(No Model.)

J. HUNT.

BOTTLE STOPPER AND FASTENER.

No. 301,600. Patented July 8, 1884.

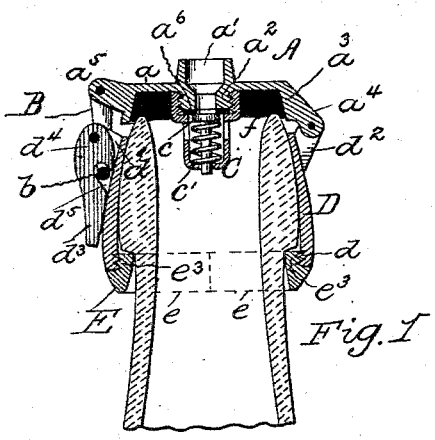

Fig. 1

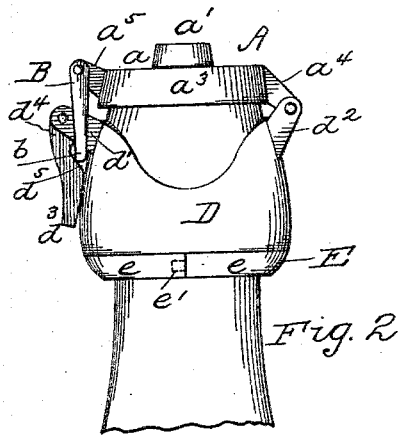

Fig. 2

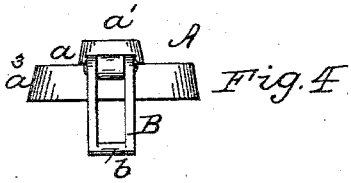

Fig. 4

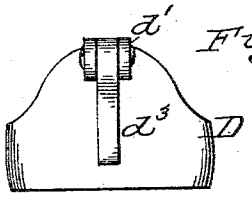

Fig. 5

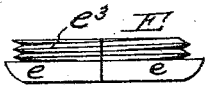

Fig. 6

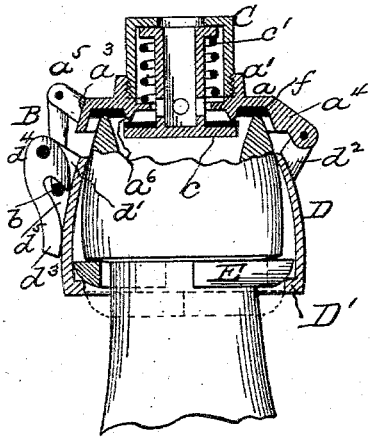

Fig. 3

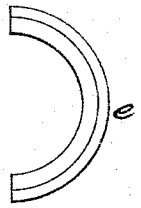

Fig. 8

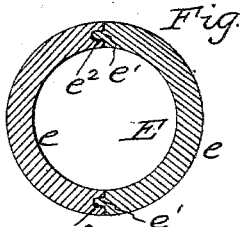

Fig. 7

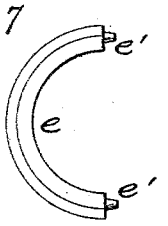

Fig. 9

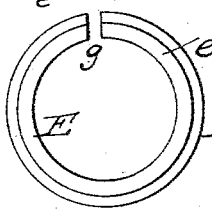

Fig. 10

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ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES HUNT, OF PHILADELPHIA, PA., ASSIGNOR OF TWO-THIRDS TO ANTHONY R. FINCK AND ROBERT H. MITCHELL, BOTH OF SAME PLACE.

BOTTLE STOPPER AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 301,600, dated July 8, 1884.

Application filed January 3, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES HUNT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Bottle Stoppers and Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings, wherein—

Figure 1 is a transverse vertical section of a bottle stopper and fastener embodying my invention. Fig. 2 is an elevation of same. Fig. 3 is a transverse section of a modification of same. Fig. 4 is a detail elevation of the stopper; and Figs. 5, 6, 7, 8, 9, and 10 are detail views.

My invention has relation to bottle stoppers and fasteners, more particularly to that form of stoppers which are provided with a valve for permitting the bottle or receptacle to be filled with the stopper *in situ;* and has for its objects to simplify and improve the construction of the stopper, and to provide an inexpensive, simple, and effective device for fastening the stopper to the bottle, so as to dispense with the use of the usual wire bail and ring.

My invention accordingly consists of the novel combination, construction, and arrangement of parts, as hereinafter described and claimed.

In the drawings, A represents the stopper composed of a plate or disk, a, with central opening, a', a surrounding threaded flange, a^2, and a peripheral flange, a^3, having diametrically-projecting lugs or ears a^4 and a^5, the latter carrying a pivoted link, B.

