

(No Model.)

H. F. GRAY.
SALT SHAKER.

No. 551,374.

Patented Dec. 17, 1895.

Fig. 1.

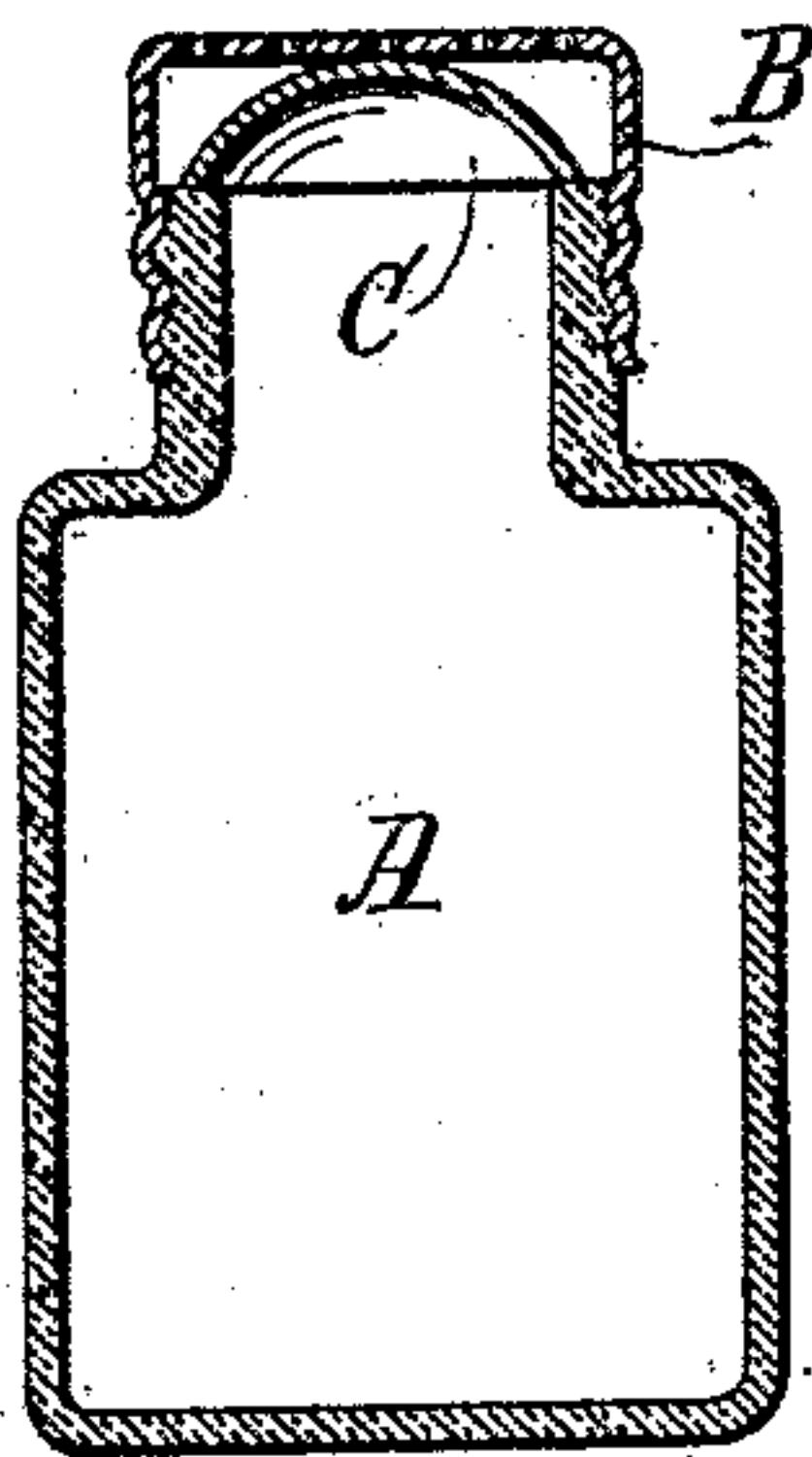


Fig. 2.

