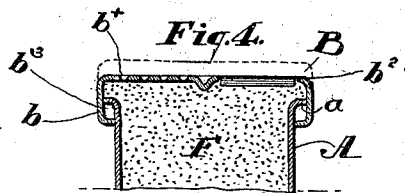
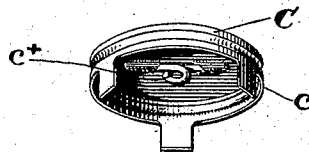
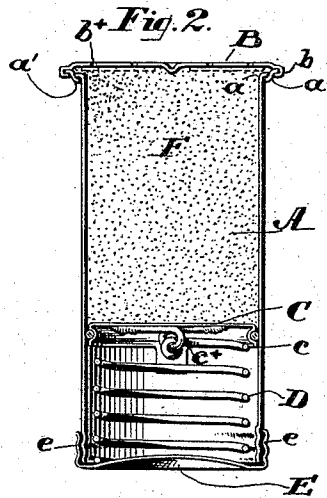
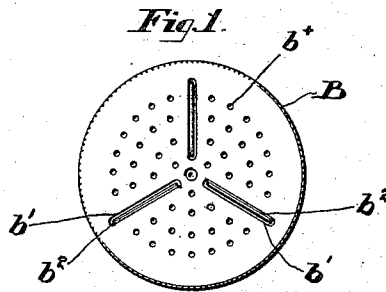


(No Model.)

F. N. DIXON.
SALT CONTAINER AND SPRINKLER.

No. 470,421.

Patented Mar. 8, 1892.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERIC NORMAN DIXON, OF PHILADELPHIA, PENNSYLVANIA.

SALT CONTAINER AND SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 470,421, dated March 8, 1892.

Application filed August 12, 1890. Serial No. 361,767. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC NORMAN DIXON, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Salt Containers and Sprinklers, of which the following is a specification.

In salt-containers employed in domestic and for table purposes it is a desideratum that the salt should not only be readily obtainable therefrom in desired quantities, but also be protected from dust and other sources of contamination; and to this end salt-cellars are usually provided with caps fitting upon their upper portions, each of which caps embodies a group of perforations through which the salt is intended when such a container is inverted and its contents shaken or stirred to escape in desired quantities. Salt being, however, as is well known, peculiarly sensitive to atmospheric conditions, the particles of a contained mass are liable in damp weather to cohere into such solidity that little or none can escape, and salt-containers as heretofore constructed have not been furnished with means to satisfactorily disintegrate the mass and compel the exit of its particles.

It is the object of my invention to construct a device which while inclosing and protecting the salt and embodying outlets for it provides a simple, inexpensive, and effective means whereby its discharge or ejection in regulated quantities may be conveniently, accurately, and positively accomplished without reference to whether such salt be loose or compacted into a solid mass.

In the drawings I illustrate and herein I describe a preferred form of a convenient embodiment of my invention, the particular subject-matter claimed as novel being hereinafter definitely specified.

In the drawings, Figure 1 is a top plan view of my improved salt container and sprinkler, and Fig. 2 is a vertical central sectional elevation of the same. Fig. 3 is a perspective view of the follower. Fig. 4 is a fragmentary vertical central sectional elevation of the top portion of the device, illustrating a slightly varied form of the rotatable cap.

Similar letters of reference indicate corresponding parts.

In the drawings, A is the body of the device, the same being preferably a cylinder the interior of which is of unvarying diameter from end to end and the upper end of which flares outwardly to form an encircling lip *a*. In Fig. 2 an applied annular circumscribing flange *a'* is shown as seated up against said lip, its purpose being to increase the projection of the same. Said flange may, however, be omitted at will, it being simply an expedient of manufacture.

B is a cap designed to be secured free for rotation upon the upper end of the body, and I prefer to so secure it by forming it from a blank of a diameter somewhat greater than that of the body A, placing it in position upon the end of said body and turning its outer edge *b* downwardly and inwardly, so that said edge lies beneath and clasps the lip *a* or the flange *a'*, if said flange is employed. The cap embodies any desired number of apertures or perforations *b^x*, which may be parallel-sided, as shown in Fig. 2, or may be, and preferably are, of lesser diameter at their lower than at their upper ends, as shown in Fig. 4. The cap is also provided with openings *b'*, in connection with which are arranged downwardly-turned knife edges or ribs *b²*, and these edges may be of any desired form, arrangement, and projection, and may be formed integral with the cap or be formed separately therefrom and soldered or otherwise secured thereto. In the interest of economy I prefer to form them, as shown in the drawings, of the metal of the cap itself by making a cut of suitable contour in the substance of the cap and depressing the tongue so formed below the plane of the neighboring portions of the metal, leaving the slot *b'* in said metal, whereby the opening in the cap and the knife-edge supplied in connection with it, as stated, are both formed by one operation. The knife-edge referred to may be, if desired, sharpened.

In Fig. 4 the downwardly-turned rim *b* of the cap is shown as somewhat elongated—that is to say, said rim extends downwardly to such an extent that the distance from the inwardly-turned edge at its lower end to the horizontal top at its upper end is greater than the mere vertical thickness of the lip *a* of the container. In this arrangement the vertical wall *b³* of the cap snugly fits around the lip *a*

and its inwardly-turned edge snugly fits around the body of the container. The arrangement shown in said Fig. 4 is designed to permit of a downward movement of said cap with reference to the body in case the spring should from any cause weaken or cease to force the salt against the cap, the downward movement of the cap making up for the decreased resilience of the spring.

