P. H. CAVERLY.

Bottle-Stopper Fastener.

No. 200,257. Patented Feb. 12, 1878.

Fig. 1.

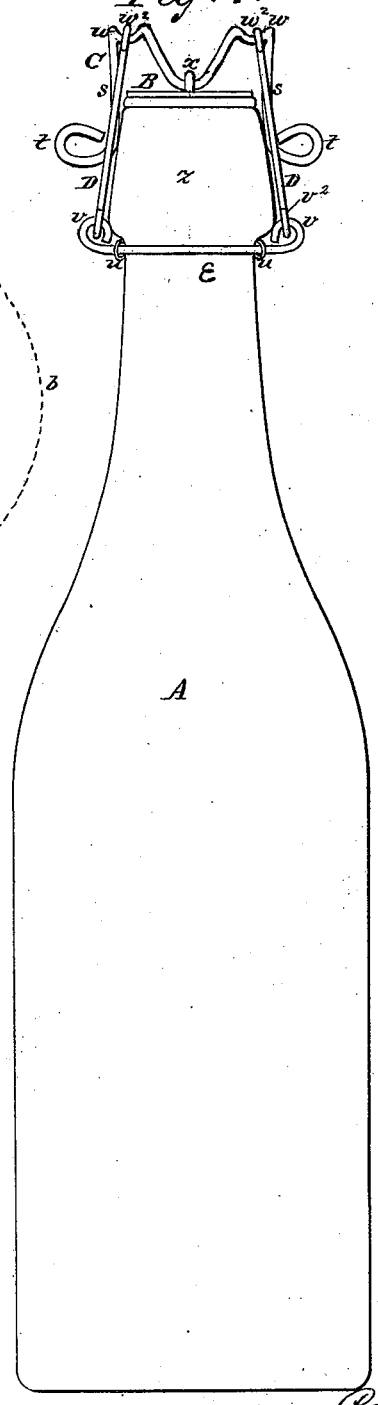


Fig. 2.

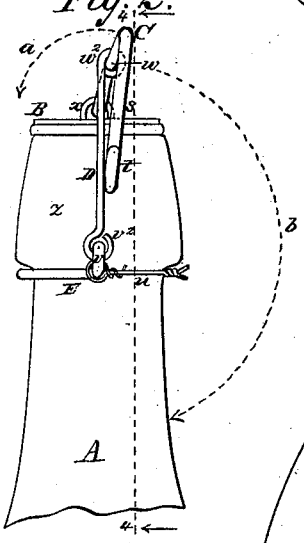


Fig. 4.

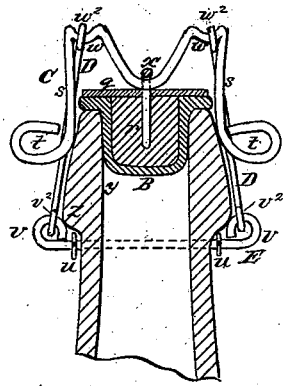


Fig. 3.

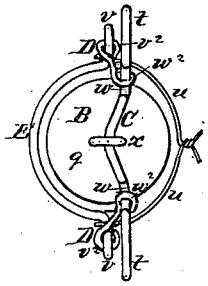
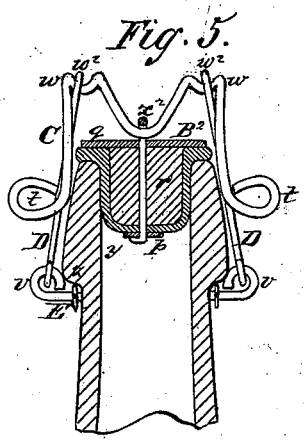


Fig. 5.



WITNESSES

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PETER H. CAVERLY, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN BOTTLE-STOPPER FASTENERS.

Specification forming part of Letters Patent No. **200,257**, dated February 12, 1878; application filed December 31, 1877.

To all whom it may concern:

Be it known that I, PETER H. CAVERLY, of the city of Brooklyn, Eastern District, in the county of Kings, New York, have invented a new and useful Improvement in Bottle-Stoppers, of which the following is a full, clear, and exact specification.

This invention relates to those stoppers which are permanently attached to bottles, so as to be preserved therewith for repeated use, being clamped in position and adapted to be unlocked by lateral pressure.