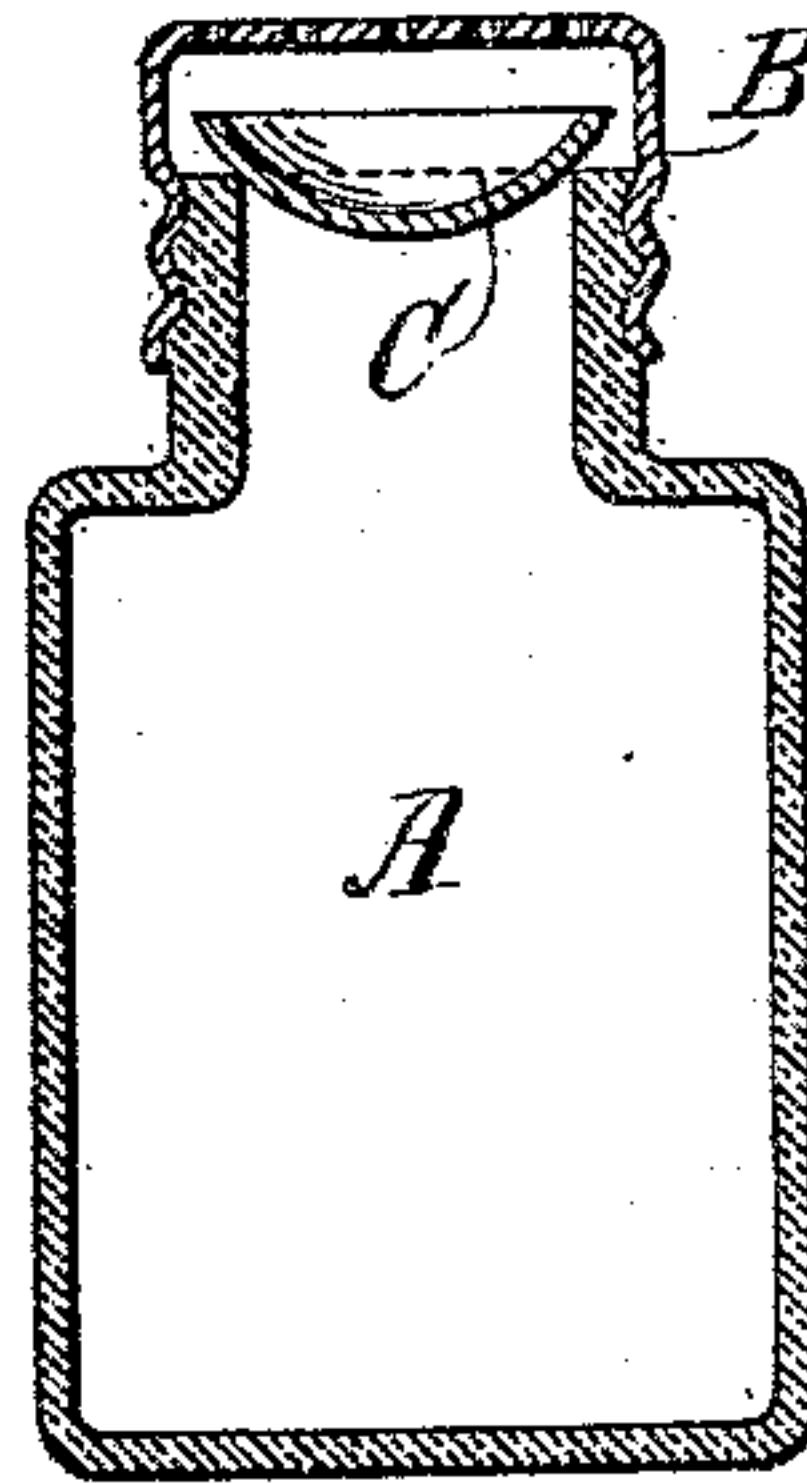


Fig. 3.

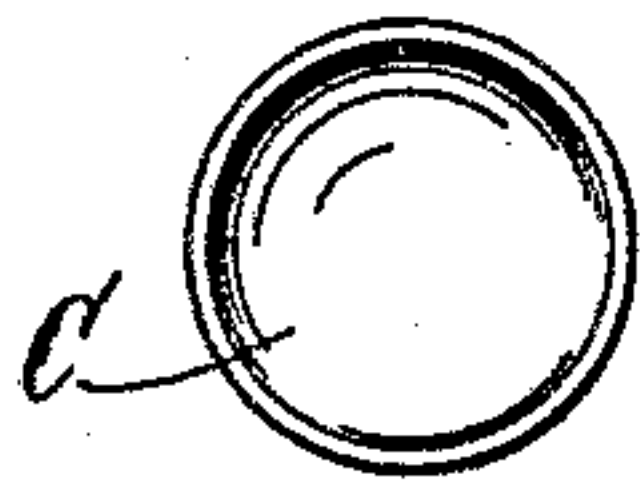
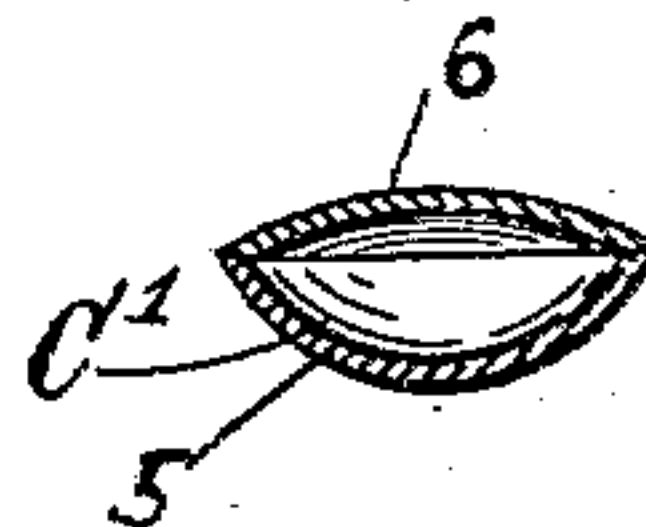


Fig. 4.



