A. M. COONS.

POWDER CAN TOP.

APPLICATION FILED JAN. 5, 1909.

920,273. Patented May 4, 1909.

Fig. 1.

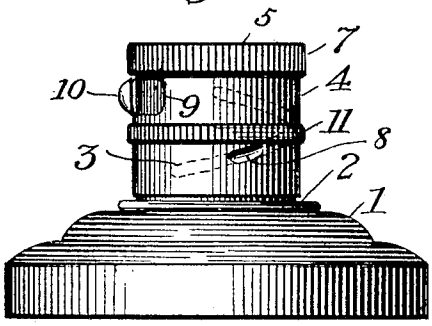


Fig. 2.

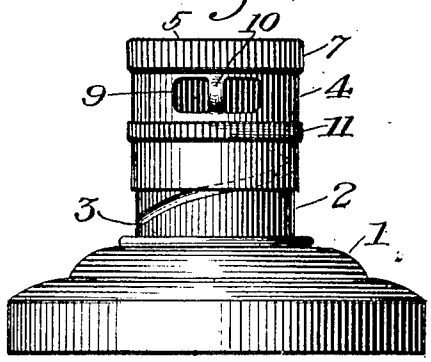


Fig. 3.

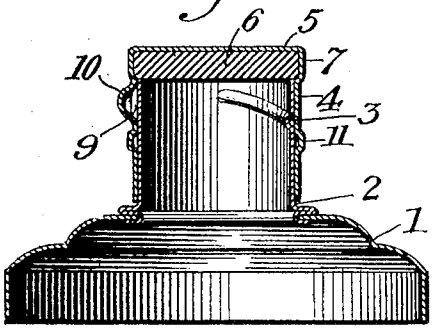


Fig. 4.

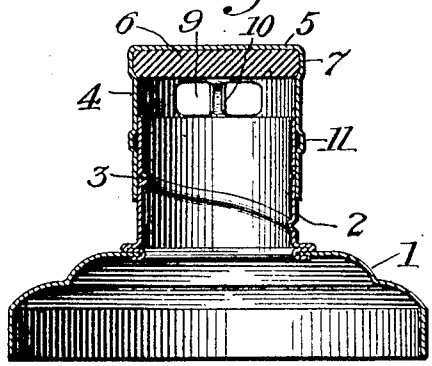


Fig. 5.

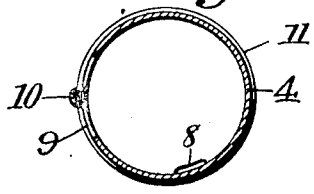


Fig. 6.

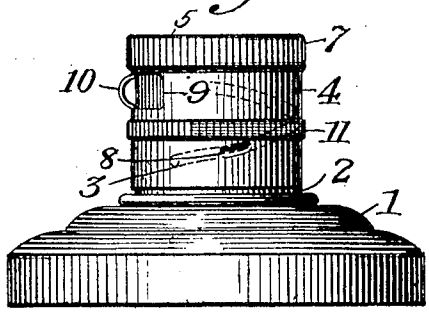
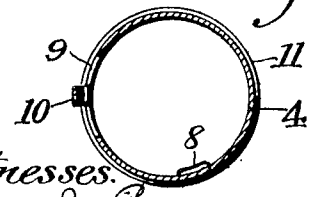


Fig. 7.



Witnesses.

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Inventor:

Arthur M. Coons

by W. M. Finckel Atty.

UNITED STATES PATENT OFFICE.

ARTHUR M. COONS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

POWDER-CAN TOP.

No. 920,273. Specification of Letters Patent. Patented May 4, 1909.

Application filed January 5, 1909. Serial No. 470,876.

To all whom it may concern:

Be it known that I, ARTHUR M. COONS, 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.

Powder can tops having caps movable longitudinally on the tops by a rotary movement to open and close a lateral discharge opening, have been variously constructed, but are not always proof against leakage of the powder when closed, and in some cases expose the user's fingers to the sharp edges of the discharge portion.

The object of the invention is to avoid these objectionable features and to provide an efficient and economical powder can top especially designed for tooth powder.

