July 7, 1925. 1,545,103

W. C. HUNTOON, JR

COLLAPSIBLE TUBE

Filed Oct. 9, 1924

Fig. 1

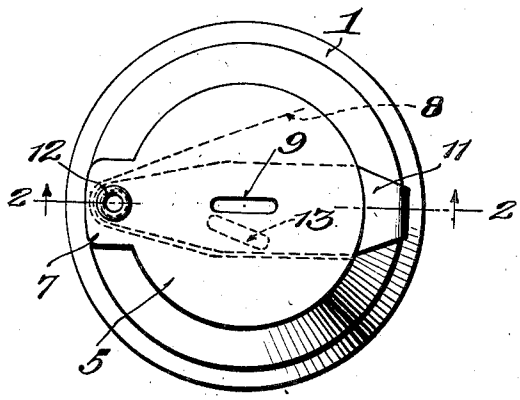


Fig. 3

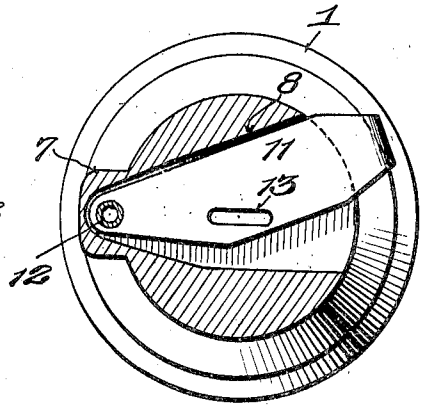


Fig. 2

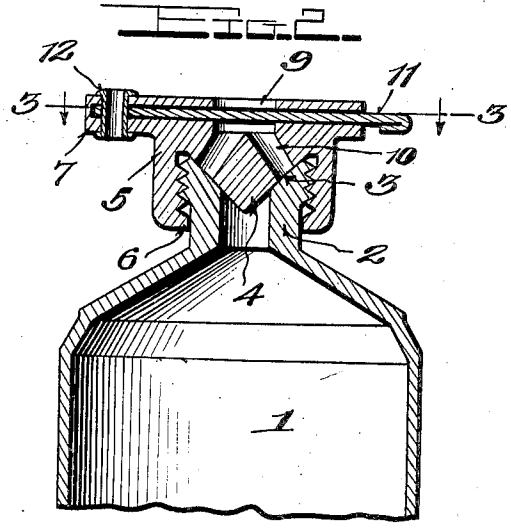
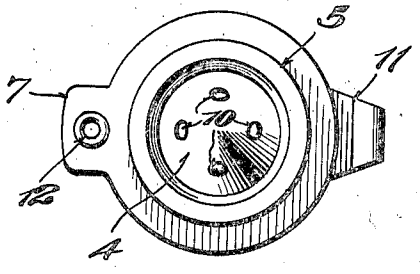


Fig. 4



Inventor

William C. Huntoon Jr.

By Joseph A. Miller

Attorney

Patented July 7, 1925. 1,545,103

UNITED STATES PATENT OFFICE.

WILLIAM C. HUNTOON, JR., OF EAST GREENWICH, RHODE ISLAND.

COLLAPSIBLE TUBE.

Application filed October 9, 1924. Serial No. 742,532.

To all whom it may concern:

Be it known that I, WILLIAM C. HUNTOON, Jr., a citizen of the United States, residing at East Greenwich, in the county of Kent and State of Rhode Island, have invented new and useful Improvements in Collapsible Tubes, of which the following is a specification.

This invention relates to certain new and useful improvements in a collapsible tube and more especially to a closure therefor, an object being to provide an air-tight closure for the tube nozzle.

A further object is to provide a cap having a discharge orifice with a supplementary closure therefor, designed to be moved to opened or closed position upon corresponding movement of the cap and still another object is to provide a cap with a movable closure and means for suspending or hanging up the tube when not in use.

The invention further resides in the salient features of construction hereinafter described and claimed, reference being made to the accompanying drawings wherein—

Figure 1 is a top plan view of a collapsible tube equipped with my improved closure.

Figure 2 is a vertical section therethrough on line 2—2 of Figure 1.

Figure 3 is a horizontal sectional view on line 3—3 of Figure 2, and

Figure 4 is a bottom plan view of the closure.

Referring more in detail to the drawings, the collapsible tube 1 is provided with the externally threaded nozzle 2, the discharge orifice of which opens into a flare providing a conical seat 3 for a cone-shaped valve 4 carried by the closure cap 5. The cap 5 has an internally threaded skirt engaging the threads of the nozzle on which it is held against displacement by having its lower edge turned inwardly or undercut, as indicated at 6.

