

A. HEBBARD.

Stoppers for Volatile Salts-Bottles.

No. 134,600.

Patented Jan. 7, 1873.

Fig: 1.

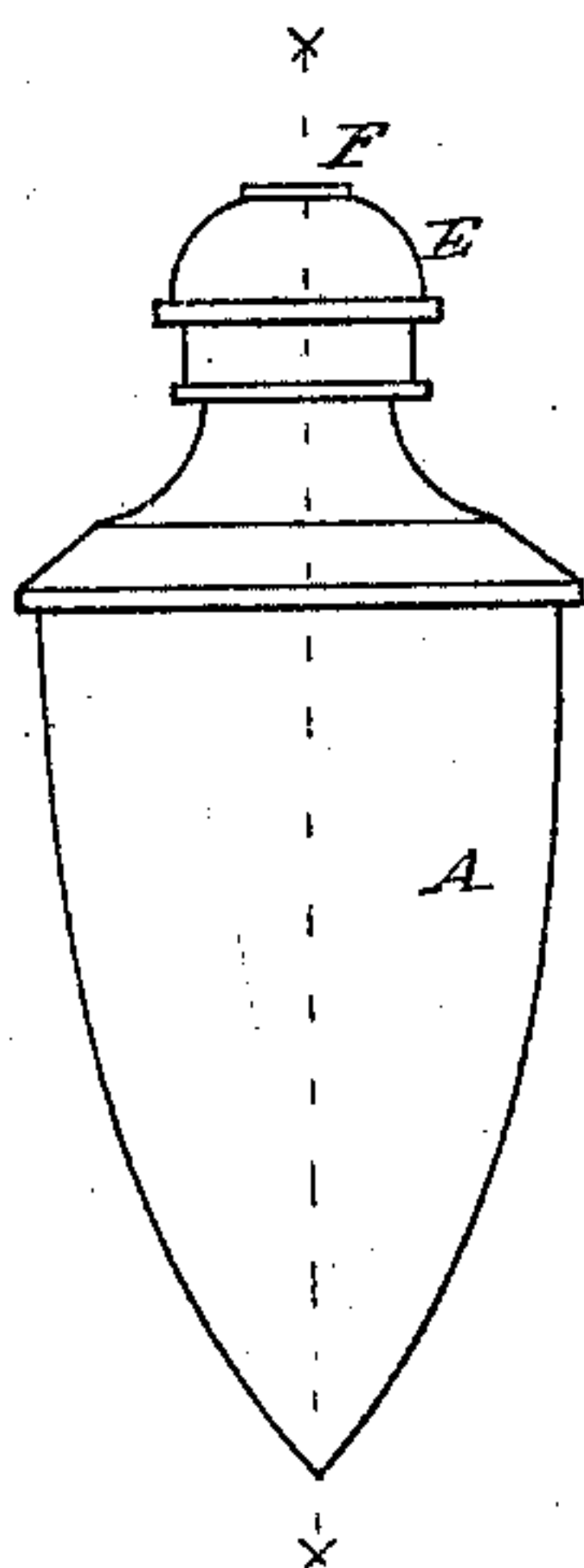


Fig: 2.