To the flange a^2 is screwed a cage, C, carrying a valve, c, which may be provided with a closing-spring, c'. The flange a^2 is located upon the under side of disk a, and exteriorly threaded, as shown in Fig. 1, in which case the lower edge, a^6, of the flange a^2 forms the seat for the valve c, and the cage C depends from disk a into the mouth of the bottle; or said flange may be situated upon the upper side of the disk a, and be interiorly threaded, as illustrated in Fig. 3. In this case, the removable cage C projects above disk a, and the under side of the disk is provided with a seat, a^6, for the valve c, the latter being then exterior to the cage. The valve c in Fig. 1 has a solid stem, and the cage C is perforated to permit of the passage of liquid from the central opening, a', to the bottle during the filling operation. In Fig. 3, however, said valve has a tubular stem with flanged end for its spring c' to exert its force against, and is perforated just above the plane of the valve for the passage of the liquid filled into the bottle. In both cases the said valve is closed upwardly, and shown in Fig. 3 provided with a washer or gasket for making a tight joint between it and its seat, so as to dispense with finishing said parts; or the washer may be attached in such manner as to lap over the valve-seat, as shown in Fig. 1.

D represents a sleeve or thimble configured to conform to the outline of the swelling on the neck of the bottle, being wider or of a larger diameter below than at its top, so that it may be readily slipped over the swelling into position upon the neck of the bottle. The lower edge of the sleeve is internally threaded at d, and at its upper edge are oppositely-projecting lugs d' and d^2. The former, d', carries a pivoted lever, d^3, having a cam or locking head, d^4, and a recess, d^5, and the latter, d^2, is pivoted to the lug a^4 of disk a, to form a hinged connection between the stopper A and sleeve D.

E represents a band, which may be composed of two pieces, e e, having dowel-pins e' and recesses e^2 in their meeting ends, and be provided with an exterior threaded shoulder, e^3. This band is placed around the neck of the bottle, just below the swelling, and screws into the threaded part d of sleeve D, to fasten it upon the bottle, and when so secured the inner wall or surface of the sleeve D and the upper edge of band E impinge against the swelling on the neck of the bottle. By unscrewing said band the stopper and fastener may be removed from the bottle.

To seal the bottle when provided with the stopper, the cross-bar b of the link B is dropped over the end of the lever d^3 and under the lug d', and the lever d^3 is moved until it abuts against the sleeve D and assumes the position shown in Figs. 1 to 3. During such movement its slot

d^5 engages with said cross-bar b and draws down the link B, which thereby tightly presses the stopper-packing f upon the edge of the bottle-mouth and seals it, and also locks said parts in position, to prevent their displacement by accidental causes. To unseal the bottle, said lever is reversely moved or turned upwardly, permitting the link B to be disconnected or disengaged therefrom, whereupon the stopple can be raised off the mouth of the bottle by hand or by the pressure within the latter.

If desired, the band E, instead of being made in two pieces, as above described, may be formed of one piece of spring metal, with a split or kerf, g, as shown in Fig. 10, so that it can be sprung around the neck of the bottle. In both such cases the band is provided with a threaded flange, e^3, for connection with the sleeve D; but, if desired, said connection may be dispensed with, and in lieu thereof the sleeve D is formed with a lower inner flange or shoulder, D′, and the band E is composed of a plain split ring, (see Fig. 3,) so that when sprung around the neck of the bottle and contracted and pushed past the shoulder D′ of sleeve D, said band will expand in the space bounded by the lower edge of the swelling of the bottle-neck and the sleeve-flange D′, and by frictional contact with said parts will lock or fasten the sleeve D to the bottle.

The band E may be of any desired configuration in cross-section; but I prefer to give to it the form shown in the drawings or that approximating a "quarter-round."

What I claim is—

1. A bottle-stopper composed of a flanged disk having a packing or gasket, a central aperture with a valve-seat, a self-closing valve, and a removable cage attached to the disk and inclosing the valve, combined with means for securing the bottle to the stopper, substantially as described.

2. A bottle-stopper composed of a disk having central opening, a', with valve-seat a^6, removable cage C, attached to the disk, a valve inclosed by said cage, packing f, and lugs a^3 a^5, combined with means for securing the stopper to the bottle, substantially as described.

3. The combination of sleeve D, fastening-band E, pivoted stopper A, carrying link B, and the lever d^3, pivoted to sleeve D, substantially as shown and described.

4. The combination of stopper A, having link B, the sleeve D, having lever d^3, with recess d^5, and the locking-band E, substantially as shown and described.

5. The combination, with stopper A, having link B, of sleeve D, having locking-lever d^3, threaded part d, and the threaded locking-band E, substantially as shown and described.

6. The bottle-stopper A, having central opening, a', with removable cage C, located upon the upper side of the stopper, the valve-seat a^6, and valve c', having tubular perforated stem with closing or reacting spring, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES HUNT.

Witnesses:
S. J. VAN STAVOREN,
CHAS. F. VAN HORN.