

C. H. NYE.
 Bottle-Stopper and Stopper-Fastener.
 No. 214,691. Patented April 22, 1879.

Fig1.

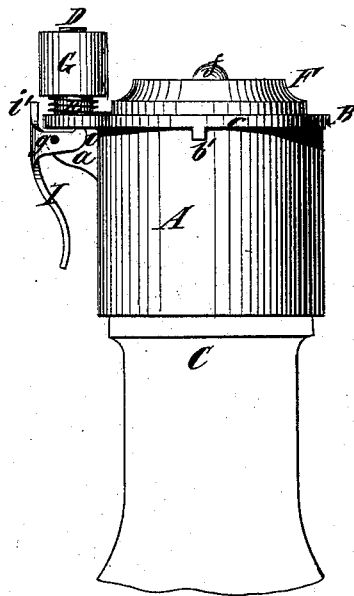
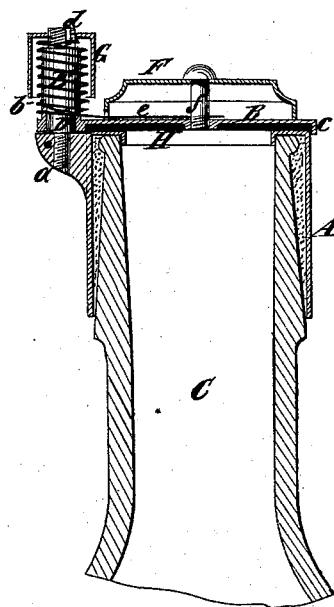


Fig2.



Figs

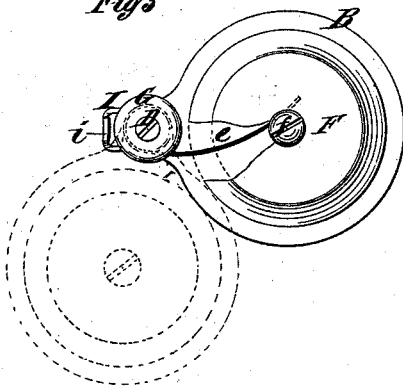
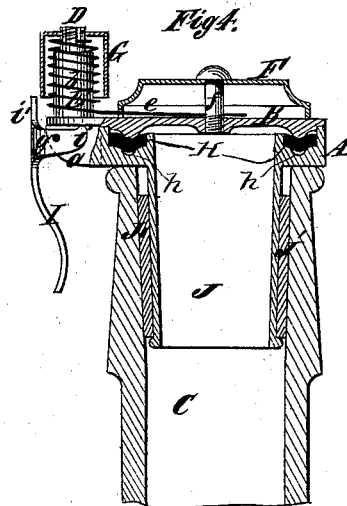


Fig4.



Witnesses:
 Geo. Royce
 A. Gregory

Inventor:
 Charles H. Nye
 by his Attorneys
 Brown & Brown

UNITED STATES PATENT OFFICE.

CHARLES H. NYE, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS,
TO HENRY P. HILDRETH AND ELIAS DURLACH, OF SAME PLACE.

IMPROVEMENT IN BOTTLE-STOPPER AND STOPPER-FASTENER.

Specification forming part of Letters Patent No. **214,691**, dated April 22, 1879; application filed
October 21, 1878.

To all whom it may concern:

Be it known that I, CHARLES H. NYE, of the city, county, and State of New York, have invented certain new and useful Improvements in Stoppers for Bottles, Flasks, Boxes, &c., of which the following is a specification.

The invention consists in the combination, with the cover of a stopper for a bottle, flask, or box, of a spring for holding said cover securely against the body of the stopper, a screw-threaded pin, about which said spring is coiled, and a cap adjustably secured to said pin, whereby the spring may be forced down upon the stopper to lock it, as and for the purposes more fully hereinafter specified.

The invention further consists in the combination, with a cover of a stopper for a bottle, flask, or box, adapted to swing laterally on a fixed center, and a spring for holding said cover against the body of the stopper, and impelling the same outward when disengaged therefrom, of a pivoted trigger, having a projection extending above its pivotal point and in line with the cover, and having toes, the latter serving to disengage the cover, and the projection serving to stop the cover in its lateral swinging movement, substantially as hereinafter set forth.

