(No Model.)

G. HAVELL.

BOTTLE STOPPER.

No. 249,043. Patented Nov. 1, 1881.

Fig. 1.

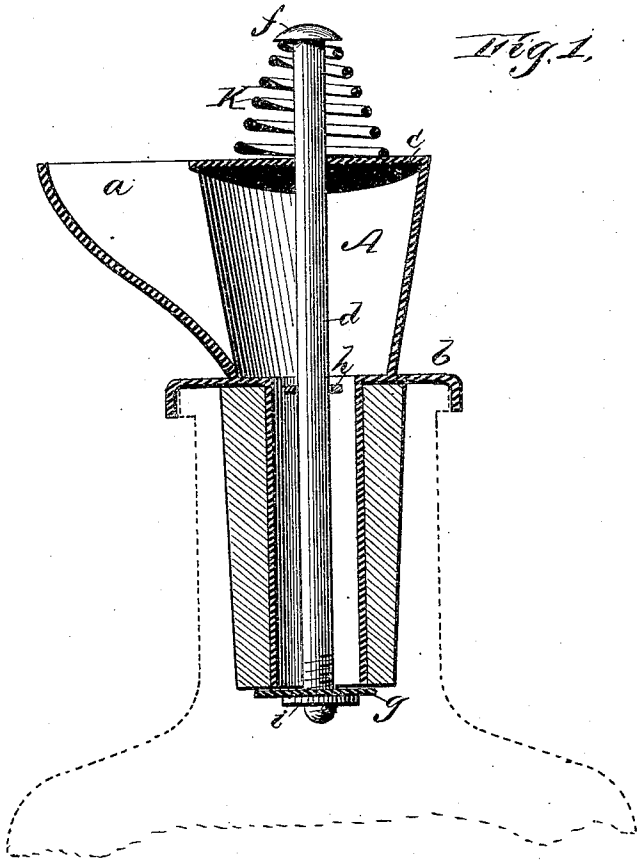


Fig. 2.

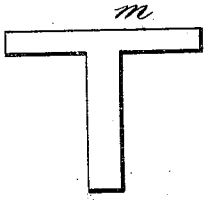
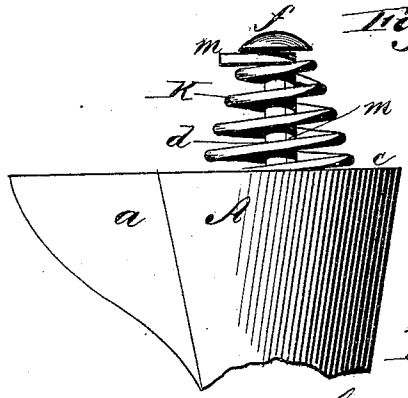


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE HAVELL, OF NEWARK, NEW JERSEY.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 249,043, dated November 1, 1881.

Application filed September 2, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HAVELL, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a central vertical section of my device; Fig. 2, a view of the lock, and Fig. 3 a view showing the lock in position.

The object of this invention is to provide a bottle-stopper which shall combine economy of construction and efficiency of operation; and it consists in certain peculiarities hereinafter more fully defined, and pointed out in the claims.

To enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe its construction and operation.

A represents a metal cap, formed with a circular-chambered base-plate, *b*, of suitable size to fit the mouth of the bottle to which it is intended to be applied. This cap is also preferably formed with a nozzle, *a*, and is covered by a circular metal plate, *c*, in which is a central opening. Below the plate *b* there is a cylindrical extension of the cap, of decreased diameter, and around this extension is placed a hollow cork.

d represents a shaft or rod, provided at its lower end with a screw-thread and at its upper end with a cap or button, *f*. This shaft *d* fits snugly in the central opening in plate *c*, and is retained or supported in position by means of a bridge, *h*, which is provided with a suitable hole for the passage of the shaft, as seen in Fig. 1.

g represents a rubber disk of somewhat greater diameter than that of the cylindrical extension, which is slipped over the end of the shaft and supported or kept in position by a metal disk, *i*, screwed upon the lower end of the shaft. The metal disk may, of course, be soldered or riveted on; but I prefer the screw-thread, as it enables the tension of the spring to be increased, if desired.

K represents a spiral spring arranged upon the shaft between the metal plate *c* and the button *f*, and which holds the rubber valve *g* closely against the extension.

To now properly adjust the parts, I place the spring upon the top plate, *c*, and insert the shaft *d* in them. The rubber valve *g* is then placed upon the lower end of the shaft and the metal disk or nut screwed on till the proper pressure is obtained against the lower end of the extension to make it air-tight.

m represents a lock for keeping the stopper effectually closed while the bottles are in transit, or until it is desired to use their contents. This lock consists simply of a thin T-shaped piece of metal, and is applied by slipping its body between the spring and shaft, its lower end resting on the plate *c*, and its arms are then bent toward each other to encircle the shaft under the button *f*.

I prefer to make the cap tapering from its top to its base, in order to give it a more symmetrical appearance, and the whole external portion of the device may be plated, if desired.

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

1. The combination, in a bottle-stopper, of the spring K, confined between the top plate, *c*, and the button *f*, with the valve-rod *d* passing through said spring, and provided at its lower end with rubber disk *g* and adjusting-nut *i*, all as and for the purpose set forth.

2. The combination, in a bottle-stopper, of cap A, base-plate *b*, circular top plate, *c*, having a central opening therein, valve-rod *d*, spring K, resting upon the top plate, bridge *h*, rubber disk *g*, and adjusting-nut *i*, all constructed and arranged as herein set forth.

3. The combination, with a bottle-stopper having a spring and valve-shaft, of a T-shaped lock adapted to be confined by the spring between the top plate of the cap and the button on the end of the valve-shaft, all substantially as herein set forth.

4. The combination, with a bottle-stopper constructed substantially as set forth, of a locking device formed and applied substantially as shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE HAVELL.

Witnesses:
H. A. KINGSLEY,
JOHN OTTO.