D. E. STEVENS.

Bottle-Stopper.

No. 204,105. Patented May 21, 1878.

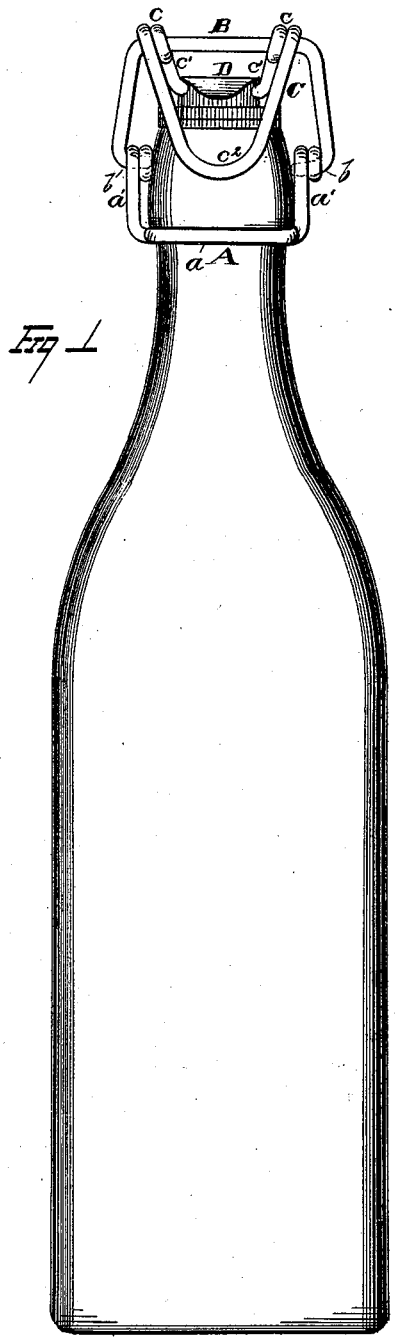

Fig 1

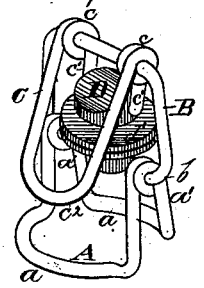

Fig. 3.

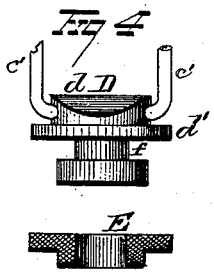

Fig 4

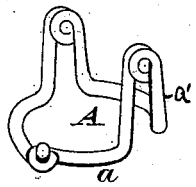

Fig 5

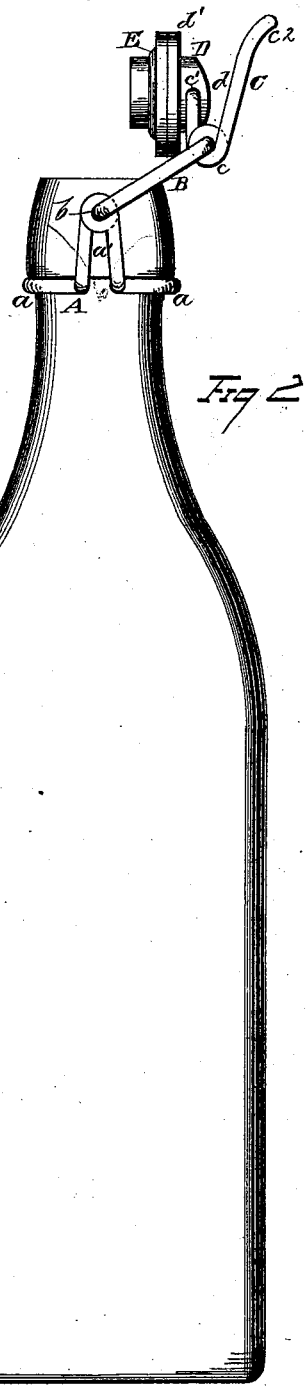

Fig 2

WITNESSES

Ed. S. Nottingham

A. M. Bright.

INVENTOR

D. E. Stevens

By Keggett and Keggett

ATTORNEYS

UNITED STATES PATENT OFFICE.

DAVID E. STEVENS, OF NEWARK, OHIO.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **204,105**, dated May 21, 1878; application filed March 30, 1878.

