

A. B. SEARLES.  
Salt-Bottles.

No. 156,068.

Patented Oct. 20, 1874.

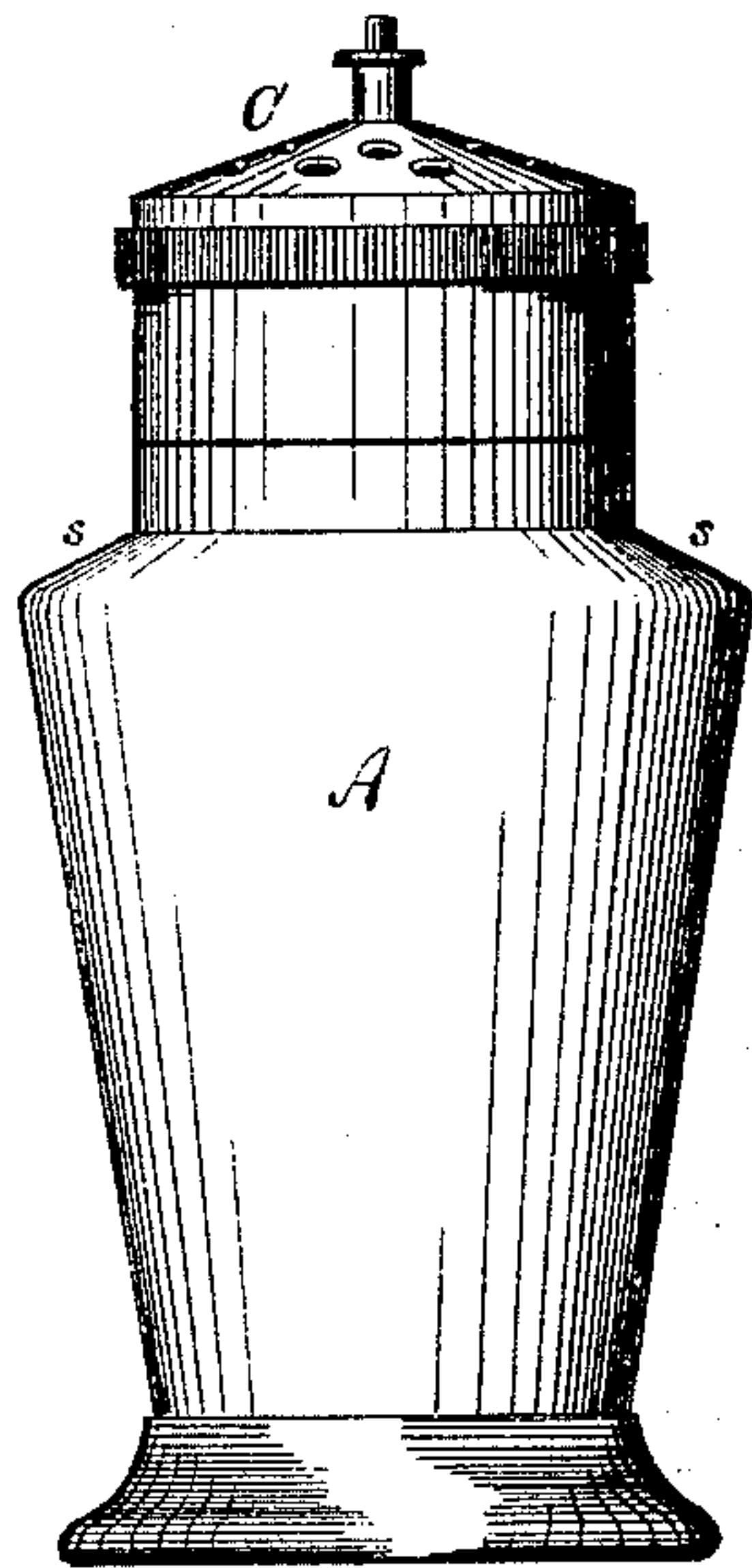


FIG. 1.

