J. BRYAN.
Bottle-Stopper Fastener.

No. 209,857. Patented Nov. 12, 1878.

Fig. 1.

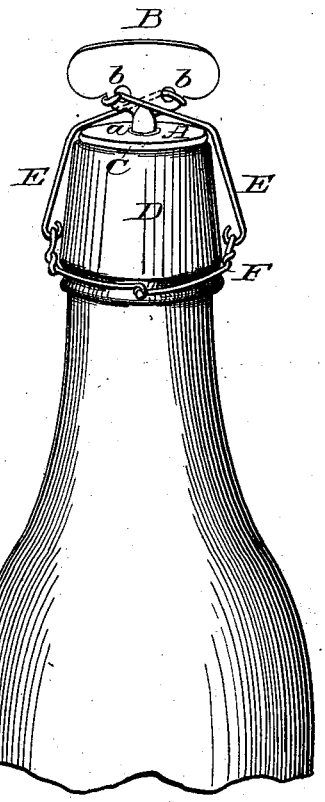


Fig. 2.

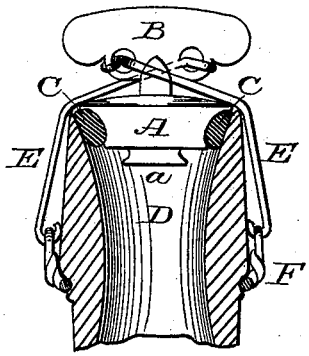


Fig. 3.

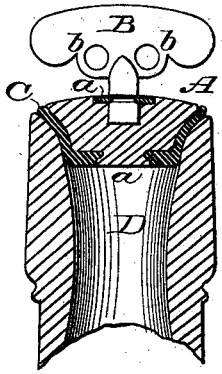
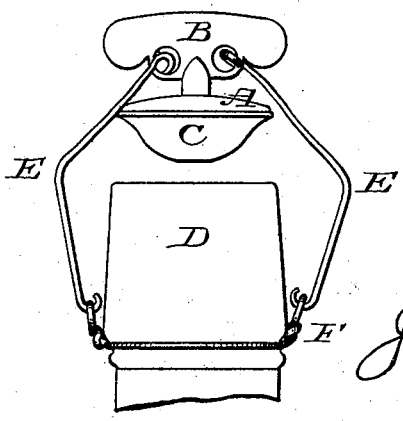


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN BRYAN, OF CANTON, ILLINOIS.

IMPROVEMENT IN BOTTLE-STOPPER FASTENERS.

Specification forming part of Letters Patent No. **209,857**, dated November 12, 1878; application filed July 2, 1878.

To all whom it may concern:

Be it known that I, JOHN BRYAN, of Canton, in the county of Fulton and State of Illinois, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification:

The first portion of my invention consists of a provision whereby a stopper permanently attached to the bottle, &c., can be readily operated so as to quickly stop or unstop the mouth of the latter, and the mouth of the bottle, when stopped by this device, shall remain securely and tightly closed until unstopped again by human agency.

The second portion of my invention consists in a new and useful construction of the stopper.

My invention is exceedingly simple in construction, is readily and cheaply made, and very easily operated.

In the accompanying drawings, Figure 1 is a side elevation of the upper portion of a bottle, showing my invention applied thereto. Fig. 2 is a side elevation of the devices shown in Fig. 1, the bottle and the rubber gasket around the stopper being shown in vertical central section; and Fig. 3 represents a vertical central section of the neck and mouth of a bottle and my invention applied thereto, the lower portion of the latter being likewise in section, a different form of gasket being applied to the face of the stopper. Fig. 4 is a side elevation of the devices shown in Figs. 1 and 2, the stopper being unseated by rotating the handle.

The handle B is connected to the stopper A in any convenient manner. The connection between the stopper and the handle is here effected as follows: The shank B′ of the handle being inserted into the vertical recess of the stopper, an annular strip of metal, *a′*, is forced into the upper—*i. e.*, enlarged—portion of this recess, and into an annular recess in the handle-shank, and then brazed or soldered fast to the stopper. The handle freely revolves in the stopper, while the strip *a′* secures it firmly thereto. The wings H of the handle are pierced at *b*, and through each perforation is passed a separate wire, whose end is bent around the edge of its respective wing into a loop form, thus leaving the wire free to turn to either side of the handle. The wires are bent as shown in Figs. 1 and 2—viz., each wire being laid flat against one side of the handle, care being taken to place the wires on opposite sides thereof, and then bent down against the outside of the mouth of the bottle and looped or hooked into a suitable connection or projection at the side of the mouth. Here each wire is connected by a hooked end to a loop formed by a twist in the wires F, which latter is secured in place by lying in a recess in the outside of the mouth of the bottle, and having its ends securely twisted together, so as to prevent it slipping past the shoulders of the recess.

The stopper A may be made of any suitable material. When such material is suitable for packing, all extra packing may be dispensed with. When not thus suitable, that portion of the surface of the stopper which comes in contact with the mouth of the bottle may be faced with a suitable packing.

The stopper shown in the drawing is of metal, and two modes of attaching the packing thereto are shown.

In Fig. 3 a rubber gasket envelops the sides of the stopper and extends on the bottom of the latter as far as projection *a* of the stopper. The gasket being fitted to tightly grasp the inwardly vertically-inclined sides of this projection, the latter operates to securely hold the gasket to the stopper.

In Fig. 2 is shown a simple form of gasket—viz., a rubber ring, C, tightly embracing the stopper, and prevented from slipping out of place by the projecting walls of the channel of stopper A, in which the gasket lies.

The mode in which my invention operates is very simple.

By turning the handle from left to right the wires are moved, and, sliding off the stopper, not only remove the pressure which they exerted on the latter, but, in fact, elevate it somewhat above the mouth of the bottle, whereupon it can be thrust to one side of the mouth and the bottle emptied or filled. In stopping the bottle this operation is reversed.

The wires combine to powerfully press the stopper down upon the mouth of the bottle and render the joint between the stopper and mouth air-tight.

An advantage of such a bottle is that it is

conveniently portable, relieving the person carrying it from carrying an extra supply of corks. The readiness with which it can be unstopped or stopped and the absolute security it affords when stopped against becoming accidentally unstopped render it a desirable article for the shelf or the counter and for the reception of volatile as well as other descriptions of liquids.

What I claim as new, and desire to secure as my invention, is—

1. The combination of handle B, provided with a stopper, and the wires E, each bent as shown, and suitably connected to its respective wings H and to a bottle, substantially as and for the purposes set forth.

2. The stopper A, provided with gasket C and handle B, having wings H, in combination with wires E, bent as shown, and suitably attached at one end to said wings, and at the other by suitable connections to a bottle, substantially as and for the purposes set forth.

3. The combination of stopper A and handle B, wires E and F, wires E being bent, as shown, and suitably attached to wings H and to wire F, substantially as and for the purposes set forth.

4. The stopper more particularly hereinbefore described—viz., provided with gasket C and handle B, provided with recessed shank rotating in a vertical recess in the stopper A *a*—in combination with the wires E, bent as shown, and suitably attached to the bottle, substantially as and for the purposes set forth.

JOHN BRYAN.

Attest:

C. H. LITTLEFIELD,

W. H. HIPSLEY.