The said invention consists in a peculiar double-crank clamping device, of superior simplicity and efficiency, the same being adapted to fasten the stopper very securely, and to open or unlock more readily than others.

Figure 1 of the accompanying drawing is a front elevation of a bottle stoppered according to this invention. Fig. 2 is another elevation of the head of the same, showing an edge view of the fastening. Fig. 3 is a plan view of the stopper attachment removed from the bottle. Fig. 4 is a vertical section on the line 4 4, Fig. 2. Fig. 5 is a similar view, showing a modification.

Like letter of reference indicate corresponding parts in the several figures.

A represents a bottle, which may be of any form, having a head enlargement, *z*, or its equivalent, and a mouth, *y*, of proper form to admit of the operation hereinafter specified.

The improved attachment consists of a stopper, B, fitted to the mouth *y*, and having on top a central pivotal staple, *x*; a double crank, C, attached to said stopper by said staple; a pair of links, D D, attached to the wrists *w w* of said crank, and a collar, E, embracing the neck of the bottle externally immediately below the head *z*, and constructed with pivotal loops *v v*, to which the lower or inner ends of said links D D are attached.

The collar E in the illustration consists of a semicircular yoke of heavy wire, having the loops *v v* formed by bends at its extremities, and two pieces, *u u*, of fine wire attached behind said loops, and twisted together when the device is applied to the bottle. The construction of this collar forms no part of the present invention, and is not essential thereto, as the loops *v v*, or their equivalents, can be provided in a variety of ways.

The links D D are pieces of wire of one length, with loops w^2 v^2, bent at their respective extremities, and of sufficient strength to retain their shape under the tensile and transverse strains to which they are subjected.

The double crank C is made of stiff wire, as heavy as or heavier than the main part of the collar E, and is, by preference, bent as represented, so as to form the wrists *w w* by means of inward curves, which construction precludes the escape of the loops w^2 v^2 from proper position. The ends of said crank are extended to form laterally-projecting loops or ears *t t*, which operate as thumb-levers.

When the stopper B is fastened in the mouth *y* the ears *t t* of the crank C occupy positions close to the sides of the head *z*, below its upper end, and the links D D extend downward behind said ears and behind the vertical plane of the pivotal staple *x*, the wrists *w w* being behind their center, while side portions *s s* of the crank-wire, immediately above the ears *t t*, press forward against said links. The parts in this position are securely self-locked, as shown in Fig. 2, any outward pressure against the stopper tending to turn the crank farther past its center, while yielding in this direction is precluded by the links. The extent of the movement of the crank behind its center is simply sufficient to form the said lock, and not enough to relax the compression of the stopper to any appreciable extent. The stopper is unlocked by a very slight backward pressure of the thumbs against the ears *t t*. This turns the wrists *w w* forward past the locking-center, as indicated by the arrow-line *a*, Fig. 2, and a continuation of the same pressure withdraws the released stopper, and turns the whole back against the neck of the bottle, as indicated by the arrow-line *b*, Fig. 2, the center of motion in the latter case being the loops *v v* of the collar.

The stopper B is composed of a flanged elastic shell, made of rubber, with a hard core, *r*, made of wood, said elastic part forming a gasket at the top of the head *z*, and also elastic sides within the mouth *y*, while the hard core renders the same more solid and less liable to change shape. The latter may also

form a sufficiently secure anchorage for the staple *x*, as indicated in Fig. 4. A metallic cap-disk, *q*, is attached by said staple, and the shank or shanks of a longer staple, x^2, may extend through the stopper, and be riveted beneath a washer, *p*, if preferred, as illustrated in Fig. 5, in order to preclude the withdrawal of the staple from the stopper. In this case the rubber at the bottom will form a packing around the shank or shanks of the staple, and in all cases the rubber will be compressed between the hard core *r* and the walls of the mouth *y*, as well as between the disk *q* and the top or lips of the head *z*.

The following is what I claim as new and of my own invention, and desire to secure by Letters Patent, namely:

The double crank C, with its wrists *w w*, thumb-levers *t t*, and side portions *s s*, in combination with the pivotal staple *x*, pivotal loops *v v*, and links D D, for locking and unlocking a bottle-stopper, in the manner herein set forth.

PETER H. CAVERLY.

Witnesses:
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