Nov. 13, 1923. 1,474,253

H. G. GANSZ

TUBE AND CLOSURE

Filed Dec. 10, 1921

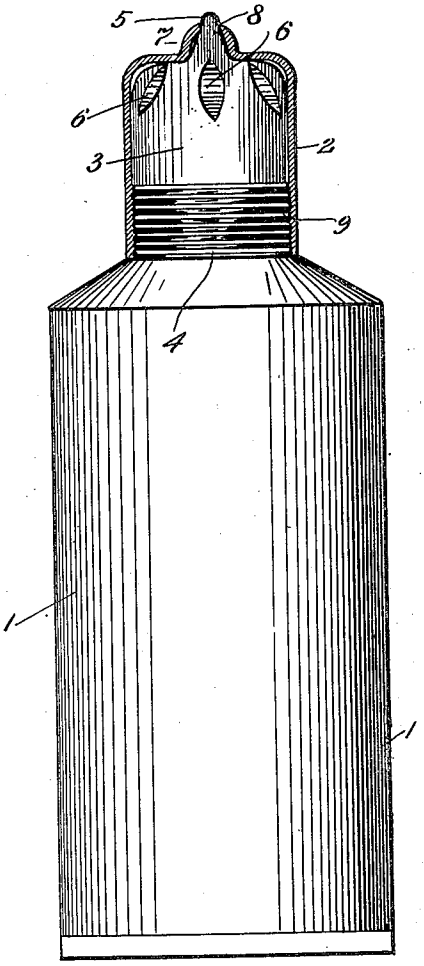


Fig. 1.

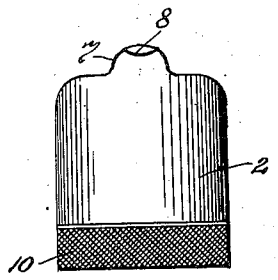


Fig. 2.

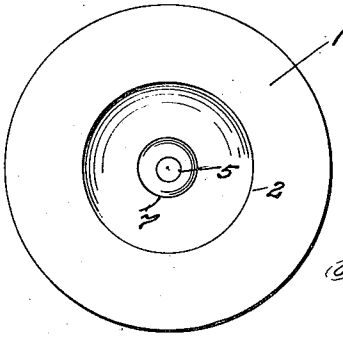


Fig. 3.

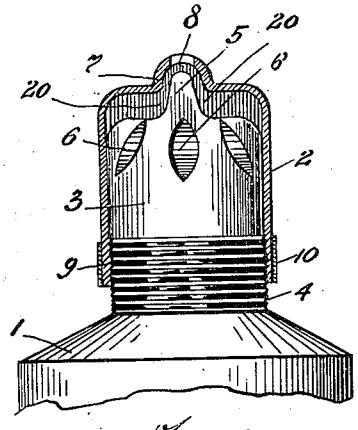


Fig. 4.

Inventor:
Harry G. Gansz
by Johnson & Krehbiel
Attorney.

Patented Nov. 13, 1923. 1,474,253

UNITED STATES PATENT OFFICE.

HARRY G. GANSZ, OF CINCINNATI, OHIO.

TUBE AND CLOSURE.

Application filed December 10, 1921. Serial No. 521,504.

To all whom it may concern:

Be it known that I, HARRY G. GANSZ, a citizen of the United States, residing at the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Tubes and Closures, of which the following is a specification.

The object of my invention is to produce a tube and closure therefor, which shall be cheap of manufacture, simple in construction and highly efficient in use; used more particularly in connection with collapsible tubes holding tooth paste, plastic medicinal preparations, or any plastic compound or composition of matter which is squeezed or oozes out of the end thereof under pressure; my device possessing great utility, and being highly sanitary, always keeping the contents in a normal and desirable condition for use, and in stock.

It consists essentially of a tube or body part holding the compound, provided at its top with a multiplicity of slits therein and a conical shaped end which is closed at the top in combination with a cap part having a hole or orifice at its upper extremity; the cap adaptable for screwing onto and off of said tube or body part.

In devices or tubes of this character now in use, a small screw threaded outlet nipple is provided, fitted by a small screw threaded cap which screws onto the small nipple; the hole in the nipple being round or rectangular. In using such tubes it is hard to lay plastic compound in proper position on the tooth brush or for any other purpose and the cap being small, it is often lost, it is hard to properly screw in place again and often screws onto the tube nipple in a manner that it becomes locked before being screwed home. It is hard to manipulate and in doing so, the paste will ooze out and smear the outlet, making it unsanitary and clogging the outlet, dirt; dust and the like can gather onto the meeting closure end between the cap and the tube nozzle or nipple. My device overcomes all these objections.

