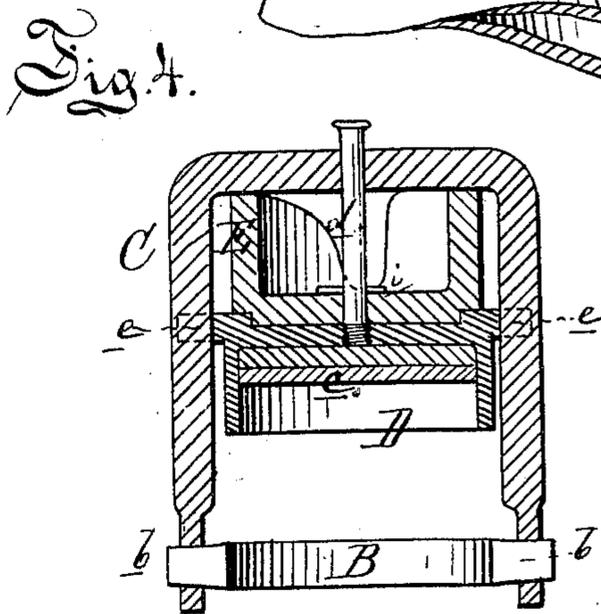
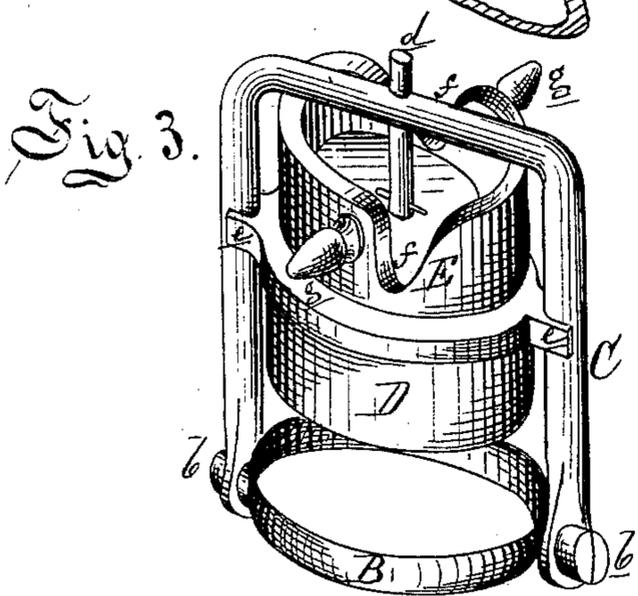
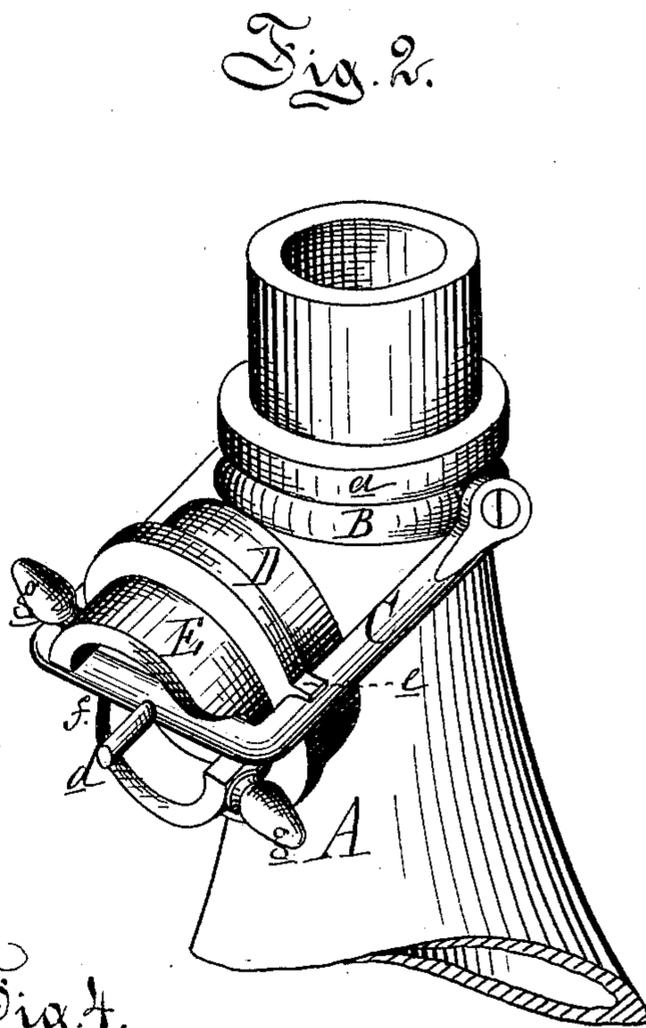
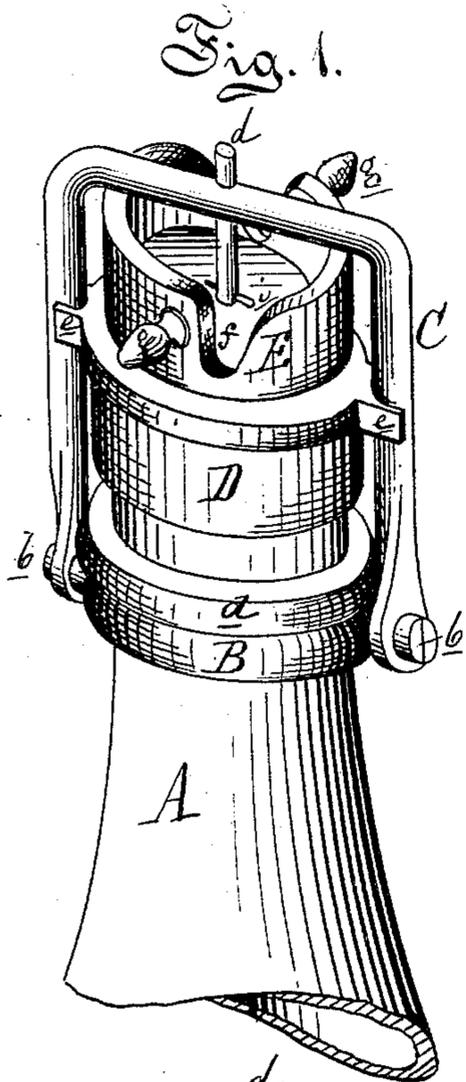