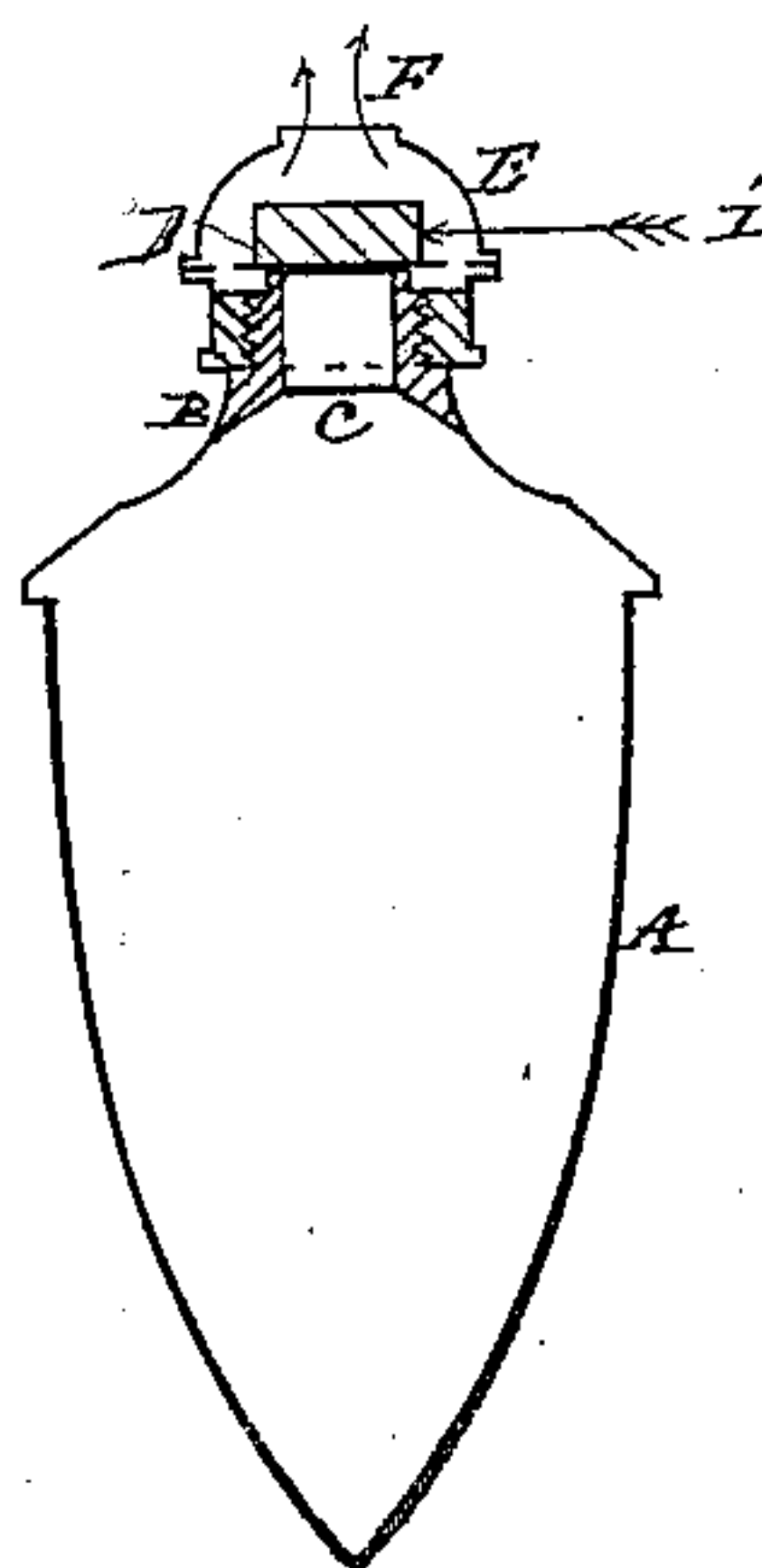


Fig: 3.

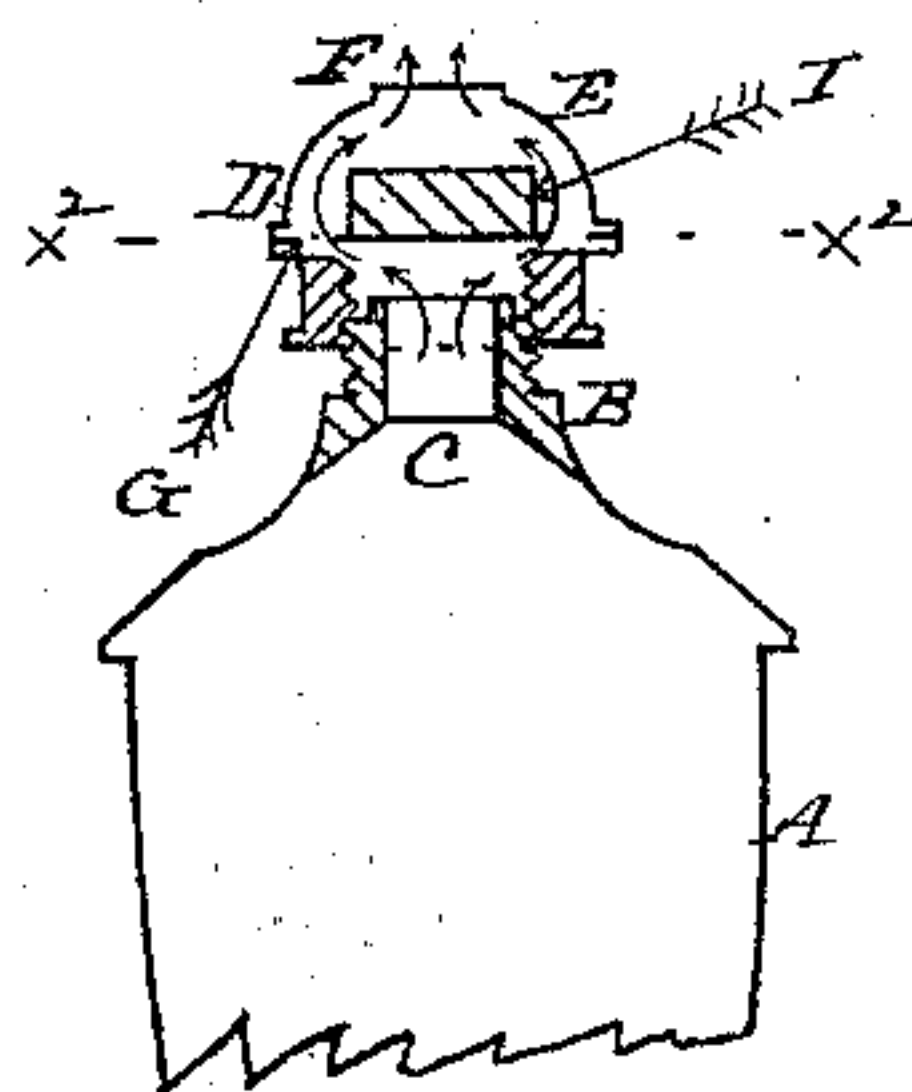
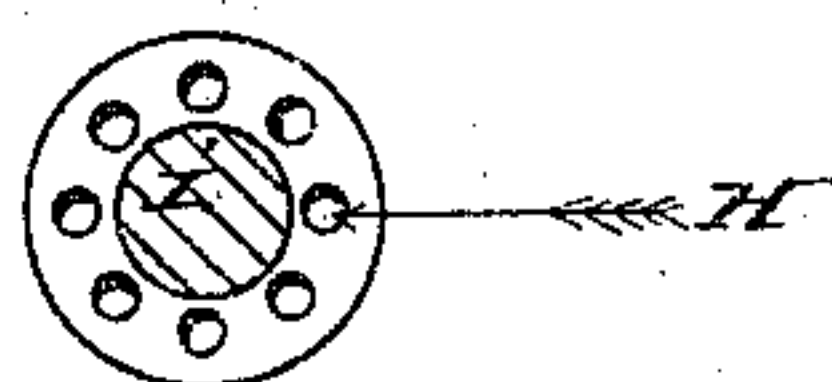


