

F. REUTTER.
POWDER CAN TOP.
APPLICATION FILED APR. 15, 1911.

1,021,481.

Patented Mar. 26, 1912.

Fig. 1.

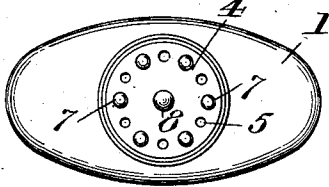


Fig. 6.

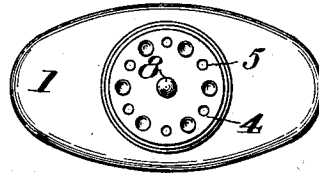


Fig. 2.

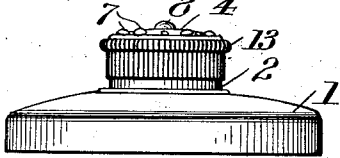


Fig. 7.

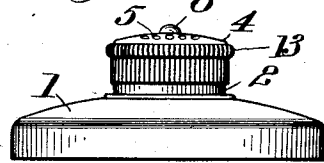


Fig. 3.

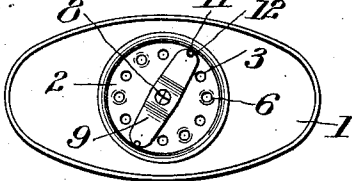


Fig. 8.

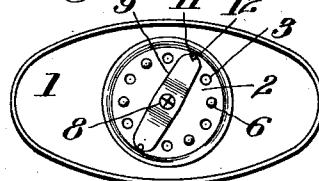


Fig. 4.

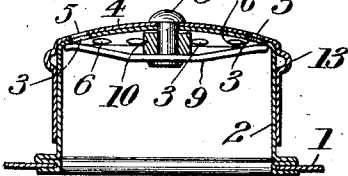


Fig. 9.

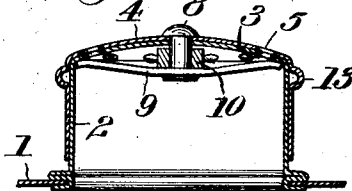


Fig. 5.

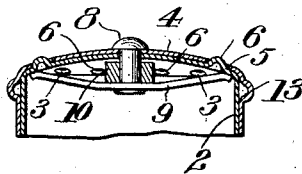
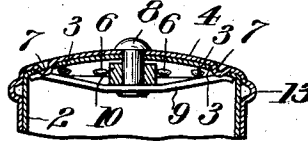


Fig. 10.



WITNESSES

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UNITED STATES PATENT OFFICE.

FREDERICK REUTTER, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

POWDER-CAN TOP.

1,021,481.

Specification of Letters Patent.

Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that I, FREDERICK REUTTER, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Powder-Can Tops, of which the following is a full, clear, and exact description.

This invention relates to that type of powder can tops in which discharge holes in an immovable part are opened and closed by a rotary cap mounted to turn upon such part and having holes which may be turned into and out of register with the holes in the immovable part, in order respectively to permit of the discharge of the contents of the can and to close the can against escape of its contents.

The object of the invention is to provide a can top for discharging the contents of the can and for closing the can against such discharge, which may be readily turned to open and close the can and yet be so securely applied to the can, without binding, that leakage of the contents of the can is minimized if not entirely prevented, and in which the cap is held in open and closed positions against accidental displacement.

The invention consists of a top of the type specified, adapted for use on powder cans and other receptacles, in which there is a neck having a top end closed save for a series of discharge holes, and provided with a series of outwardly or inwardly projecting beads alternating in the same circle with the holes and serving as stop members, and a spring-held cap axially mounted upon the neck and having a series of discharge holes adapted to be brought into and out of register with the discharge holes in the neck, and having complementary stop members similarly alternating with its own discharge holes, the stop members on the neck cooperating with the holes in the cap to hold the cap in position so as to close these holes and also to resist accidental turning, and the stop members on the neck cooperating with the stop members on the cap to hold the cap in open position, the spring in connection with said stop members insuring a practically leak-tight union of the cap and neck.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a top plan view; Fig. 2 is a side

