N. Thompson,

Stopper Lock,

No. 40,292, Patented Oct. 13, 1863.

Fig. A.

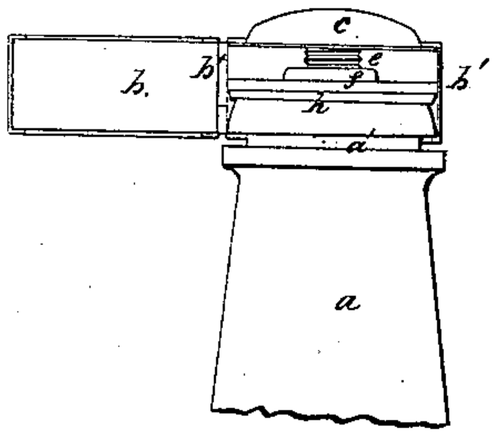


Fig. C.

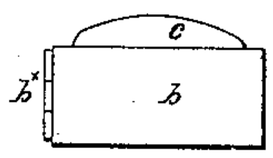


Fig. H.

Fig. B.

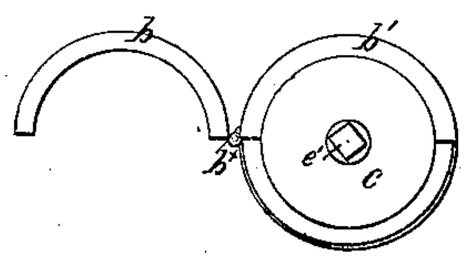


Fig. A.

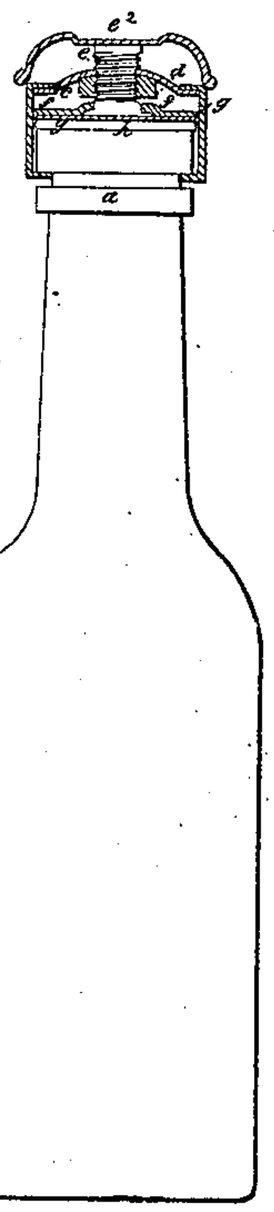


Fig. E.

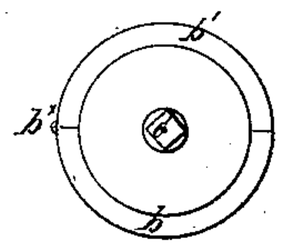


Fig. F.

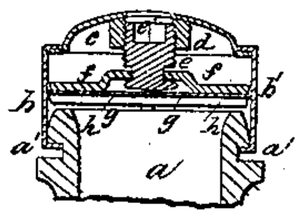
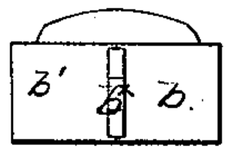


Fig. H.



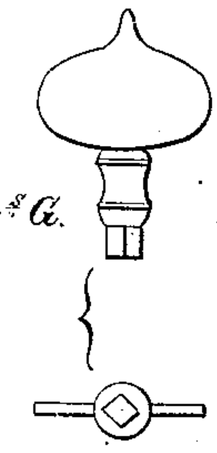
Inventor:

Witnesses:

Geo. Pitt.

Jno. Ward

Fig.s G.



UNITED STATES PATENT OFFICE.

NATHAN THOMPSON, OF ABBEY GARDENS, ST. JOHN'S WOOD, ENGLAND.

IMPROVED DEVICE FOR STOPPING BOTTLES, &c.

