Oct. 21, 1930. R. J. RADER 1,779,216

COLLAPSIBLE TUBE

Filed Oct. 26, 1927

Fig. 1

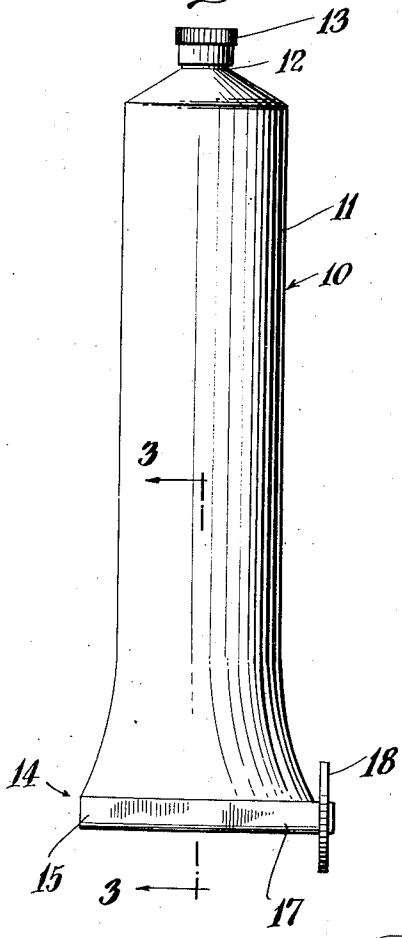


Fig. 2

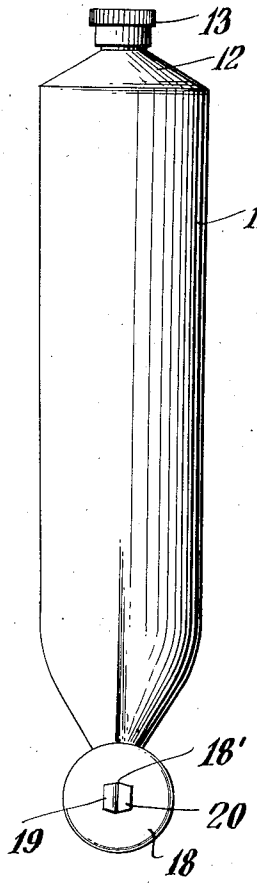
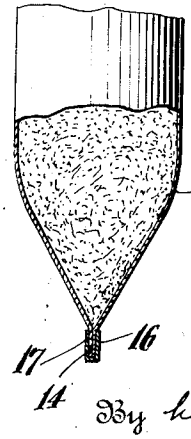


Fig. 3



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UNITED STATES PATENT OFFICE

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COLLAPSIBLE TUBE

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My present invention relates to collapsible tubes and the like, and aims to devise articles of the general character specified which are simple in construction, which may be readily and conveniently fabricated and assembled, and which may as readily be operated with maximum convenience and the maximum utilization of the contents of said collapsible tubes and the like. Other objects and advantages of the articles of the present invention will in part be pointed out in detail hereinafter and will in part be obvious to those skilled in the art to which the present invention relates.

In the accompanying specification I shall describe, and in the annexed drawing show, an illustrative embodiment of the present invention. It is, however, to be clearly understood that my invention is not limited to the specific embodiment thereof herein shown and described for purposes of illustration only.

Referring to the drawing, wherein I have illustrated the aforesaid illustrative embodiment of the present invention:

Fig. 1 is a plan view of a collapsible tube embodying the principles of the present invention, said tube being shown with its cap applied and still fully charged;

Fig. 2 is a view similar to Fig. 1 showing the collapsible tube partially discharged;

Fig. 3 is a cross-sectional view taken along line 3—3 of Fig. 1 of the drawing.

Referring now to the aforesaid illustrative embodiment of the present invention, and more particularly to the drawing illustrating the same, 10 indicates the collapsible tube as a whole, said tube comprising the tube body 11 which is provided with the threaded nipple 12 and the usual internal threaded cap 13. The parts 11, 12 and 13 may be made in the usual manner, as by stamping out of tin or one of its alloys.

At its other end 14 the tube is provided with an end closure 15 which is preferably in the form of a folded metal strip having the folds 16 and 17 between which the end 14 of the tube may be clamped. The member 15 is preferably in the form of a relatively elongated and relatively rigid member adapted to receive, in a clamping position, the open end of the tube body 11.

Associated with the expressing member 15 is an operating portion, preferably in the form of a disc 18 which may be attached to the member 15 in any suitable manner, as by being provided with a substantially centrally disposed slot or aperture 18′ through which pass the ends 19 and 20 of the portions 16 and 17, respectively, these ends being preferably cut so as to be adapted to be folded over against the outer face of the disc 18, in opposite directions, to properly position the disc 18.

This completes the description of the aforesaid illustrative embodiment of the present invention. The construction of said embodiment will, it is believed, be sufficiently clear from the foregoing description. Likewise the manner of assembling said embodiment will be clear from the foregoing description but may be briefly summarized as follows:

After the tube body 11 is provided with the threaded nipple 12, the end 14 is inserted between the folds 6 and 17 of the member 15, which latter is now compressed so as to bring the portions 16 and 17 of the member 15 into clamping position with the lower end of the tube, as hereinabove described. Previous to this operation the ends 19 and 20 of the members 16 and 17, respectively, have preferably been passed through the slot 18′ in the disc 18 and have been folded over in opposite directions to properly position the disc 18 on the member 15. The member 15 is applied after the tube has been charged or loaded through the open end 14, the cap 13 having been applied, as by being screwed onto the threaded nipple 12, before the loading or charging operation has commenced.

This completes the description of the manner of assembling and loading the aforesaid illustrative embodiment of the present invention. It will be noted that the device is simple in construction, may be readily and conveniently fabricated and assembled, and as readily charged. In discharging the tube, the cap 13 is removed and the operator then brings the necessary rotary pressure on the

disc 18, which causes the desired portion of the tube 11 to be wound around the expressing member 15, thus discharging the tube. This discharging operation is conducted efficiently and economically. The device has other advantages and superiorities in construction and in use which will readily occur to those skilled in the art to which the present invention relates.

What I claim as my invention is:

1. A collapsible tube comprising a tube body, an end closure therefor in the form of an elongated, relatively rigid member attached thereto, said end closure having one end thereof extended to form a pair of lugs, and an operating disc having an opening through which said lugs are extended and folded down whereby said disc is attached to said end closure.

2. A collapsible tube comprising a tube body, an end closure therefor in the form of an elongated, relatively rigid member attached thereto and having a space therein for receiving in clamping position an end of said tube body, a pair of lugs formed on one end of said end closure and an operating disc having an opening through which said lugs are extended and folded down whereby said disc is attached to said end closure by means of said lugs.

3. A collapsible tube comprising a tube body, an end closure therefor in the form of an elongated, longitudnally folded, relatively rigid member attached thereto and having a space therein for receiving in clamping position an end of said tube body, a pair of lugs formed on one end of said end closure and an operating disc having an opening through which said lugs are extended and folded down whereby said disc is attached to said end closure by means of said lugs.

In testimony whereof, I have signed my name to this specification this 26th day of July, 1927.

ROBERT J. RADER.