In the accompanying drawings, Figure 1 represents a side view of a stopper embodying my improvements as applied to a bottle; Fig. 2, a central vertical section thereof; Fig. 3, a plan thereof, parts being broken away to show the actuating-spring; and Fig. 4, a central vertical section of a stopper of slightly-modified form.

Similar letters of reference designate corresponding parts in all the figures.

A designates the socket or collar forming the body of the stopper, and B a cover therefor. As represented, the body A is made of sheet metal, and at its top is turned inward, and provided with a downwardly-projecting lip, which fits inside the mouth of the bottle to which it is applied. It may be secured to the neck of a bottle or flask, C, by means of cement, as represented, or in any suitable manner.

The body A is shown as having on one side a projecting lug, *a*, in which a pin, D, may be

secured. This pin forms a center, upon which the cover B of the stopper swings. The said cover is preferably provided with a sleeve, *b*, through which the pin D passes, whereby a long bearing is afforded for the cover, and its canting or binding on the pin is prevented. It is shown as provided at its outer edge with a downwardly-projecting rim, *c*, whereby it is secured against lateral displacement, and with a projecting nib, *b'*, whereby in closing the cover is prevented from being swung too far over the body of the stopper. E designates a spring, arranged above the cover, here represented as of spiral form, and as coiled about the pin upon which the cover swings. One end of this spring is held in a slot, *d*, in the end of the pin D, and the other end, *e*, forms an arm, which extends inward and impinges against the cover at or near the center. By the downward pressure of the spring the cover is securely held against the body of the stopper, and by the resilience of the arm *e*, acting on the pin *f*, the cover may be swung laterally outward, as represented in dotted outline in Fig. 3, if raised sufficiently above the body of the stopper to allow the rim *c* to clear the same. The pin *f*, against which the arm *e* of the spring E impinges, may also serve as a means for securing to the cover B an ornamental top piece, F, which protects the said arm of the spring from injury and enhances the appearance of the stopper. To further protect the spring E from injury, I have shown a cap, G, which surrounds the same. This cap or cover is shown as secured to the pin D by a screw-thread, and by being adjusted thereon may serve as a means for regulating the pressure of the spring.

A packing, H, of rubber or other suitable material, is represented as held by the projecting rim *c* of the cover B, and serves to make the bottle, flask, or box to which the stopper is applied air-tight. As a means of raising the cover B so that it may swing outward, I employ a trigger, I, which is shown as pivoted at *g* to the lug *a*, and projecting from the body A. By pressing the trigger inward the toes or points *i* impinge against the cover, and raise it upward against the force of the spring E. The upward projection *j'* forms a stop, with

which the cover comes in contact in swinging outward, (see dotted outline in Fig. 3,) and which precludes it from further movement.

Fig. 4 represents a stopper provided with a plug, J, adapted to fit inside a bottle or flask, and which is shown as surrounded by an elastic packing, J', for making the bottle or flask airtight. The cover B in this modification of my invention is shown as provided with a downwardly-projecting rim or bead, and the packing H as held in an annular groove, h, which is provided with a recess or depression corresponding to the bead or rim upon the cover. By the bead or rim the packing is pressed into the recess or depression and a very secure joint formed. The rubber packing may be attached either to the body or to the cover of the stopper.

It will be seen that as the spring for actuating the cover acts upon the center to press it downward, and as it also acts on the center to swing the same outward, the said cover has a very even bearing on the body of the stopper, and is precluded from canting or binding in its movements.

It will also be seen that as the spring is entirely above the cover the same may be removed at pleasure and another spring substituted.

Some or all of my improvements may be embodied in jars and other vessels.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the cover of a stopper for a bottle, flask, or box, of a spring for holding said cover securely against the body of the stopper, a screw-threaded pin about which said spring is coiled, and a cap adjustably secured to said pin, whereby the spring may be forced down upon the stopper to lock it, substantially as specified.

2. The combination, with the cover of a stopper for a bottle, flask, or box, adapted to swing laterally on a fixed center, and a spring for holding said cover against the body of the stopper, and impelling the same outward when disengaged therefrom, of a pivoted trigger, having a projection, *v'*, extending above its pivotal point and in line with the cover, and having toes *i*, the latter serving to disengage the cover, and the projection *v'*, serving to stop the cover in its lateral swinging movement, substantially as set forth.

CHARLES H. NYE.

Witnesses

T. J. KEANE,
FRED. HAYNES.