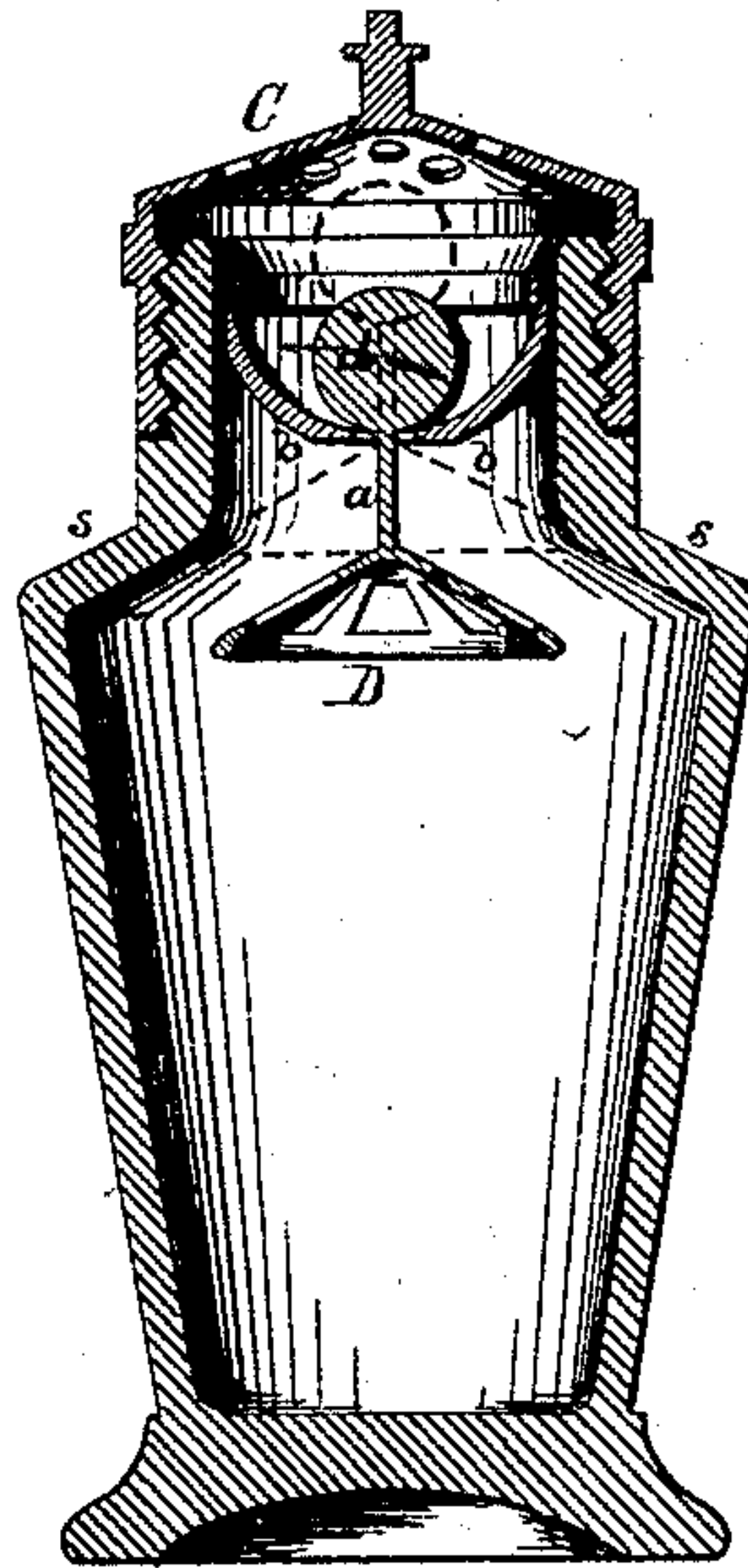


FIG. 2.

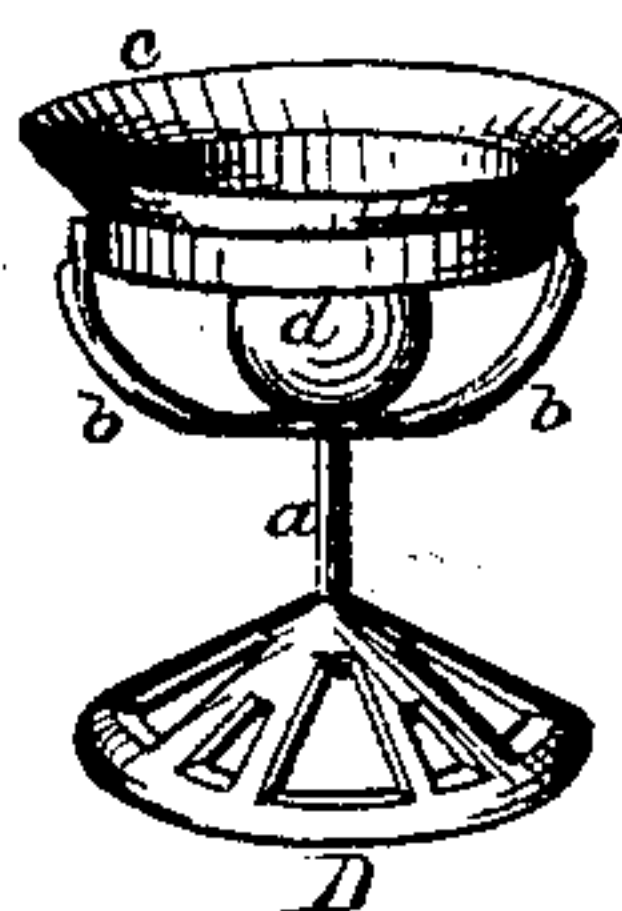


FIG. 3.

