor to anything less than the whole of my invention limited only by the appended claims.

What is claimed is:
1. In a bottle comprising a body, a stopper removably engaged therein, a collar attached to said body, a vertically disposed rod rigid with said collar, and a lever pivoted on said collar for sliding said stopper on said rod to open the bottle.
2. In a bottle comprising a body having an opening therein, a stopper removably engaged in said opening, a collar attached to said body, a vertically disposed rod rigid with said collar, and a lever pivoted on said collar and operatively connected with said stopper, said lever adapted for sliding said stopper on said rod to open or close the opening of the bottle.
3. A bottle comprising a body open at the top, a stopper in the top opening, a collar attached to said body, a vertically disposed rod rigid with said collar, another collar attached to said stopper and slidable on said rod, and a lever pivoted on said first mentioned collar and operatively connected with said second mentioned collar for sliding the latter on said rod to remove said stopper from the opening of the bottle.
4. A bottle comprising a body open at the top, a collar attached to said body, a vertically disposed rod rigid with said collar, another collar attached to said stopper and slidable on said rod, a link pivoted on said latter collar, and a lever fulcrumed on said first mentioned collar and pivotally connected with said link for sliding said second mentioned collar on said rod to open or close the bottle.
5. A bottle comprising a body having an opening therein, a stopper removably engaged in said opening, a vertically disposed rod mounted on said body, a collar attached to said stopper and slidable on said rod, a link pivotally attached to said collar, a lever fulcrumed on said body and pivotally connected with said link for sliding said collar on the rod to remove said stopper, and a stop at the top of said rod for limiting the sliding movement of said collar.
6. A bottle comprising a body having an opening therein, a stopper removably engaged in said opening, a catch member carried by said stopper, a vertically disposed rod mounted on said body, a collar attached to stopper and slidable on said rod, a link pivotally attached to said collar, a lever fulcrumed on said body and pivotally connected with said link for sliding said collar on the rod to remove said stopper, and means carried by said rod for cooperating with the catch member on said stopper to hold the latter in an elevated position.
7. An attachment for bottles comprising a pair of collars, said collars adapted to be attached to the respective body and stopper portions of a bottle, a rod rigid with the collar on said body, an arm attached to the collar on said stopper and having an aperture therein, said arm slidable on said rod, a lever fulcrumed on the collar of said body, and a link pivotally connecting said lever and said arm, said lever adapted for manipulation to slide said arm and the collar on said stopper distant from the collar on said body.
8. In combination with a bottle having a mouth, a stopper, for closing said mouth, a band encircling the top of said bottle, a guide rod fixed to said band and rising upwardly above the top of said bottle, means for slidably mounting said stopper on said guide rod, an actuating means correlated with said first means whereby said stopper may be moved vertically toward or away from said mouth, and coacting means between said stopper and said guide rod for supporting
said stopper in an elevated position when moved thereto by said actuating means.

9. An attachment for bottles comprising an attaching band adapted to be mounted on the neck of a bottle, a guide rod extending from said band, a slide member slidably mounted on said guide rod and adapted for attachment to a bottle stopper, an actuating lever pivoted to said attaching band, and a link pivotally connected at its respective ends to said actuating lever and said slide member.

10. A bottle comprising a body having a peripheral groove therein, a collar rigid with the body in the groove, pivot means carried by the collar, a vertically disposed rod rigid with said collar and extending above said body, a stopper removably closing the bottle and having also a peripheral groove therein, a carrier rigidly attached to the stopper in its groove and having an arm slidably mounted on said rod, a lever pivotally mounted on said means and including a rearwardly extending arm, a link terminally pivotally connecting said latter arm and said first arm, and a front manipulating arm on said lever for operating said link to slide said first arm for moving the carrier to open the bottle.

In testimony whereof I hereby affix my signature.

BERNARD WIENER.