(No Model.)

G. & W. H. CHAMBERLIN.

BOTTLE STOPPER.

No. 301,564. Patented July 8, 1884.

Fig. 1.

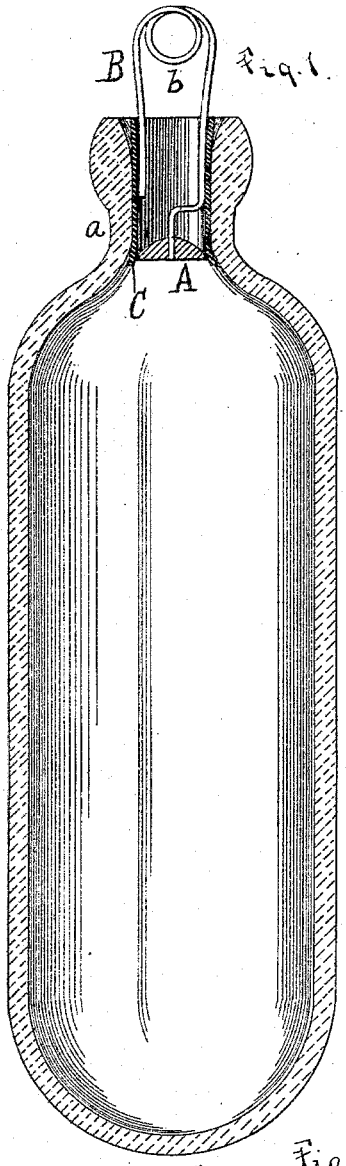

Fig. 2.

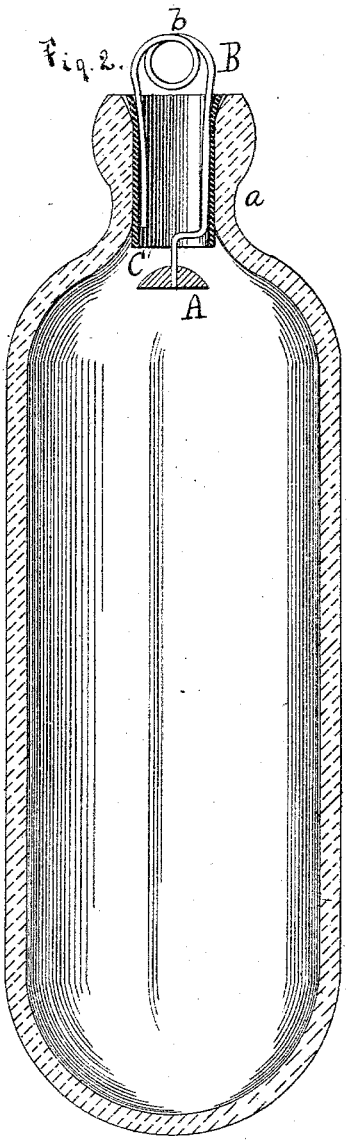

Fig. 3.

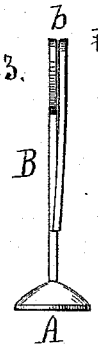

Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE CHAMBERLIN AND WILLIAM H. CHAMBERLIN, OF OLEAN, N. Y.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 301,564, dated July 8, 1884.

Application filed March 19, 1884. (No model.)

To all whom it may concern:

Be it known that we, GEORGE CHAMBERLIN and WILLIAM H. CHAMBERLIN, citizens of the United States, residing at Olean, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Bottle-Stoppers; and we do 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 the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a central vertical section of the bottle-stopper in a bottle, shown as closed therein. Fig. 2 is a similar view with the stopper opened; Fig. 3 a side view of the stopper proper; Fig. 4, a view of the bottle packing-tube detailed.

Like letters designate corresponding parts in all of the figures.

Our invention belongs to the class of removable inside stoppers; and it consists in the combination, with a bottle provided with a freely removable packing-tube on the inside of the neck of a stopper, of a disk form, and provided with a stem adapted to keep the stopper in position in the neck of the bottle, substantially as hereinafter specified.

The construction is substantially as follows:

The stopper proper consists of a disk, A, preferably convex or broadly conical on the outer side, and of a diameter a little less than that of the neck *a* of the bottle. A stem, B, consisting of a wire extended outward through and beyond the neck of the bottle, and bent at *b* once or twice in a circle or approximate shape to form a loop or eye for drawing it into the neck of the bottle, and thence extended inward nearly to the disk again, and left free to yield inward and spring outward. This stem thus constructed not only serves to manipulate the stopper with, but the additional purpose of holding the stopper-disk at right angles to the axis of the bottle-neck, which is necessary for performing its proper function.

This stopper is used in connection with a packing-tube, C, of soft india-rubber or equivalent material, which is inserted in the neck of the bottle, preferably far enough to reach a little into the inner flaring part of the bottle-neck. When the stopper is placed in a bottle and the packing-tube also inserted in the neck of the bottle, then, by drawing on the stopper-stem, the disk A is drawn into the inner end of the packing-tube C until the diminishing interior diameter of the bottle-neck prevents it being drawn any farther outward, when it will completely and effectually stop the bottle, as shown in Fig. 1. Then, on driving in the stem B by any means, the stopper assumes the position shown in Fig. 2, ready for pouring out the liquid in the bottle. The sides of the stem B of the stopper, pressing into the interior surface of the packing-tube C, hold the stopper open. While the stopper is in this latter position the packing-tube can be readily pulled from the neck of the bottle by pliers or other suitable means, and then the stopper itself is readily drawn out, leaving the bottle free to be washed or cleaned out.

Packing-tubes, in connection with inside stoppers, have been used before, when they form a part of the stopper itself, and are inserted and withdrawn therewith. This requires a more or less complex construction and at considerable cost, whereas our separate packing-tube, inserted in and forming an ordinarily inseparable part thereof, allows the utmost simplicity of the stopper itself, very cheap and easily manipulated, as well as durable and efficient. We are not aware that this construction has been known before. Also, bottles with interior ring or tube-packing and inside stoppers of conical or spherical form have before been used; but the extended surface of contact between the packing and stopper cannot always be relied on to produce an air-tight joint necessary for this purpose; but with a thin-edged disk like our stopper pressing against the packing, the joint on the side of the packing is always reliable.

We claim as our invention—

The combination, with a bottle provided with a freely-removable packing-tube, C, on the inside of its neck, of a stopper, A, of disk form, and provided with a stem, B, adapted to keep the stopper in position in the neck of the bottle, substantially as and for the purpose herein specified.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE CHAMBERLIN.
WILLIAM H. CHAMBERLIN.

Witnesses:
WILLIAM D. CHAMBERLIN,
W. D. PARKER.