

(No Model.)

P. HENRICHS.

BOTTLE STOPPER AND DRAFT NOZZLE.

No. 266,364.

Patented Oct. 24, 1882.

Fig 1.

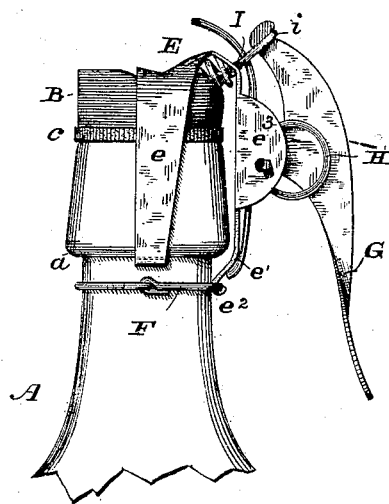
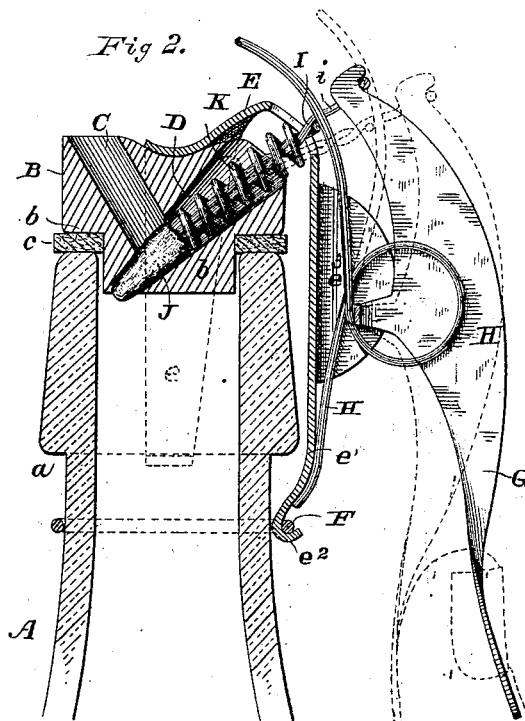


Fig 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

PETER HENRICHS, OF FARGO, DAKOTA TERRITORY.

## BOTTLE-STOPPER AND DRAFT-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 266,364, dated October 24, 1882.

Application filed July 25, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, PETER HENRICHS, of Fargo, Cass county, Dakota Territory, have invented certain new and useful Improvements in Bottle Stoppers and Draft-Nozzles, of which the following is a specification.

My invention relates more especially to that class of stoppers and draft nozzles or tubes which are employed with bottles containing various waters and liquids charged with gas, the pressure of which, when a valve is open, discharges the contents of the bottle.

The object of my invention is to simplify such stoppers and draft-tubes, so as to render them less liable to derangement, and consequently impart to them greater durability and efficiency; also, to provide a stopper and tube adapted to bottles of different sizes, and capable of being readily applied and firmly secured in place.

The subject-matter claimed as of my invention is first fully described, and then particularly pointed out at the close of the specification.

In the accompanying drawings, which represent my improvements as embodied in the best way now known to me, Figure 1 is a view in elevation of the upper part or neck and head of a bottle having my improvements applied thereto; and Fig. 2 is a vertical section through the neck and head of the bottle, with the stopper and draft-tube and its appliances also in section.

The bottle A is provided with a stopper, B, which has a contracted portion, *b*, to enter the opening or mouth of the bottle a short distance. Between the annular end of the bottle-head and an annular shoulder, *b'*, of the bottle-stopper B is interposed a packing ring or gasket, *c*, for instance, of india-rubber, in order to secure a tight joint between the stopper and the bottle. It will be obvious that by reason of the contracted portion *b* and the wide shoulder *b'* of the bottle-stopper, it may be applied to bottles having mouths of different diameter. The stopper B is provided with a draft tube or opening, C, intersecting a tapering oblique valve-opening, D, the lower end of the latter opening communicating with the interior of the bottle below the stopper. This stopper B, I prefer to cast of metal in a

single piece; but the stopper may be made of glass or of any other suitable material preferred.

