

J. E. WOODWARD.
Bottle-Stopper.

No. 213,488.

Patented Mar. 18, 1879.

Fig. 1.

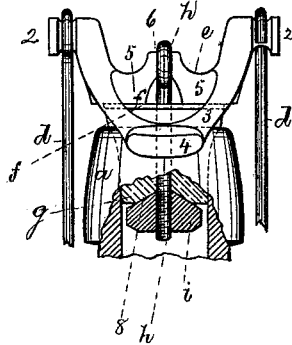


Fig. 2.

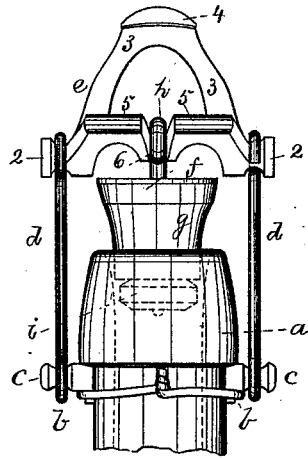
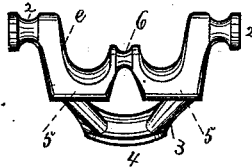


Fig. 3.



Witnesses.

L. F. Connor.
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UNITED STATES PATENT OFFICE.

JAMES E. WOODWARD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **213,488**, dated March 18, 1879; application filed February 14, 1879.

To all whom it may concern:

Be it known that I, JAMES E. WOODWARD, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Bottle-Stoppers, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to improvement in bottle-stoppers; and consists, chiefly, in a lever made as a double crank, one part of which acts upon the plate at the top of the cork, while the other at the same time draws upward upon the center of the cork, and bulges it out or fits it closely to the inner side of the neck of the bottle.

In this my improved bottle-stopper I am enabled to employ a stopper of cork, thereby dispensing with india-rubber and other gaskets.

Figure 1 represents the neck of a bottle broken out and stopped by my improved stopper, the cork and parts below it being partially in section; Fig. 2, a view of the neck of a bottle, with the stopper and its operating-lever elevated into its highest position; and Fig. 3 represents, in elevation, the rear side of the lever, showing its double cranks.

The bottle and its neck *a*, the band *b* and its lugs *c*, and the links *d*, pivoted thereon, are and may be of any usual construction.

The lever *e* invented by me has its fulcrum-points *2* supported by the upper ends of the links *d*. This lever has a handle, *3*, with a concaved thumb-piece, *4*. The working portion of the lever is composed of two rounded faces, *5*, which act upon the loose metallic disk *f*, placed at the top of the cork *g*, these two faces constituting one crank, and of a crank, *6*. (See Fig. 3.)

The crank *6* is embraced by a loop or eye at the upper end of a center rod, *h*, which extends through the disk *f*; and the cork *g* has applied to it the cork-expander *i*, having its upper face, *8*, made conical, as shown in Fig. 1, the said cork-expander being preferably adjustable upon the rod *h*.

When the bottle is to be closely stopped the cork is first inserted while the handle *3* of the lever *e* is most elevated, (see Fig. 2,) and then the handle is turned downward to the position

in Fig. 1. During this operation the crank parts *5* come in contact with the loose metallic disk *f* at the top of the cork, and force the cork, upon which the disk bears, down into the bottle-neck, and as the cork is being firmly seated in the neck of the bottle by these parts *5*, which so operate upon the disk *f*, the crank *6* acts to lift the rod *h* and the cork-expander *i*, so that its concaved top *8* causes the cork to bulge or round outwardly, thereby forcing the periphery of the cork *g* in very firm and close contact with the interior of the bottle-neck.

With beer and such liquids real cork is better for a stopper than india-rubber, and is cheaper.

The cork-expander will preferably be made of hard, strong wood.

Prior to this my invention I am not aware that any manufacturers of beer have, with their stopping devices, which always remain with the bottle, ever used genuine corks.

I do not broadly claim the use of a lever to force a stopper down into a bottle-neck, as such levers are embodied in many different forms.

The downward motion of the handle is arrested by the lower end of the thumb-piece meeting the bottle-neck.

I claim—

In a bottle-stopper, the pivoted lever *e*, mounted on links *d*, and provided with the crank-faces *5* and the crank *6*, combined with the cork, the loose disk at its top, and the rod connected with the crank *6*, and the cork-expander attached to the rod, and shaped at its top to act against the lower end of the cork, and expand or bulge the peripheral portion of the cork outward in contact with the interior of the bottle-neck, while the cork is held pressed downward in the said neck, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES E. WOODWARD.

Witnesses:

G. W. GREGORY,
N. E. WHITNEY.