Specification forming part of Letters Patent No. **40,292,** dated October 13, 1863.

To all whom it may concern:

Be it known that I, NATHAN THOMPSON, of 15 Abbey Gardens, St. John's Wood, in the county of Middlesex, England, a citizen of the United States of America, have invented or discovered new and useful Improvements in Apparatus for Stopping Bottles, Jars, and other Vessels; and I, the said NATHAN THOMPSON, do hereby declare the nature of the said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement thereof—that is to say:

According to my invention for stopping bottles, jars, and other vessels the neck of the vessel is made with a groove (or it may be a projecting ring) around it a short distance below the mouth; and the stopping apparatus (no part of which is permanently attached to the vessel) consists of a ring of sheet metal with flanges projecting inward from its upper and lower edges. This ring is divided into two parts, each of a semicircular form, which are hinged together on one side. To the upper flange of one of the half-rings a circular plate of the same diameter as the interior of the ring is soldered or attached, and in the center of this plate is a hole, and immediately below it a screw-nut is fixed. This receives a short screw, to the lower end of which a plate is connected, in such a manner, however, that the screw can turn independently of the plate. A disk or packing of cork or similar material is attached to the plate, and the top of the screw is made with a recess to receive a key, by which it may be turned. When the stopping apparatus is placed on the neck of the vessel and the two half-rings closed together, the flange at the lower edge of the ring enters the groove in the neck of the vessel all round at the same time. The plate at the lower end of the screw comes immediately over the mouth of the vessel, and the upper flange of the part of the ring which is not attached to the top plate comes over the edge of the plate, so as to hold it down to the neck of the vessel. Then by turning the screw the plate at its lower end with the packing upon it is forced down onto the top of the neck, and so closes fluid-tight the mouth of the vessel.

Figure A is a side view of the upper part of the neck of a bottle, together with stopping apparatus arranged as above described, the stopping apparatus being placed on the neck of the bottle, but not closed thereon. Fig. B is a plan of the stopping apparatus as it appears when open. Figs. C and D are side views of the same as it appears when closed. Fig. E is a plan of the same, and Fig. F is a vertical section of the stopping apparatus, together with a small portion of the neck of the bottle.

In these figures, *a* is the neck of the bottle, and *a'* the groove therein; *b* and *b'*, the two parts of the divided ring. These parts have on their upper and lower edges flanges projecting inward, as before mentioned. These parts are hinged together at *b*×.

c is a circular plate, which is raised or arched up in the center. This plate is soldered to the upper part, *b*, of the divided ring.

d is a screw-nut soldered to the plate *c* at the center thereof, and immediately beneath a hole therein. *e* is a screw working in this screw-nut, and having a square recess or socket, *e'*, at its center.

f is a plate riveted to the lower end of the screw *e*, but so that it can turn freely thereon. This plate is raised in the center, so that the end of the screw *e* may not come in contact with the thin plate of tin plate *g*. This plate covers the bottom of the plate *f*, and is turned up around its edges, so as to secure it.

h is a packing-piece, by preference of cork. It is cemented with shellac or other cement to the plate *g*.

Figs. G show the key, which is employed for turning the screw *e* to force the cork *h* against the top of the neck of the bottle. When the cork is thus forced down, the parts of the ring *b* cannot be opened out to remove the stopping apparatus, but after slackening the screw this may readily be done.

Fig. H is a side view of a bottle and stopping apparatus of a slightly different construction, and Fig. I is a similar view, but with the stopping apparatus in section. This

apparatus differs from that just described in that the recess e' in the top of the screw e is dispensed with, and a head, e^2, is substituted therefor, which can be turned by the fingers without a key.

What I claim is—

The combination of a cap carrying a stopper and a screw acting thereon with the neck or mouth of a bottle or other vessel by means of double-flanged pieces hinged together and to the cap, which double-flanged pieces, when closed together, enter a groove in (or under a ring on) the neck or around the mouth of the bottle or vessel, and also come over the edge of the cap, so as to confine the same, substantially as herein described.

NATHAN THOMPSON.

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JOHN DEAN,
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