Fig: 4.



Witnessed
H. B. D. Munick
Charles L. Barrick

Inventor
Alonzo Hebbard

UNITED STATES PATENT OFFICE.

ALONZO HEBBARD, OF NEW YORK, N. Y.

IMPROVEMENT IN STOPPERS FOR VOLATILE-SALTS BOTTLES.

Specification forming part of Letters Patent No. 134,600, dated January 7, 1873.

To all whom it may concern:

Be it known that I, ALONZO HEBBARD, of the city, county, and State of New York, have invented a certain new and useful Improvement in Stoppers for Volatile-Salts Bottles and other purposes; and I do hereby declare the following to be a full description of the same.

The nature of my invention consists in combining with a hollow screw-cap a perforated diaphragm, having in the center part of it a plug, of rubber or leather or other suitable material, to close the mouth of the bottle when screwed down upon it, and open it when unscrewed a turn or two to allow the escape of the volatilized salts through the perforations of the diaphragm to the outlet of the stopper. But to describe my invention more particularly, I will refer to the accompanying drawing forming a part of this specification, the same letters of reference, whenever they occur, referring to like parts.

Figure 1 is a side view of the bottle with stopper attached thereto. Fig. 2 is a cut sectional view of the same through the line $x\ x$, Fig. 1, showing the mouth of the bottle closed by the stopper. Fig. 3 is the same cut sectional view, showing the mouth of the bottle open. Fig. 4 is a plan view of the diaphragm and plug of rubber therein on the line $x^2\ x^2$, Fig. 3.

Letter A represents the bottle, which may be made of metal, glass, or other suitable material, having screw-threads B cut on the neck thereof, and its central opening C slightly projecting above the line of the screw-threads. The object of making the edges of the central opening C more prominent than the screw part of the neck of the bottle is to obtain a better surface to stop the opening than if made

with a broader surface; and, second, to make the opening small enough to admit of the escape of the vaporized salts around the stopper D without making the screw-cap E disproportionately large to the size of the bottle. This screw-cap is made of metal, of a dome or any other suitable shape, with a central opening, F, at the apex of it. Across its internal diameter, about on a line with the spring of the arch of the dome, is firmly secured a diaphragm, G, having a number of perforations, H, through it, and surrounding a central cavity in which is inserted a plug of India rubber or leather, I, or other suitable material. The object of this plug is to act as a stopper to the opening in the neck of the bottle when the cap is screwed down, as shown in Fig. 2; and the perforations H are for the purpose of allowing the volatilized salts to escape from the bottle past the stopper, as shown by the arrows in Fig. 3, without the necessity of detaching the cap entirely from the neck of the bottle.

By this means it will be obvious that there can be but little risk of loss of the cap, and at the same time it affords a most perfect means for stopping the mouth of the bottle.

Having now described my invention, I will proceed to set forth what I claim, and desire to secure by Letters Patent of the United States—

The combination of the bottle A with the screw-cap E, having a diaphragm, G, therein, made as described, and all arranged and operating as set forth.

ALONZO HEBBARD.

Witnesses:

H. B. DOMINICK,

CHARLES L. BARRITT.