The various features of my invention and their advantages will readily become apparent from the following specification and claim.

In the accompanying drawing, forming a part of this specification:

Fig. 1, is a view in elevation of my new tube, with the cap thereof in section,

Fig. 2, is a view of the cap in elevation,

Fig. 3, is a plan view, and

Fig. 4, is a view in elevation of the body part, partly broken away, the cap being shown in section and being shown in operative position.

The body of the tube is marked 1, and the cap 2, and they may be made from any material which will best serve the purpose for which they are used and they may be made of any desirable contour. The body 1, is preferably made of thin collapsible material. This body portion has the neck 3 extending upward therefrom and this neck may be small and long or it may be made short. This neck is closed at the top by a conical extreme end 8 and carries and is provided with a number of slits as 6; at the bottom of this neck is placed peripheral screw thread 4.

The cap is formed as shown in the drawing having a slight rise at the top thru which I place an orifice or hole 5 and at the bottom this cap has a knurled surface 10, and at its bottom carrying an internal screw thread 9. These screw threads may be of a pitch best adaptable to hold the part together and to enable the ready unscrewing and reseating of cap 2. The screw threads 9 of the cap engage the screw threads 4 on the body portion 2. I may make any other connection between the cap and body portion which will enable me to move the cap upwardly and downwardly on the neck 3 of the tube 1.

In the device shown in Fig. 1, it will be seen that the cap 2 is screwed home and in a normal position, the conical upper end of the neck 3 of the tube passing up thru the rise 7 at the top of the cap, making a very tight joint.

In Fig. 4, it will be seen that the cap has been screwed upwardly and the rise on the cap is above the conical part 5, the hole 8 being exposed, so that, when the collapsible tube is pressed or squeezed, the contents will ooze or press out of the holes or slits 6 and enter the passage-way 20 between the upper part of the neck 3 and the inside

of the cap top, and by continued pressure will pass out thru the hole 8 onto the tooth brush, for example; when enough paste has been pressed upon the tooth brush the screw cap 2 can be screwed home as shown in Fig. 1, closing the orifice 8 as the conical top 5 is pressed up thru the same and they have formed the tight joint together. When the screw cap is screwed down home the surplus paste is forced back in thru the hole 6 into the tube.

It will be observed, that, by my construction I provide a sanitary tube and cap, for carrying plastic materials or compositions of matter, which are forced out of the collapsible tube, which is more convenient than tubes of this character now used; there is little danger of losing the cap, as it need not be entirely unscrewed from the tube neck.

It will, of course, be evident that the cap may be engaged with the tube end in any other preferred manner, which might be found desirable in practice.

A tube of this character can also be more readily carried around when found necessary or in travel and the cap will not become disengaged from the body portion.

While I have herein described one specific method for carrying my invention into effect, it will be readily understood that I may modify the same to some extent.

What I claim as new and my invention and desire to secure by Letters Patent, is:

A dispensing device including a collapsible receptacle provided at one end with a cylindrical head terminating in a centrally disposed conical peak, the upper end of said head being provided with radially disposed ports to permit the contents of the receptacle to be discharged through said head, the cylindrical outer surface of substantially the entire upper half of said head being smooth and the cylindrical surface of substantially the entire lower half of said head being screw-threaded, and a cap cooperating with said head and terminating in an apertured dome adapted to cooperate with the conical peak for entirely closing the receptacle, the cap being provided with an internal cylindrical surface of substantially the same diameter as the cylindrical surface of the head, extending from one end of the cap to the other, substantially the entire upper half of the cylindrical surface of the cap being smooth to cooperate with the smooth portion of the cylindrical surface of the head of the receptacle and substantially the entire lower half of the cylindrical surface of the cap being screw-threaded to engage the threaded portion of the receptacle thread, the height of said threaded portions being substantially equal to the height of the smooth cylindrical surface of the head from the ports to the screw threads of the head, in order to prevent material discharged from said ports from reaching said threads.

In testimony whereof, I affix my signature at Cincinnati, Ohio, this 8th day of December, 1921.

HARRY G. GANSZ.