The invention consists of a powder can top having a cylindrical open-ended neck, constructed with a spiral groove, and a cap surrounding said neck and having a closed end provided with an internal washer which fits leak-tight over the open end of the neck, said cap having an inclined lug to engage the spiral groove of the neck, so that by rotating the cap it will be moved longitudinally of the neck to open and close the discharge opening; the cap having a lateral discharge opening and this opening spanned by a bridge to be engaged by the user's finger in moving the cap. This bridge removes the finger from contact with the edge of the neck and so prevents injury to the finger from contact with the thin and sharp edge of the neck.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation of one form of can top embodying the invention, the top being closed. Fig. 2 is an elevation at right angles to Fig. 1, showing the top open for discharge purposes. Fig. 3 is a vertical section with the top closed. Fig. 4 is a vertical section with the top open, the top being turned half way around from Fig. 2. Fig. 5 is a horizontal cross-section of the cap of Figs. 1 to 4 drawn through the center of the discharge opening. Fig. 6 is a side elevation illustrating another form of the invention, the difference being in the form of bridge. Fig. 7 is a horizontal section, through the opening, of the cap of Fig. 6.

The can top 1 has a neck 2 secured to it in any suitable way. This neck has its outer end wholly open. The neck is provided with a spiral groove 3 extending part way around it so as to afford top and bottom stops or limits for the movements of the cap. The cap 4 is enough larger than the neck to fit it closely outside. The top 5 of the cap is closed and provided inside with the washer 6 of pasteboard or other suitable material held in place therein by the milled bead 7, and so as to close down upon the edge of the neck and close the top leak-tight. The cap and neck are connected by a lug 8 set in the spiral groove 3, so that by turning the cap on the neck the coöperation of the lug and groove serves to raise or lower the cap on the neck, depending upon which way the cap is turned, and thereby respectively open and close the top. Further, this coöperation of groove and lug limits the extent of up and down movement; and still further, the groove and lug are so proportioned and arranged and the frictional fit of the cap on the neck is such that the cap will stay in any given position, without liability to accidental self displacement.

The discharge opening 9 is arranged in the side of the cap only, and at its upper end, below the washer 6, and so as to be opened and closed by the turning up and down, respectively, of the cap.

Since the metal of these tops is quite thin, the edge of the open neck when exposed in the opening 9 is likely to pinch or cut the user's finger in operating the cap, and to guard against this a bridge 10 integral with the cap is sprung across the opening and bowed outwardly therefrom. To reinforce this bridge and obviate sharp edges, its sides may be turned in, so as to give it a rounded and smooth external surface. In other words, it may be made convex in cross-section, as shown in detail in Fig. 5. But, as shown in Figs. 6 and 7, the bridge may be flat.

Of course, the lug 8 is formed after the cap is applied to the neck, and thus the connection of the two is permanent.

The form of the discharge opening is immaterial, but it is material that it be provided with the outstanding bridge so as to

safeguard the user against cutting or pinching the fingers.

The cap may be reinforced and its operation facilitated by providing the additional milled bead 11.

The neck may be made leak-tight in other ways than the preferred way herein shown.

What I claim is:—

1. A powder can top, having an open-ended neck provided with a spiral groove, a turning cap applied externally to the neck and having a lug engaging the groove in the neck to obtain a limited up and down movement on the neck, said cap having a discharge opening in its side near its upper end and a washer in its upper end to close down upon the open end of the neck and close it leak-tight and a finger protecting medium spanning the discharge opening.

2. A powder can top, having a neck and a cap movably connected therewith and provided with a side discharge opening across which is an outwardly bowed bridge.

3. A powder can top, having a neck and a cap connected therewith and having a limited longitudinal movement thereon and provided with a lateral discharge opening spanned by a bowed bridge convex in cross-section.

4. A powder can top, having a neck and a cap movably connected therewith and provided with a side discharge opening across which is an outwardly bowed bridge, the neck being open-ended and the cap having a washer to close said neck leak-tight.

In testimony whereof I have hereunto set my hand this 31st day of December A. D. 1908.

ARTHUR M. COONS.

Witnesses:

HENRY FEHL,

G. F. HODGES.