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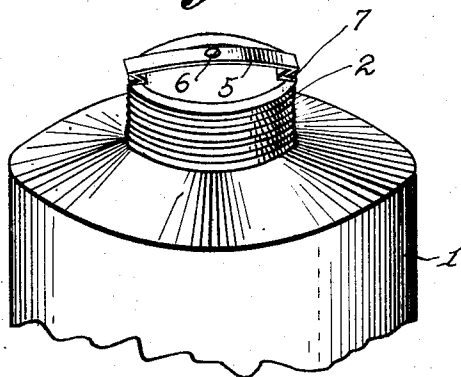
J. M. RICHARDSON

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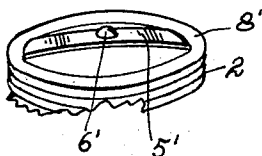
COLLAPSIBLE TOP FOR VESSELS

Filed Aug. 2, 1929

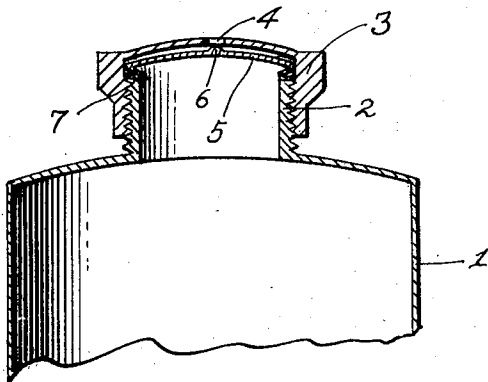
*Fig. 1.*



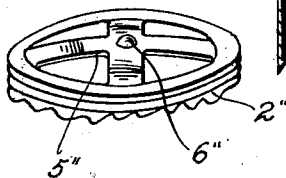
*Fig. 4.*



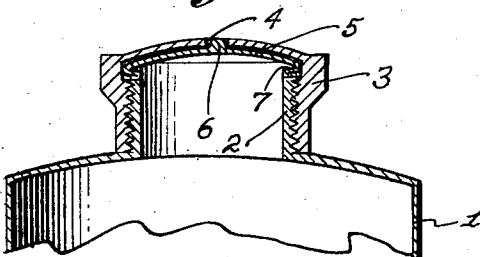
*Fig. 2.*



*Fig. 5.*



*Fig. 3.*



INVENTOR.

*J. M. Richardson*

BY

*J. J. Newton*

ATTORNEYS.

## UNITED STATES PATENT OFFICE

JAMES M. RICHARDSON, OF MONTREAL, QUEBEC, CANADA

## COLLAPSIBLE TOP FOR VESSELS

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This invention relates to a collapsible vessel or tube suitable, for example, for holding tooth paste, shaving cream and the like and more particularly to the top of such a tube.

One object of the invention is to provide means for preventing the egress, when so desired, of the material in the tube.

Another object of the invention is to provide means at the top of the tube and on the interior thereof for sharply cutting off a stream of material and thus preventing an accumulation of material on the end of the tube when the stream is cut off.

Another object of the invention is to provide a paste cut off that will be economical to manufacture but which at the same time can be easily manipulated by an inexperienced user.

With these and other objects in view, which will be developed as the description proceeds, I will now describe my invention in connection with the accompanying drawings in which:

Figure 1 represents a perspective view of the top of the tube with one form of my invention applied thereto;

Figure 2 is a sectional view of my tube with the cap thereon but in a position to allow egress of the material from the tube;

Figure 3 is a sectional view corresponding to Figure 2 with the tube top screwed down to position to cut off the stream of material and prevent further issuing of the material from the tube;

Figure 4 is a modified form of the cross-bar of the tube top; and

Figure 5 is a second modification showing a double cross-bar.

1 represents the body of the tube. This may be of collapsible material and of conventional size and shape. The tube top terminates at its top in a threaded neck portion 2. I provide a cap 3 internally screw threaded to fit over the screw threaded portion 2. This cap 3 is provided with a hole 4 and I may attach to the top of the threaded neck 2 a bar 5 preferably having thereon a lug 6. This bar 5 may be attached to the neck portion 2, as shown in Figures 2 and 3, having accordion shape spring portions 7 at either

end, the bar 5 being attached to the neck portion 2 in any convenient way as by soldering.

In order to eject material in the tube 1 from the top, the user will simply give a turn or two to the screw threaded cap 3 to raise the cap to a position shown, for example, in Figure 2. Then by pressing on the collapsible portion of the tube the material may be forced through the hole 4 in the cap. In order to cut off the material the cap 3 will be again screwed downwardly until the interior top of the cap comes down on the spring 5 as best shown in Figure 3. This will cut off the stream of material and prevent any further egress of the material even though the tube 1 be materially collapsible.

In some cases the bar 5 may be provided with the lug 6 fitting in the hole 4. This lug will displace any material remaining lodged in the hole 4 and thus present a clean surface on the exterior of the cap when the ejected material on the outside of the cap is removed.

It will be apparent from an inspection of Figure 3 that the more the pressure of the material on the bar 5, the closer the bar will be pressed against the top of the cap to efficiently prevent egress of the material when the cap is screwed down.

I have shown a different form of bar in Figures 4 and 5. The bar 5' in Figure 5 may have its ends integral with a ring 8 resting on top of the screw threaded portion 2.

In Figure 5 I have shown a cross bar 5'' and in this modification the bar may be soldered to the screw threaded cap 2'.

It is apparent that the modifications of the fastening of the bar to the neck portions may be widely varied, also that if the cap is sufficiently thin the lug 6 may be omitted. There may be other modifications, hence I do not wish my invention to be limited to the exact form shown. My improved top may be applied to a jar or can as well as to a tube.

What I claim as my invention is:

1. A vessel comprising a neck portion, a spring having its ends seated on the top of said neck portion and extending transversely crosswise the top of the neck portion and a cap having an integral top with a hole there-

in, the top being movable toward and away from said spring and said spring being sufficiently wide to cover the hole in the cap and prevent egress of the material through the hole when the top rests on said spring.

2. A vessel having a screw-threaded neck portion and a one piece detachable bar having its ends seated on the top of said screw-threaded neck portion and extending across the neck portion with elastic means at the end of the bar, a screw-threaded cap fitting over the neck portion and bar, said cap having a hole therein, said cap being movable towards and from the bar to open and close the hole in the cap.

3. A tube having a screw threaded neck portion and a bar extending across the top of the neck portion said bar having a lug thereon, a screw threaded cap having a thickened side portion fitting over the bar and neck portion and having a thin integral top portion having a hole therein through which the lug on the bar may project, said cap being movable towards and from the bar to open or close the hole in the cap.

In testimony whereof I have affixed my signature.

JAMES M. RICHARDSON.

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