M. J. HINDEN.
BOTTLE-STOPPER.

No. 175,981.

Patented April 11, 1876.



Attest:
Edward Barthel.
Thos. S. Day

Witness:
M. J. Hinden
By Atty
Thos. S. Sprague

UNITED STATES PATENT OFFICE.

MATTHIAS J. HINDEN, OF DETROIT, MICHIGAN, ASSIGNOR TO HIMSELF AND
MATTHIAS KERSHT, OF SAME PLACE.

IMPROVEMENT IN BOTTLE-STOPPERS.

Specification forming part of Letters Patent No. **175,981**, dated April 11, 1876; application filed
September 16, 1875.

To all whom it may concern:

Be it known that I, MATTHIAS JOSEPH HINDEN, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Bottle-Stoppers, of which the following is a specification:

The nature of my invention relates to an improvement in a bottle-stopper of that class which is permanently secured to the neck of the bottle by a swinging bail, whose ends are pivoted to a ring on the neck of the bottle; and it consists in a novel and peculiar stopper-plate and cam-ring, in combination with the bail, as more fully hereinafter set forth.

Figure 1 is a perspective view of my stopper as applied to a bottle, showing the latter corked by it. Fig. 2 is a similar view, showing the bottle open. Fig. 3 is a detached perspective view of the stopper-plate and cam-ring. Fig. 4 is a cross-section of the same.

In the drawing, A represents the neck of a bottle or jug, having the usual "ball" or ring *a* molded on it just below the mouth. B is a metal ring, preferably halved or made in two parts, and provided with two trunnion-studs, *b*, on which are sleeved the ends of a metal bail, C. D is a stopper-plate, having a pendant flange to slip over the mouth of the bottle. To the lower side of the stopper-plate is secured an elastic disk, *e*, of rubber, cork, or other suitable material, by forcing it into the flange.

From the center of the plate D rises a stud, *d*, which extends up through an opening in the center of the bail. On each side of the plate D there is a guide-yoke, *e*, which partially em-

braces the bail, thus guiding the plate fairly to its seat on the mouth of the bottle.

E is a plate seated on the stopper-plate, with a central eye for the stud *d* to pass through, and on which it rotates as a center.

The periphery of this ring-plate is cast with two segment-cams, *f*, whose upper edges bear against the under side of the bail, each being cast with a projecting lug, *g*, by which to turn it. A pin, *i*, is transversely passed through the stud *d* above the ring-plate to keep the latter in position, and to enable the operator to lift the stopper-plate with it high enough to have its flange clear the neck of the bottle, the low end of each segment-cam being cut down to the plane of the ring-plate to allow of such movement.

When the stopper-plate is seated on the bottle-mouth it is forcibly compressed thereon by turning the ring-plate to the right, which will bring the cam-segments against the bail. A reverse movement releases the pressure, when the stopper-plate may be lifted from the mouth of the bottle, and the whole device swung to one side.

What I claim as my invention is—

The combination of the stopper-plate D, provided with the disk *e*, stud *d*, and guide-yokes *e*, and the plate E, provided with the cam-segments *f*, with the bail C, substantially as and for the purpose set forth.

MATTHIAS JOSEPH HINDEN.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.