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F. A. GRAUMAN ET AL
SEDIMENT COLLECTING STOPPER

1,892,884

Filed June 19, 1928

Fig. 2

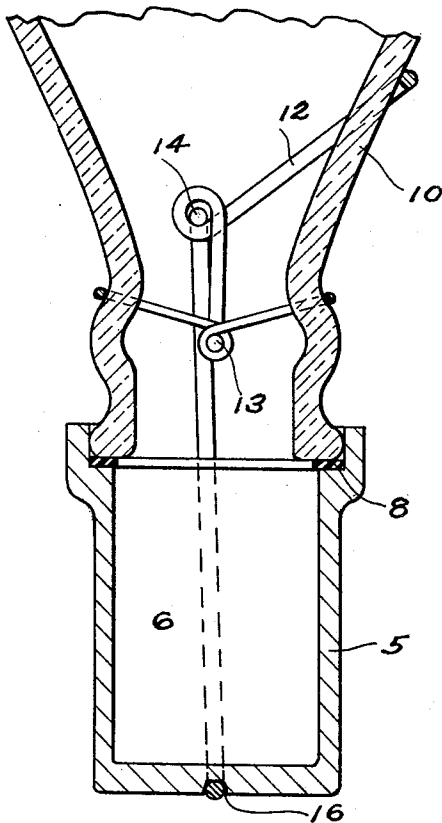
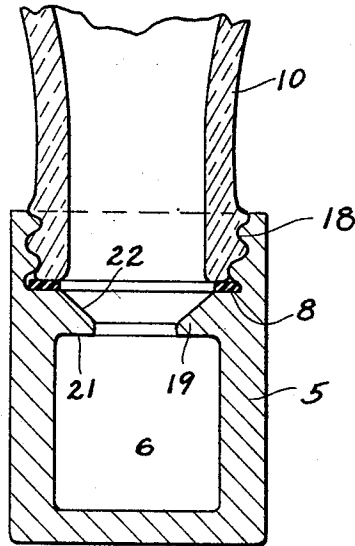


Fig. 1

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SEDIMENT COLLECTING STOPPER

Application filed June 19, 1928. Serial No. 286,625.

Our invention relates to the art of bottle stoppers and most particularly to that type that is adapted as stoppers for beverages and similar liquids which when allowed to stand precipitate the solids in the form of sediment.

Most beverages of the type that will produce a sediment have stored up within them gases of considerable pressure which, when the bottle is opened, effervesce and cause a violent mixing. If, when this takes place there is any appreciable amount of sediment it is very thoroughly mixed with the otherwise clear liquid. Therefore:—

It is a primary object of our invention to provide a bottle stopper that will collect the sediment as it is precipitated and permit its easy removal from the bottle.

Another object of our invention is to provide a sediment collecting device that may be inserted in the neck of a bottle and be held in place by a conventional crimped cap.

A further object of our invention is to provide a sediment collecting device that will trap and retain the sediment so collected.

In general the object of our invention is to overcome the various difficulties set forth above and provide a bottle stopper which is characterized by its efficiency and its simplicity.

The above general objects of our invention together with others inherent in the same are obtained by the device illustrated in the following drawing, the same being preferred exemplary forms or modifications of our invention, throughout which drawing like reference numerals indicate like parts.

Figure 1 is a cross sectional view through our invention showing the same secured to an inverted bottle by a conventional type of wire clamp.

Figure 2 is a cross sectional view of a slightly different form of our invention, the same being shown as secured to an inverted bottle by means of a screw thread.

Referring to the drawing, numeral 5 represents a hollow cap or stopper with the cavity 6. This stopper may be made of any suitable material such as glass, pottery, bakelite, treated wood or the like.

A gasket 8 of some soft material is used to

form a seal between the stopper and the top of bottle 10. The method of securing the stopper to the bottle will depend in a large measure upon the liquids it is desired to bottle.

In Figure 1 we have shown a conventional type of securing means which produces its securing pressure by means of the member 12. Revolving about a pivot 13 until the pivot 14 has passed beyond the line joining the pivot 13 and groove 16 in cap 5. The toggle action so obtained exerts considerable pressure and provides a lock that tightens when pressure is applied to the fluid.

In Figure 2 we have shown the cap 5 secured to the bottle 10 by means of the threads 18. Further, inasmuch as this type of stopper can not be as quickly removed as that shown in Figure 1, we provide as part of cap 5 a circular shelf 19 having a flat lower surface 21 and a sloping upper surface 22.

Method of operation

To take advantage of the sediment collecting properties of our stopper it is necessary to invert the bottles and let them stand on the stoppers until it is desired to use the liquid thus stored. In the form shown in Figure 1 it will be clear that the sediment may drop unhindered into the cavity 6 and when it is desired to open the bottle it should be brought to a horizontal position. The lock lever 12 is moved to the unlocked position and the cap removed and the bottle quickly restored to a vertical position. Sediment will often solidify and then the bottle may be inverted.

In the type shown in Figure 2 the sediment in settling passes over the sloping surface 22 into the chamber 6. When it is desired to open this type the bottle must be inclined sufficiently from its upright position so that the flat side 21 will prevent the sediment from flowing back into the bottle 10.

Other details of operation and construction of our invention would be so obvious to those skilled in the art that we believe that no further description is necessary. Manifestly, changes may be made in the form, proportion, and arrangements of parts of our

invention without departing from the spirit thereof:

What we claim is:—

1. A bottle stopper adapted to be secured
5 to the mouth of a bottle, a cylindrical sediment collecting cavity disposed wholly without and co-axially with the bottle, a circular shelf formed as part of the stopper, disposed between the bottle engaging portion of the
10 stopper and the said cavity adapted to retard the sediment returning to the bottle when the bottle is held in a slanting position.

2. A bottle stopper, of the class described comprising a cap-like device adapted to be
15 securely fastened onto the mouth of the bottle; a cylindrical sediment collecting cavity within said device, said cavity being disposed wholly without and co-axially with the bottle and an annular shelf disposed between the
20 bottle and the said cavity having a sloping surface facing the bottle engaging portion of the stopper and a flat surface, normal to the axis of the cavity, facing said cavity.

In witness whereof, we hereunto subscribe
25 our names this 11th day of June A. D. 1928.

FRANK A. GRAUMAN.
ARTHUR H. GRAUMAN.

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