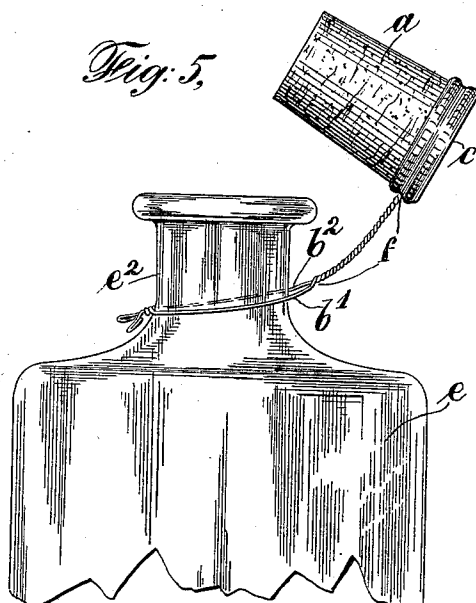
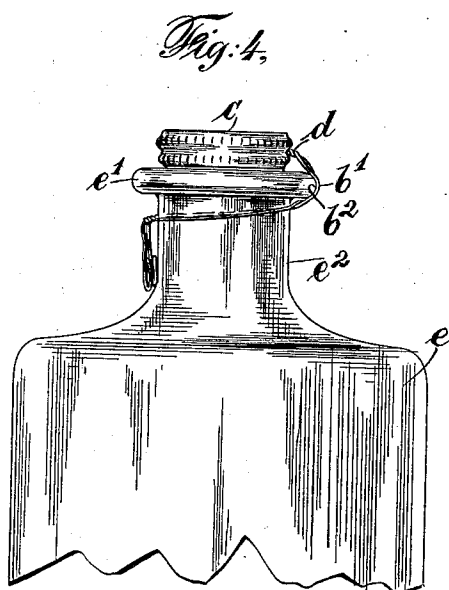
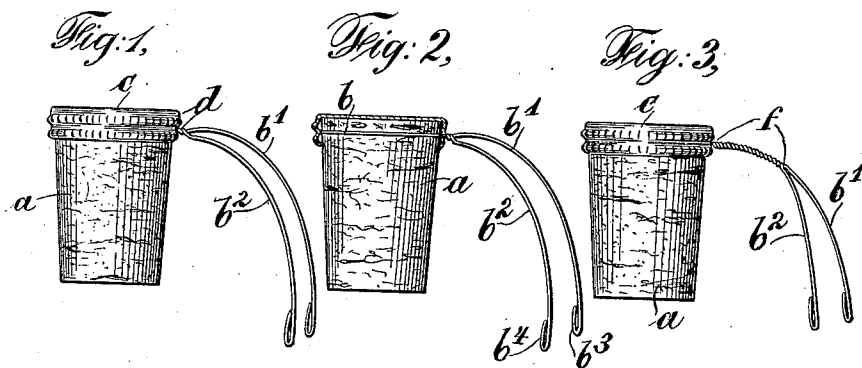


V. H. KOPALD.
BOTTLE STOPPER.
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1,041,816.

Patented Oct. 22, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

VICTOR H. KOPALD, OF BROOKLYN, NEW YORK.

BOTTLE-STOPPER.

1,041,816.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, VICTOR H. KOPALD, a citizen of the United States, and a resident of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

This invention has reference to improvements in bottle stoppers. It pertains particularly to bottle stoppers made of cork, rubber, artificial compositions and the like which are especially used on bottles containing chemical or poisonous substances.

It is desirable to close bottles containing chemical and poisonous substances by stoppers that cannot loosen or be forced out during transportation. Furthermore, stoppers for bottles containing chemical, antiseptic, medicinal and poisonous substances should not be liable to be mislaid or lost during use. This is particularly disagreeable when small quantities of the substance are required from time to time as is the case with the substances above named. If, for instance, a stopper is lost from a bottle containing carbolic acid or volatile chemical liquids or medicines and a substitute stopper should not be at hand then harm or injury to persons or loss of substance may be the result.

In order to avoid the above described deficiencies I have constructed a bottle stopper which is permanently attached to the bottle when once applied although the stopper itself forms a separate article of commerce.

