

(No Model.)

J. TERRY.

INTERNAL BOTTLE STOPPER.

No. 320,192.

Patented June 16, 1885.

Fig. 2.

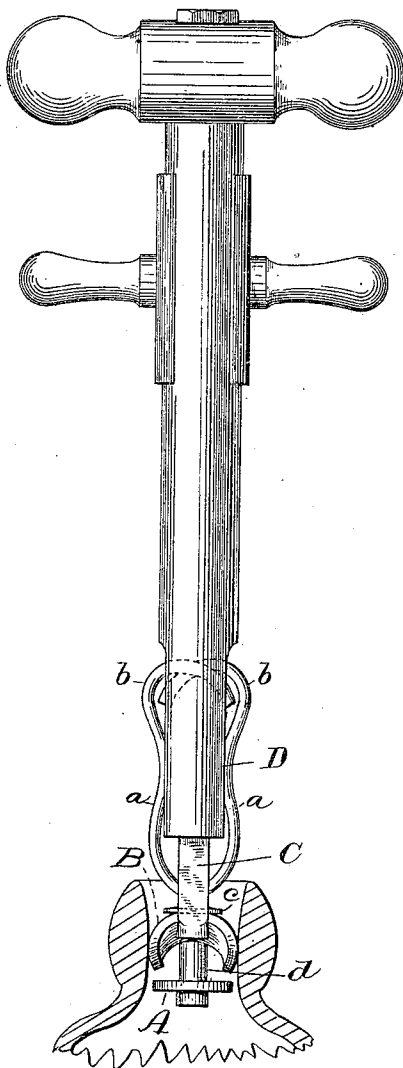
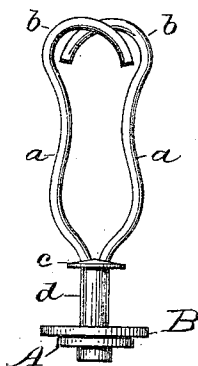


Fig. 1.



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UNITED STATES PATENT OFFICE.

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INTERNAL BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 320,192, dated June 16, 1885.

Application filed January 21, 1885. (No model.)

To all whom it may concern:

Be it known that I, JAMES TERRY, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Removable Internal Bottle-Stoppers, of which the following is a specification.

In the accompanying drawings, Figure 1 is a side elevation of my bottle-stopper, and Fig. 2 is a side elevation of the same together with grasping-nippers, and a sectional view of the bottle-neck.

The stopper-wire is formed of two spring-arms, *a a*, the outer ends of which terminate in a short bend or bow, *b*, preferably upon the outer end of each arm, the lateral width of which bend is a little in excess of the diameter of the hole through the neck of the bottle, so that when the stopper is forced downward into the bottle the bow or bows are caught within the bottle-neck and prevent the stopper from falling down into the bottle. At the inner end of the stopper is the ordinary pressure disk or head, *A*, above which is the usual flange or plate, *c*, both of which perform their usual functions. Both the pressure-disk and the flange *c* are immovably fixed upon the inner end of the spring-arms *a a*, and are separated by the neck *d* a distance materially greater than the thickness of the packing-disk. The packing-disk is placed upon this neck, and the space between the confronting edges of the pressure-disk *A* and flange *c* is such that the packing-disk may be caught over its edge by any suitable grasping-nippers at two or more points and pulled far enough away from the pressure-disk to allow other parts of the edge of the packing-disk to be bent inward by the neck of the bottle, as illustrated in Fig. 2, so that the stopper may be removed. In thus removing the stopper the packing-disk has its edge bent upward at the points by which it is grasped and downward at other points.

The grasping nippers or tool herein shown consists, in brief, of two spring-arms, *C*, having confronting hooked ends and a sliding sleeve, *D*, with which to force the spring-arms together. Any other instrument may be substituted therefor which will take over the edge of the packing-disk at two or more points. In fact, two hooks formed of a bent-up piece of wire will answer the purpose.

In order to hold the stopper in such a position in the bottle that the packing-disk may be thus grasped by an instrument for removing the stopper, it is essential that the stopper be provided with a bail or stopper-wire of some kind, which will suspend the stopper from the neck of the bottle when the stopper is pushed inward to allow the escape of the liquid. This in the present instance is accompanied by the spring-arms *b b*. It should be noted that the arms are long enough so that they will spring back into place whenever pressed to or from each other, while at the same time the short bend or bow at the outer termination of said arms is so short as to have but little, if any, give or spring, and so the width of these bows is greater than the diameter of the hole in the neck of the bottle. Said bends effectually prevent the stopper from being forced so far into the bottle as to let the stopper fall therein.

I claim as my invention—

The herein-described removable internal bottle-stopper, consisting of a stopper-wire by which to suspend the stopper within the neck of the bottle, the pressure-disk *A*, flange *c*, and the packing-disk *B*, fitted to slide upon the neck between said pressure-disk and flange a distance sufficient to be wholly removed from said pressure-disk, substantially as described, and for the purpose specified.

JAMES TERRY.

Witnesses:

EDDY N. SMITH,
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