WITNESSES.

O. Lapham  
Lucius Rockwood

INVENTOR.

Andrew B. Searles.

# UNITED STATES PATENT OFFICE.

ANDREW B. SEARLES, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN SALT-BOTTLES.

Specification forming part of Letters Patent No. **156,068**, dated October 20, 1874; application filed April 12, 1873.

*To all whom it may concern:*

Be it known that I, ANDREW B. SEARLES, of the city and county of Providence and State of Rhode Island, have invented an Improved Salt-Box, of which the following is a specification:

My invention relates to three articles of table use, such as salt-boxes, pepper-boxes, and dredging-boxes; and consists in introducing into the neck or upper portion of the bottle a movable perforated disk or diaphragm, which shall prevent the clogging up of the holes in the cap of the box. More or less difficulty occurs in the use of such articles from the clogging up of the holes in the cap or sprinkler when using the article in consequence of too large a quantity of the salt falling into the neck of the bottle at once.

In my invention the apertures allow only so much salt to fall into the neck of the bottle upon the interior surface of the cap or sprinkler as will pass through the perforations in the same, and consequently there can be no stopping or clogging of those passages.

Figure 1 represents one of my improved salt-bottles with the cap on and provided with the movable disk. Fig. 2 is a vertical section of the same. Fig. 3 is the disk, with the ring and band to support it.

A is the bottle. C is the cap screwed upon the neck of the bottle in the usual way. D is the disk or diaphragm supported by a small rod, *a*. *b* is a band or support, curved, as shown, and attached at either end to opposite sides of a ring, C, which fits into the top of the neck. The top of this ring is flaring or funnel-shaped, so that it will rest on the top of the neck, and when the cap is screwed on the ring is held firmly in place. The rod *a* passes through a hole in the lowest part of the band *b*, and equidistant from the interior surface of the neck of the bottle. A weight or ball, *d*, is fastened to the top of this rod and rests on the upper side of the band *b* when the bottle is upright. The rod *a* is made to play freely through the hole, and when the bottle is inverted the ball *d* falls down toward the cap, drawing the diaphragm after it and against the under side of the support *b* and shoulder *s* of the bottle.

The length of the rod *a* and the position of

the band *b* should be so adjusted that when the bottle is inverted the ball will reach nearly to the interior surface of the top of the cap, and when upright the movable diaphragm will be far enough away from the shoulder of the bottle to allow all the salt in the neck to fall back into the body of the bottle. To facilitate this object the upper surface of the diaphragm is made more or less convex, as shown. The bottle should never be filled quite to the shoulder with damp salt.

In using this bottle, as soon as it is inverted the diaphragm falls down, as described, and checks the passage of the salt into the neck. When damp it would otherwise pack together and stop up the holes in the cap. The apertures in the diaphragm being larger in size, but less in number, than those in the cap, allow only so much of the damp salt to pass into the neck as will readily escape through the perforated cap. The diaphragm is principally useful in case of damp salt.

My invention, however, is not limited to a movable diaphragm. It may be stationary, and at or near the bottom of the neck, the essential principle being that the apertures be large enough to admit the passage of damp salt in moderate quantities, so that it may be discharged through the smaller holes in the cap as fast, or about as fast, as it reaches them. The adjustment need not be very nice or exact for practical purposes.

The action of the mass against the shoulder sets free a sufficient quantity for use, in case the same has become caked together.

It will be seen that the diaphragm is simply a regulator effecting the discharge of damp salt, and is not an agitator or pulverizer, and is not intended to act upon dry salt nor salt in cakes or lumps.

I claim as my invention—

In combination with a salt-box or receptacle, the diaphragm D arranged within the box to check the passage of damp salt into the neck of the bottle in quantities sufficient to choke up the apertures in the cap, substantially as described.

ANDREW B. SEARLES.

Witnesses:

O. LAPHAM,

LUCIUS O. ROCKWOOD.