In addition to these main objects it has been sought to produce an article of inexpensive materials and care has been taken to produce stoppers which are neat in appearance and do not occupy much space when packed and shipped as such; all as will be fully described hereinafter with reference to the accompanying drawing in which:

Figure 1 represents in side elevation, a stopper embodying in desirable form the present improvements. Fig. 2 illustrates same in side elevation partly in section. Fig. 3 shows in side elevation a somewhat modified form of stopper. Fig. 4 is a side elevation of the upper part of a bottle with stopper applied for transportation, and Fig. 5 is a like view showing the stopper attached to the bottle during use and out of the bottle neck.

Similar letters of reference denote like parts in all the figures.

On the drawing *a* represents the stopper which is of usual form. The stopper may consist of any desirable material that is not destroyed by the liquid or substance within the bottle. For volatile and oily medicinal substances a cork stopper may be used while for other substances like acids, rubber, artificial compositions and the like may be employed or even wood or glass stoppers. On the top portion of the stopper a wire *b* is provided which passes around the entire circumference of same. At the point where the wire meets it is twisted together so that it is held securely in that location. The wire end portions *b*¹, *b*² are of a certain length and for the sake of convenient handling form end loops *b*³, *b*⁴. For the purpose of protecting the wire portion that passes circumferentially around the top portion of the stopper a metal cap *c* is secured to the top portion of the stopper in such manner that it completely covers the wire *b*. The cap *c* necessarily has an opening or small incision *d* through which the wire end portions pass otherwise the cap *b* is simply pressed over the top portion of the stopper so as to be permanently secured thereto.

The stopper so far described is primarily purposed to be used on bottles to be transported. In Fig. 4 a bottle *e* is shown to which such a stopper has been applied. The wire end portions *b*¹, *b*² are passed beyond the rim *e*¹ of the bottle neck *e*² and twisted together on the opposite side of the neck as shown in Fig. 4, while the extreme ends are pressed against the outer wall of the bottle neck. In this manner the cork or stopper is securely attached and held in position.

A slightly modified form of stopper is shown in Fig. 3. The construction of the stopper is substantially the same as the one shown in Figs. 1 and 2 except to note that the wire end portions *b*¹, *b*² are twisted together for a certain length after leaving the metal cap *c* as shown at *f* in Fig. 3. The twisted portion may be produced directly during the manufacture of the stopper which latter is then especially adapted for use in chemical retail houses, drug stores and the like, where chemical, volatile, medicinal, antiseptic or poisonous liquids or substances are sold in small quantities. The wire end portions *b*¹, *b*² are then pressed around the neck *e*² of the bottle *e* as shown in Fig. 5 and secured with their extreme ends so that the stopper is permanently attached thereto and

cannot be mislaid or lost. The twisted portion *f* of the wire is of such length that the cork or stopper may be easily inserted into the bottle neck and withdrawn therefrom without becoming detached from the bottle neck. It is self-evident that the stopper shown in Figs. 1, 2, and 4 may likewise be secured to the neck of the bottle by detaching first the wire, twisting it to form the portion *f* and then securing it again to the neck of the bottle. This is done by the user if he buys bottles with contents in the original packing which were transported by railway or otherwise.

I claim as my invention:

1. A bottle stopper comprising the stopper proper, a cap on the top of the stopper with small side opening permanently secured thereto, and a wire on the stopper within said cap, the ends of said wire passing through the said opening in the cap.

2. A bottle stopper comprising a cork stopper, a metal cap permanently secured thereto at its top portion covering the top

and a short portion of its sides and having a small side opening; a wire within said cap around the stopper passing through the side opening of the cap, said wire being adapted to be wound around the neck of the bottle and long enough to permit of the removal or insertion of the cork.

3. In combination with the neck of the bottle, a cork stopper, a metal cap permanently secured thereto at its top portion covering the top and a short portion of its sides and having a small side opening, a wire within said cap around the stopper passing through the side opening of the cap, said wire being adapted to be wound around the neck of the bottle and long enough to permit of the removal or insertion of the cork.

Signed at New York, N. Y., this 1st day of June 1911.

VICTOR H. KOPALD.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."