The stopper is securely fastened in place upon the head of the bottle, preferably by means of a three pronged or armed frame, E, two arms, *e*, of which are passed down along the sides of the head of the bottle, so as to fit by their lower bent ends under the shoulder *a*, formed by said bottle-head. The third arm, *e'*, of the three-pronged frame extends down, being slightly bent inwardly, below the said shoulder *a* of the bottle, and is provided with an outwardly-bent projection or end *e''*, so as to form a seat, in which a wire, F, is placed, said wire encircling the bottle, and having its ends suitably fastened together in order to securely fasten the three-pronged frame in position upon the bottle. The upper end of the said frame E fits snugly upon the top of the stopper B, back of the mouth of the draft opening or tube C, so that when the arms *e e'* are fitted by their bent ends under the shoulder *a* of the bottle, and the arm *e'* is fastened to the bottle by its wire, the said stopper will be rigidly held in place and securely close the mouth of the bottle. The arm *e'* of the three-pronged frame E is provided with lugs or portions *e''*, so as to afford a ready means of pivoting to said arm *e'* a thumb-lever, G. The upper end of this lever G is normally rocked or drawn inward toward the bottle-stopper by the action of the spring H, which acts upon said lever in the example shown by being passed through a link, *i*, formed at the outer end of a wire or rod, I, the said link enveloping or surrounding the said upper end of the lever G, while there is connected with the opposite or inner end of said wire or rod I a plug or tapering valve, J, preferably of india-rubber, adapted to move endwise in the lower end of the tapering oblique valve-recess D of the bottle-stopper. Said spring H is preferably constructed of spring-wire in the manner shown in the drawings—that is to say, of a double wire, the lower ends of which press against the outside of the arm *e'* of the three-pronged frame E, while the upper ends pass loosely through the link *i* of the wire I, as before described, the wire at or about its center being twisted into one or more spring-coils, *h*, on each side of the pivoted

lever G, between said lever and the lugs  $e^3$ , in which it is pivoted. This spring acts also to steady the lever in its rocking movements and prevent loose movement thereof. It will, however, of course be understood that the spring for the lever G may be organized in other ways.

Surrounding the wire or rod I, which carries at its lower end the tapering plug or valve J, before mentioned, is a coiled spring, K, compressed between the plug J at one end and the frame E at the other, the action of which is to normally force said plug or valve firmly down into its tapering recess or seat in the bottom of the stopper and across the draft-tube C, so as to prevent the discharge of any liquid from the bottle. This spring K also acts to draw the upper end of the lever G toward the stopper, in which action it is aided by the spring H, before described. When the liquid is to be discharged all that is necessary is to press upon the lower end of the thumb-lever G, so as to rock said lever upon its pivot, as shown in dotted lines in Fig. 2, which operation will retract the plug or valve J and permit the contents of the bottle to communicate with the draft-tube C of the stopper and be discharged therefrom.

Bottles provided with my improved stoppers may be charged with their contents in any desired manner.

The advantages of my improvements, due to their simplicity and effectiveness, need not be elaborated.

Having described my invention, what I claim as new is—

1. The combination, substantially as hereinbefore set forth, of the bottle, the stopper provided with a draft-tube intersecting an oblique valve-opening, the valve fitted to move endwise in said valve-opening, the armed frame securing said stopper to the bottle, and mechanism mounted upon said frame to operate said valve.

2. The combination, substantially as hereinbefore set forth, of a bottle, a bottle-stopper, and a frame to secure said stopper to the bottle, said frame having one or more arms engaging an external shoulder upon said bottle, and another arm receiving a fastening device surrounding the bottle.

3. The combination, substantially as hereinbefore set forth, of the bottle, the stopper having a draft-tube, the valve controlling communication between said tube and the interior of the bottle, the spring acting upon said valve to keep it normally pressed to its seat, the lever for moving said valve against the force of its spring by a link-connection, and an auxiliary spring acting upon said lever to steady it and aid in keeping it in a normal condition in readiness for retracting the valve to permit of the withdrawal of the contents of the bottle.

In testimony whereof I have hereunto subscribed my name.

PETER HENRICHs.

Witnesses:

W. W. SMITH,  
THOMAS BAKER, Jr.