To all whom it may concern:

Be it known that I, DAVID E. STEVENS, of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in bottle-stoppers; and consists in a construction as follows: A spring-clamp is made with two neck-embracing portions, constituting the main body thereof, and which fit beneath the shoulder formed below the head of a bottle. These neck-embracing portions are connected together by upright extensions formed on opposite sides of the clamp, and which provide bearings for the journal ends of the swinging bail, approximately in horizontal line with the central portion of the head of the bottle. The clamp is made of wire, and the said upper body-bearings for the journal ends of the bail are formed by a double-loop twist of the wire on both respective sides of the clamp. The cam-lever is also made of wire, and is provided with a side arm having a slight outwardly curve, extending continuously from its engagement with the bail down to the extreme lower portion of said arm. This lower portion of the arm has bearing against the side of the head of the bottle, whereby it resists the tendency of the stopper to unseal itself, and also provides means for readily handling the lever-arm in raising the stopper from the mouth of the bottle. The two short arms of the lever have their extremities bent inwardly and engaged with slots, which latter are made in opposite sides of a cap-piece formed on the stopper.

Referring to the drawings, Figure 1 is a view, in side elevation, of the bottle-stopper applied as in use. Fig. 2 is a view, in end elevation, of the same, showing the stopper raised from the mouth of the bottle. Fig. 3 is a view of the bottle-stopper removed from a bottle. Fig. 4 represents the stopper with its gasket. (Shown detached from each other.) Fig. 5 is a view of a modification of the cam-lever.

The clamp A is made of wire, and either in one continuous piece, adapted to be pressed over the head of a bottle, as shown in the main figures of the drawing, or with the ends of the wire adapted to be readily connected and disconnected by loop engagement, as shown in the modification view. In either instance it is made with the two neck-embracing portions *a*, which constitute the main body of the clamp, and fit beneath the ordinary shoulder formed on the neck of a bottle. These two neck-embracing portions are connected together by upright extensions *a'*, formed on opposite sides of the clamp, and extending above the main body of the latter, so as to provide bearings for the journals *b* of the swinging bail B, which are in horizontal line, approximately, with the central portion of the head of the bottle.

I am aware that heretofore a metallic yoke has been made which embraces substantially the entire bottle-head above the shoulder, and is made with downwardly-curved portions on opposite sides of its body, having lugs formed thereon, said lugs, respectively, projecting inwardly and locking underneath the shoulder of the bottle neck.

The difference between my spring-clamp and this latter-described yoke consists in the fact that my clamp embraces substantially the entire neck below the shoulder of the bottle, and is formed with the upright extensions, which latter provide bearing for the journal ends of the bail. This bail is also of wire, the same as is the case with the cam-lever C, with which latter the bail engages by the two double-loop twists *c*. The extremities of the two short arms c^1 of this lever are bent inwardly, and engage with slots made, respectively, in opposite sides of the cap-piece *d*, which latter is formed on the stopper D. The long arm c^2 of the lever is bent with a slight outward curve, extending continuously from its engagement with the bail downward to its extreme lower portion, which latter has bearing against the head of the bottle when the latter is sealed, and which also provides means for the ready handling of said lever-arm in raising the stopper from the mouth of the bottle. The stopper, made of metal, glass, or other suitable material, is provided with the annular recess *f*,

formed immediately below the bearing-rim d', and into this recess the gasket E is seated. The upper body of the gasket fits against the under side of the bearing-rim of the stopper, and is of correspondingly greater width than the lower body thereof, which latter is of ring form, and does not extend down below the horizontal plane of the stopper-recess, in which it is seated.

Other forms of gasket may, however, be used, as the latter does not constitute part of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a bail, of the wire clamp, formed with the two neck-embracing portions, which embrace substantially the entire neck of a bottle below its shoulder, and the upright extensions, which provide bearing for the journal ends of said bail, substantially as set forth.

2. The combination, with the bail, of the lever, whose long arm is bent with a slight curve extending continuously outward from its engagement with said bail down to its extreme lower portion, which latter bears against the bottle-head when the stopper is sealed, and provides means for readily raising the same, the two short arms of said lever being bent inwardly and engaged with slots made in opposite sides of the cap-piece formed on the stopper, substantially as set forth.

3. In a bottle-stopper, the combination, with cam-lever C, provided with the two short arms c^1, of the stopper D, made with the cap-piece d, which latter has slots formed in opposite sides thereof, with which the inwardly-bent extremities of said arms, respectively, engage, substantially as set forth.

4. In a bottle-stopper, the combination, with bail B, of the lever C, engaged therewith by the two loop formations c, one at either opposite end portion of its horizontal body, said lever being formed with arm c^2, curved as described, and with the two arms c^1, which latter have inwardly-bent extremities engaging with cap-piece d of stopper D, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of March, 1878.

DAVID E. STEVENS.

Witnesses:
DAN L. JONES,
JNO. M. SWARTZ.