The body portion of the cap is preferably disk-shaped, and has a radial lug 7 from which a chamber 8 leads diametrically through the body and opens through the opposite edge thereof in the form of a slot. Extending axially through the body is a discharge opening 9 which communicates with a plurality of ducts 10 leading from the valve 4 and so arranged as to be closed when the latter engages its seat. An auxiliary or supplemental valve in the form of a pivoted cut-off 11 is disposed within the chamber 8, one end extending into the lug 7 where it is pivotally secured by an eyelet while the opposite end thereof projects through the slot to serve as an operating handle. The cut-off 11 is preferably formed with a port 13 for registry with the opening 9, and it is mounted to be oscillated in a horizontal plane within the chamber to open and close the opening 9. The eyelet 12 not only serves as a pivot for the cut-off 11 but also forms a hole to be threaded over a nail or hook for hanging up the tube when not in use.

It will be observed that when the cap is to be unscrewed the operator will grasp the lug 7 and the projecting handle portion of cut-off 11 and rotate the cap to unscrew same, such movement automatically shifting or swinging the cut-off to open position. Likewise, upon screwing the cap to seat the valve 4 on its seat 3, the operator will naturally grasp the lug 7 and the handle portion of cut-off 11 and swing the latter to its operative position so that a double, air-tight seal is formed over the nozzle.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination with a collapsible tube having a nozzle with a flared discharge orifice providing a valve seat, a cap threaded on the nozzle and provided with a conical valve for engaging on the seat, said cap having a discharge opening branching into a plurality of ports opening through the valve to be closed by the seat, said cap also being formed with a radial lug and a chamber extending there-from through the opposite side of the cap, a cut-off disposed in the chamber and pivoted at one end of the lug and having its opposite end projecting beyond the cap to form an operating handle, said cut-off adapted to open and close the discharge opening and an eyelet forming the pivotal connection of the cut-off and providing a means for hanging up the tube.

2. In a combination with a collapsible tube having a nozzle with a flared discharge orifice providing a valve seat, a cap threaded on the nozzle and provided with a conical valve for engaging on the seat, said cap having a discharge opening branching into a plurality of ports opening through the valve to be closed by the seat, said cap also being formed with a radial lug and a chamber extending therefrom through the opposite side

of the cap, and a cut-off disposed in the chamber and pivoted at one end in the lug and having its opposite end projecting beyond the cap to form an operating handle, said cut-off adapted to open and close the discharge opening.

3. In combination with a collapsible tube having a nozzle with a flared discharge orifice providing a valve seat, a cap threaded on the nozzle and formed with a radial lug and a chamber extending therefrom through the opposite side of the cap, a cut-off disposed in the chamber and pivoted at one end in the lug and having its opposite end projecting beyond the cap to form an operating handle, said cut-off adapted to open and close the discharge opening, and an eyelet forming the pivotal connection of the cut-off and providing a means for hanging up the tube.

4. In combination with a collapsible tube, a rotatable closure therefor having an outlet, means whereby upon rotation of the closure in different directions communication between the tube and closure will be opened and closed, a cut-off for the outlet, and means for connecting the cut-off to the closure whereby upon movement of the cut-off in different directions same will be moved to open or closed position and upon continued movement in the selected direction the cut-off will rotate the closure to open or close communication between the tube and closure.

5. In combination with a collapsible tube, a threaded closure therefor having an outlet, means whereby upon turning of the closure in different directions communication between the tube and closure will be opened and closed, and a cut-off for the outlet pivoted to the closure whereby upon movement of the cut-off in different directions same will be moved to open or closed position and upon continued movement in the selected direction, the cut-off will rotate the closure to open or close communication between the tube and closure.

6. In combination with a container having a discharge orifice and an outwardly extending lug, a cut-off controlling the orifice, and an eyelet extending through the cut-off and lug and headed at its ends to provide a combined suspension eyelet for the entire container and a pivotal mounting for the cut-off.

7. In combination with a container having a discharge neck, a rotatable closure cap on the neck for controlling the neck discharge having an outlet, said cap having a part engageable with the neck to thereby close the outlet, an independent closure for the outlet of the cap, and means to movably connect the last named closure to the cap.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM C. HUNTOON, JR.

Witnesses:

S. N. MCCLARENCE,

J. A. MILLER.