WITNESSES:

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SALT-SHAKER.

SPECIFICATION forming part of Letters Patent No. 551,374, dated December 17, 1895.

Application filed April 16, 1895. Serial No. 545,901. (No model.)

To all whom it may concern:

Be it known that I, HARDING F. GRAY, a citizen of the United States, and a resident of Passaic, in the county of Passaic and State of New Jersey, have invented a certain new and useful Improved Salt-Shaker, of which the following is a specification.

My invention relates to an improvement in receptacles known as "shakers" or "dredgers" used for distributing finely-comminuted or pulverulent material, such as salt, celery-salt, powdered sugar, and the like.

One object of the invention is to provide such receptacles with means for excluding moisture from the contents thereof, thereby preventing such contents from becoming damp or from caking because of first becoming damp and then drying.

Another object of the invention is to make this same means, which normally acts as a stopper, serve also as a stopper during shipment and as a regulator for the flow of the pulverulent material when in use. The caps of the shakers referred to are generally provided with such large perforations that when the contents of the shakers are dry they discharge too freely. Said stopper, however, when the shaker is used, partially obstructs the flow of the pulverulent material and so guards against an excessive discharge thereof.

With these objects in view my invention consists in the construction and combination of parts hereinafter fully described, and set forth in the claim.

In the accompanying drawings, which form a part of this specification, Figures 1 and 2 represent my improved shaker provided with a stopping and regulating device in the form of a segment of a spherical shell. Fig. 3 represents said device in plan. Fig. 4 represents the stopping and regulating device in the form of a hollow convex lens.

A designates the receptacle of the shaker or dredger, which may be of any of the known forms and of metal, china, or any suitable material. B designates the cap, which is, as usual, of metal, though it may be of any other material so far as my invention is concerned. With these parts I combine the stopper and regulator, which may be of various forms, some of which are illustrated in the drawings and designated by the letter C. It may be

made of any non-corrosive material, but is preferably made of aluminum.

The part C, to serve the desired double function as a stopper, is made invertible, so that when placed one side up, as for shipment of filled receptacles, it completely stops the passage from the receptacle, and when placed the other side up it merely stops ingress of moisture to the receptacle. In the latter position it also acts as a regulator during the shaking operation.

The invertible stopper and regulator shown in Figs. 1, 2, and 3 consists of a segment of a spherical shell, though it may consist of a hollow lens, as C' in Fig. 4. When the shaker is filled for shipment the stopper C is placed with the convex side up, as in Fig. 1, and the stopper C' with the side 5 up, so that when the cap is screwed down it will press upon the stopper, retain it upon the neck of the receptacle, and so prevent the contents of the receptacle from discharging. When the shaker is put to use the cap is removed and the stopper inverted, as in Figs. 2 and 4, when it acts in its full capacity of stopper and regulator.

The lens-like stopper of Fig. 4 may have the side 6 flat or convex, as shown. The convex form is preferred, as it enables the stopper to readily seat itself upon the neck of the receptacle when placed in shipping position. This side also prevents salt from lodging on or in the stopper, which might be objectionable in shakers having large perforations in their caps.

As is clearly apparent from the drawings, the stopper C normally closes the passage to the interior of the receptacle, and so prevents moisture from entering it, thereby keeping the contents dry and preventing them from caking. When the shaker is inverted the stopper leaves its seat and allows a sufficient amount of the contents of the receptacle to pass around it and out through the perforations of the cap, thereby regulating the amount of the discharge by preventing the whole body of contents from banking up on the perforated surface of the cap. The mobility of the stopper also prevents the contents from banking up against it and holding it over the perforations. This banking, however, is not liable to take place in perfectly-dry material, and as by the use of my com-

bined stopper and regulator the material is kept dry it can always pass freely around the stopper in amounts sufficient to produce the desired discharge.

5 The drawings simply illustrate the invention as applied to shakers of the size usually employed for salt, but it is intended to use the stopper and regulator on the large-sized shakers and dredgers as well. It may also
10 be used to advantage in spice-dredgers to prevent the evaporation of the aromatic oil and to regulate the amount of discharge.

Many variations in form and size of the stopper and regulator may be produced, and it
15 may be variously located in the shaker and made inseparable from either the cap or the receptacle without departing from my invention, the gist of which resides in the combination, with a shaker or dredger for any purpose
20 whatever, of an invertible device acting as a stopper during the shipment of filled

shakers and as a stopper for the receptacle of the shaker when put to use and as a regulator for the discharge of the contents of the shaker.

What I claim as my invention is—

In a shaker or dredger the combination with the receptacle, of a removable perforated cap, and an invertible stopper seated upon the neck of the receptacle and held in place when
30 in one position by the cap but free to oscillate between its seat and the perforations of the cap when in the reverse position, as and for the purpose set forth.

Signed at New York, in the county of New York and State of New York, this 6th day of April, A. D. 1895.

HARDING F. GRAY.

Witnesses:

WM. H. CAPEL,

HENRY T. HIRSCH.