elevation; Fig. 3 is a plan view of the top inverted; Fig. 4 is a vertical cross-section, on a larger scale, showing the spring in elevation and the discharge holes open, and Fig. 5 is a vertical cross-section, on a larger scale, of the upper portion of the top, showing the spring in elevation and the discharge holes closed, these several views illustrating a form of the invention wherein the stop members are outwardly projecting beads. Fig. 6 is a top plan view; Fig. 7 is a side elevation; Fig. 8 is a plan view of the top inverted; Fig. 9 is a vertical cross-section, on a larger scale, showing the spring in elevation and the discharge holes open, and Fig. 10 is a vertical cross-section of the upper part of the top, showing the spring in elevation and the discharge holes closed, these several views, Figs. 6 to 10, illustrating a form of the invention wherein the stop members comprise inwardly extending beads.

The breast 1, neck 2 having a closed top end save for the discharge holes 3, and the cap 4 mounted to turn upon the neck and having the discharge holes 5 adapted to be brought into and out of register with the holes 3 in the neck, may be and are here shown as of the usual construction, excepting as modified by the application thereto of the features of the present invention, as I will proceed now to explain.

As shown in Figs. 1 to 5, the discharge holes 3 in the top alternate with outwardly projecting beads 6, and the holes 5 in the cap alternate with outwardly projecting beads 7. The beads in each instance are arranged in the same circle with the holes, and the beads on the neck are adapted to enter the holes in the cap when the cap is turned to close the top against discharge. When the cap is turned so as to open the holes, the cap is held in such position by the inter-engagement of the beads on the neck and cap.

In order to hold the cap in place, permit it to be rotated, give it sufficient play for its stop members to ride over one another and then snap together and hold the cap member in tight relation to the neck, I provide an axial rivet 8 which extends through the cap and neck and is fixed in a spring 9, with a washer 10 interposed between the spring on the inside of the neck. The spring 9 is bowed, by preference, so as to stiffen it and

permit the introduction of the washer 10 between the spring and the neck. The spring may have a notch 11 in one or both of its ends, and each notch is adapted to
 5 engage a projection 12 extending inwardly from the neck so that the spring is held from turning; the rivet thus becoming a journal on which the cap is rotated.

As shown in Figs. 6 to 10, the beads 6 and
 10 7 project inwardly instead of outwardly, and in this case the inwardly projecting beads on the cap enter the holes in the neck when the cap is turned to close the discharge holes.

15 In both illustrations of my invention, it is to be understood that the spring is of sufficient resilience to yield as the cap is rotated to bring its holes into and out of register with the holes in the neck and to permit
 20 the cap to lift as its beads ride over the beads in the neck, and to snap back again into close relation to the neck so as to insure a practically leak-tight or waste-proof union of the cap and neck. The rim of the cap
 25 may be beaded, as shown at 13, and this beaded portion or the whole rim may be milled, knurled, or otherwise roughened in order to form a fingerhold for the operator in turning the cap.

30 What I claim is:—

1. A top for powder cans and other receptacles, comprising a neck having discharge holes arranged in a circle on its end, and stop members alternating with the holes,
 35 and a cap having a series of discharge holes adapted to be turned into and out of register with the holes in the neck and also having alternating stop members complementary

to the stop members on the neck, the stop members on the neck and cap cooperating 40 with one another to hold the cap in discharging position and said stop members on one part entering the discharge holes of the other part to close said holes and hold the cap in closed position. 45

2. A top for powder cans and other receptacles, comprising a neck having a series of discharge holes in its end and a series of stop members alternating with the discharge holes, a spring-held cap axially mounted 50 upon the neck and having a series of discharge holes adapted to be turned into and out of register with the holes in the neck and also having in alternation with said holes a series of stop members complementary 55 to the stop members in the neck, the stop members on one part serving to enter and close the discharge holes in the other part.

3. A top for powder cans and other receptacles, having a neck provided with discharge holes and alternating beads, a cap 60 mounted upon said neck and provided with complementary discharge holes and beads, an axial rivet connecting the cap and neck, a bowed spring arranged within the neck upon 65 which the rivet is fixed, means to hold the spring stationary, and a washer interposed between the spring and the top end of the neck.

In testimony whereof I have hereunto set 70 my hand this 13th day of April A. D. 1911.

FREDERICK REUTTER.

Witnesses:

G. F. HODGES,
 L. H. BASSETT.