F. W. PERRY.
Bottle-Stopper Fastener.

No. 199,165. Patented Jan. 15, 1878.

Fig. 4

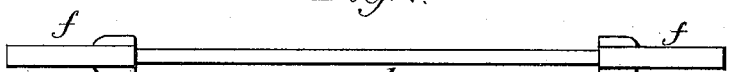
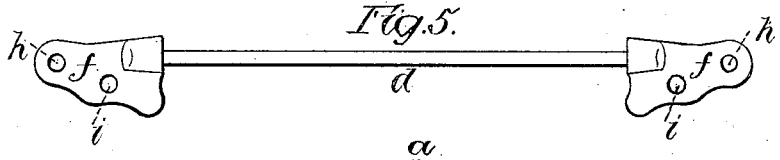


Fig. 5.



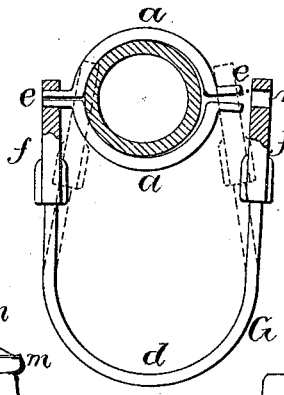


Fig. 3.

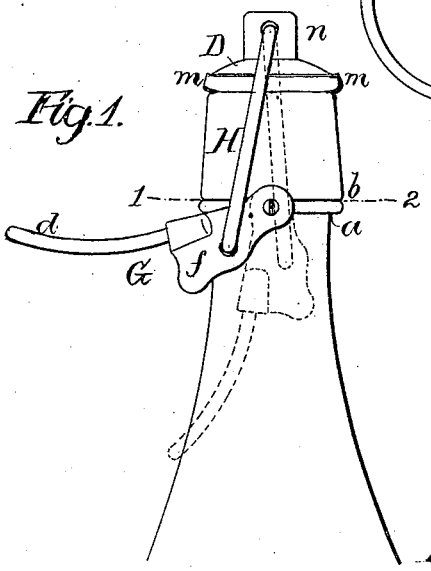


Fig. 1.

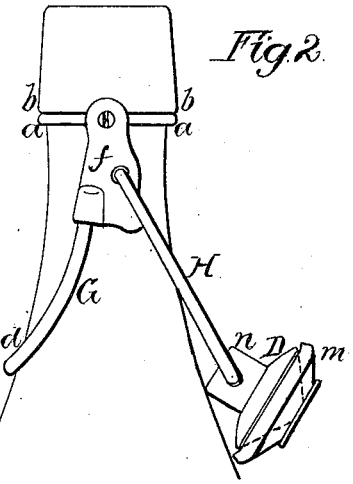
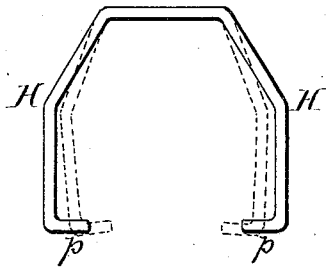


Fig. 2.

Fig. 6



Witnesses

Henry Howson Jr.

Harry Smith

Inventor

Frank W. Perry

by his Attorneys

Howson and Son

UNITED STATES PATENT OFFICE.

FRANK W. PERRY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO WILLIAM A. LEAVITT, OF SAME PLACE.

IMPROVEMENT IN BOTTLE-STOPPER FASTENERS.

Specification forming part of Letters Patent No. **199,165**, dated January 15, 1878; application filed November 26, 1877.

To all whom it may concern:

Be it known that I, FRANK W. PERRY, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Bottle-Stoppers, of which the following is a specification:

The main object of my invention is to so construct and adapt to each other the several parts of a bottle-stoppering device, described hereinafter, that they can be readily put together and applied to a bottle without skilled manipulation.

In the accompanying drawings, Figure 1 is a side view of my improved stoppering device for bottles as it appears when the stopper has been applied to the mouth of the bottle, and before it is compressed thereto; Fig. 2, the same with the stopper detached from the mouth of the bottle; Fig. 3, a section on the line 1 2, Fig. 1, showing the collar and bent lever; Figs. 4 and 5, views of the lever before it is bent, and Fig. 6 a front view of the bail.

The collar of the device consists of two segmental pieces, *a a*, of halved wire, bent to conform to the neck of the bottle below the shoulder *b*, each segment having at each end a projection, *e*, so that when fitted to the neck of the bottle the segments will form a collar with two journals or trunnions, one on each side of the neck.

The lever G consists of three pieces—namely, the wire *d*, and at each end of the latter a piece, *f*, made of cast metal, and secured to the wire by and during the process of casting, each end piece of the lever having two holes, *h* and *i*. The lever is, in the first instance, straight, as shown in Fig. 5; but it is subsequently bent and adapted to the trunnions of the collar, which trunnions fit freely into the holes *h h* of the lever.

D is the stopper, consisting of metal, to which a ring or cap, *m*, of rubber, adapted to the mouth of the bottle, is attached in such a manner that while firmly held when in use, it can be readily slipped off when it becomes worn and has to be replaced.

Through a projection, *n*, on the stopper D passes the yoke or bail H, consisting of wire shaped as shown in Fig. 6, but originally bent to the extent shown by dotted lines in that figure, so that the inwardly-bent ends *p* cannot be introduced into the holes *i* of the lever without first springing apart the legs of the bail, and so that the tendency of the legs to recoil will not only maintain their projections *p* in their holes in the lever, but, pressing against the pieces *f f* of the lever, will serve to maintain the latter in place, the wire of the lever having of itself but little elasticity, owing to the heat imparted to it in casting the said pieces *f f*.

The operation of the device will be readily understood by reference to Figs. 1 and 2. When the lever G is elevated the stopper D can be readily adjusted to the mouth of the bottle, and when the lever has been depressed so as to occupy a position against the neck of the bottle, as shown by dotted lines in Fig. 1, the stopper will be depressed and the lever will be out of the way. By raising the lever the stopper will be released, and lever, stopper, and bail will hang against the neck of the bottle, as shown in Fig. 2, so as to be out of the way, and present no obstacle to interfere with the ready filling of the bottle.

One of the main objects of my invention has been to so construct the parts that they can be sent to bottle-manufacturers for application to the bottles without the aid of skilled manipulation.

The several parts detached from each other may be packed in comparatively small compass for shipment to the parties using the bottles, by whom the several connections may be readily made in the manner explained above.

Another advantage of my invention is, that the stopper and its operating devices can be readily removed from a broken bottle and applied to a new one without demanding the use of any tools, or the employment of a skilled workman.

I claim as my invention—

1. The combination, in a bottle-stopper, of an operating-lever with a holder for the same, consisting of two detachable segments, *a a*,

having projections *e e*, which form trunnions adapted to holes in the lever, on which the segments depend for retention on the neck of the bottle, all substantially as set forth.

2. The combination of the lever G, the holder for the same, and the yoke H, possessing such elasticity that it will retain the lever on the trunnions of the holder, as set forth.

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

FRANK W. PERRY.

Witnesses:
RICHARD L. GARDINER,
HARRY SMITH.