C is what I term the "follower," it being shown as of the same diameter as the interior of the body A and being located and adapted to move vertically within the same. Said follower is provided with a depending guide-flange *c* of any desired depth, and by the contact of said flange with the wall of the body A is maintained always in a level position and prevented from binding in its travel. The follower is to be provided with means whereby it may be caused to approach the cap, and this action may be secured in various ways. I prefer, however, to employ a spring for the purpose, which spring is shown in the drawings as being of the spiral variety, arranged to bear against the bottom of the container and the follower, respectively, so that its expanding thrust occasions the ascent of the latter. The upper end of this spring, which is lettered D, is preferably engaged with the follower in such manner as is most convenient and effective, being in the drawings shown as engaged with an ear *c*^x, secured to the central portion of the under face of said follower.

The bottom E of the container is removable, but may be secured in place, as convenience of manufacture may dictate. I show it as provided with an upturned screw-threaded flange *e*, by which it is screwed upon the lower end of the body A, which is of course to be correspondingly screw-threaded. The lower end of the spring may, if desired, be secured to the bottom E, so that the follower C, spring D, and bottom E will form a connected whole.

The operation of the device will be readily understood. Assume the container empty and inverted and the bottom E and the follower and its spring removed therefrom. A mass of salt F in quantity sufficient to almost fill the body A is placed in the inverted container. The follower is then inserted and placed upon the salt, and the device E is brought into position against and secured upon the end of the tube, compressing the spring D within the space unoccupied by the salt, and the container may then be set with the cap upmost. The follower under the influence of the spring maintains the mass of salt up against the cap in all positions of the container and as fast as the salt diminishes in quantity in the use of the device takes up the vacant space. When it is desired to obtain salt from the container, the latter is inverted, and the cap B and body A are rotated with reference to each other conveniently,

either by grasping the outer edge of the cap between the thumb and forefinger of the left hand and the body of the container in the right hand of the user or else by grasping the body of the container in the palm of the hand and rotating the cap with the thumb and forefinger of the same hand. In its rotation the cap by virtue of its knife-edges and also by virtue of the perforations and openings grinds or shears off from the mass the salt which bears directly against it, and the portions thus taken off pass through said perforations and openings, while the mass of the salt is constantly pressed up by the spring to take its place.

It is of course obvious that the device is to some extent operative when the cap is provided with the apertures *b*^x only and the slots and knife-edges are omitted, and also operative when the cap is provided with the slots and knife-edges and the apertures *b*^x are omitted, and when in the claims I use the word "cap" without qualification the term is broad enough to cover both said constructions.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination, to form a device for containing a mass of granular material, such as salt, and occasioning its exit and distribution, of a casing, a cap the face of which embodies outlets secured in place thereon and adapted to be rotated, a follower, and means for actuating said follower to occasion the forcing of the mass of contained material against said cap, said cap forming the end of the casing and its outlets being in coincidence with the path of movement of the follower, substantially as set forth.

2. The combination, to form a device for containing a mass of granular material, such as salt, and occasioning its exit and distribution, of a casing, a cap embodying a slot and a knife-edge secured in place thereon and adapted to be rotated, and means for forcing a mass of contained salt into contact with said cap, substantially as set forth.

3. In combination, a salt-containing receptacle embodying a circular lip, a cap of approximately the same diameter as the container, secured in place thereon and adapted to be rotated, provided with a prominent edge by which its rotation may be effected, and means for forcing contained salt into contact with said cap, substantially as set forth.

4. The combination, to form a salt container and sprinkler, of a body, a cap embodying outlets in its face, secured in place thereon and adapted to be rotated, a removable bottom, a follower, and a spring, substantially as set forth.

5. The combination, to form a salt container and sprinkler, of a body provided with an outwardly-flaring lip, a cap consisting of a disk of metal, the rim of which is intumed beneath

the lip of the container, a feed-opening in said body, a follower, and a spring, substantially as set forth.

5 6. The combination, to form a salt-containing receptacle, of a body provided with a flaring lip, a cap provided with a flange, the lower end of which is intumed beneath the lip of the body, the length of said flange being in excess of the vertical thickness of the lip, a
10 follower, a spring, and a removable bottom, substantially as set forth.

7. The combination, to form a salt container and sprinkler, of a body, a rotatable cap, the edge portion of which is adapted to be manually grasped and the center of which coincides with the axis of the container, a follower, and means for operating said follower, the arrangement being such that the salt contained in the container and the top are pressed

against and may be rotated with reference to each other, substantially as set forth. 20

8. The combination, to form a salt container and sprinkler, of a body, a rotatable cap, the edge portion of which is adapted to be manually grasped and the center of which coincides with the axis of the container, a removable bottom, a follower, and a spring, the arrangement being such that the salt contained in the container and the top are pressed against and may be rotated with reference to each other, substantially as set forth. 30

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 11th day of August, A. D. 1890.

FREDERIC NORMAN DIXON.

In presence of—

LEWIS ALTMAIER,

JAMES S. PHILLIPS.