

Sept. 29, 1925.

1,555,705

W. E. ROBERTS

DISPENSING DEVICE

Filed April 7, 1922

Fig. 1.

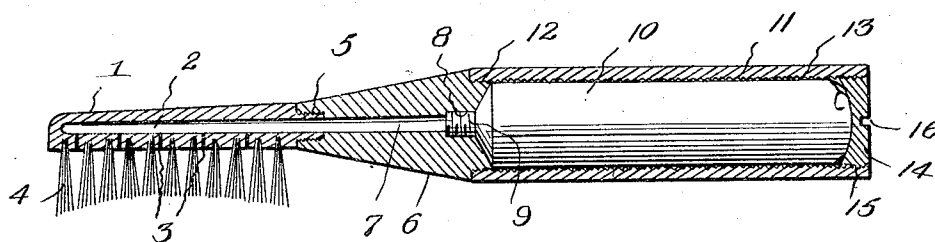


Fig. 2.

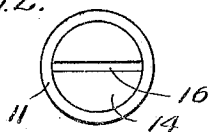


Fig. 3.

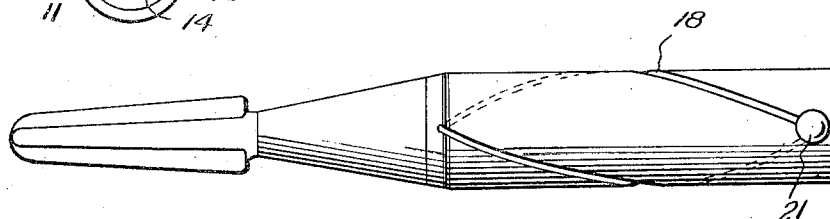


Fig. 4.

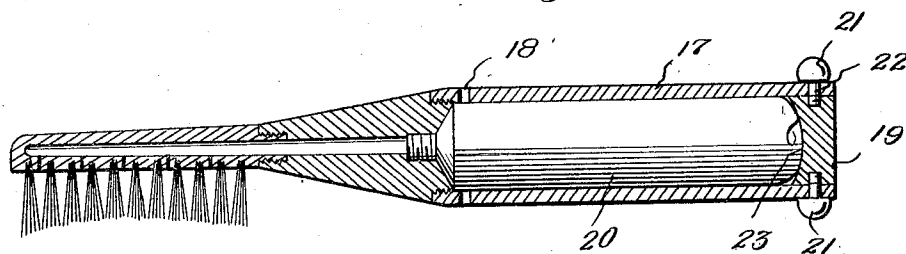
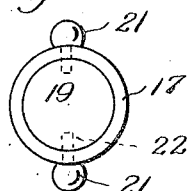


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WILLIAM ELLSWORTH ROBERTS, OF KENOSHA, WISCONSIN.

## DISPENSING DEVICE.

Application filed April 7, 1922. Serial No. 550,336.

*To all whom it may concern:*

Be it known that I, WILLIAM ELLSWORTH ROBERTS, a citizen of the United States, residing at Kenosha, in the county of Kenosha and State of Wisconsin, have invented new and useful Improvements in Dispensing Devices, of which the following is a specification.

This invention relates to a tooth brush and has for its primary object the combining of a tooth brush and paste tube in a single article.

An object of the invention is to construct a tooth brush having means for feeding paste to the bristles of the brush.

Another object of the invention is to provide a fountain tooth brush of simple, inexpensive construction which is accurate in its operation.

A feature of my invention is the novel manner of connecting an ordinary paste tube to a brush so that paste may be readily fed to the brush head and the latter properly supported during the brushing operation.

Besides the above my invention is distinguished in the use of mechanical means for exerting great pressure to force paste through the outlets.

With these and other objects in view the invention will be better understood from the following detailed description taken in connection with the accompanying drawing wherein:

Fig. 1 is a sectional view through a brush constructed in accordance with my invention.

Fig. 2 is an end elevation.

Fig. 3 is a plan view of another form.

Fig. 4 is a longitudinal sectional view of Fig. 3.

Fig. 5 is an end elevation of Fig. 3.

Again referring to the drawing illustrating two of the many constructions for mechanically forcing paste from the brush and more particularly to Figures 1 and 2 the numeral 1 designates a brush head having a passage 2 communicating with outlets 3 arranged among the bristles 4. This head is provided with a threaded base 5 that has screw threaded engagement with the nipple 6 also provided with a passage 7 in commu-

nication with the passage 2. The passage 7 also has screw threaded engagement 8 with the nipple 9 of an ordinary paste tube 10. The numeral 11 designates a barrel that has screw threaded engagement 12 with the nipple and threaded throughout its interior as indicated at 13. A cap 14 has screw threaded engagement 15 with the said mentioned threads and is provided with a slot 16 for receiving an instrument whereby the cap may be turned and fed along the interior of the barrel thereby pressing the end of the tube and forcing paste through the passage and then through the outlets onto the bristles. It is, of course, to be understood that the barrel 11 may be loaded with paste and the tube disposed of.

In the remaining figures I have illustrated another mechanical method of forcing paste from the tube. In this particular instance the barrel 17 is provided with spiral slots 18 encircling part way of the barrel for the purpose now to be described. A follower 19 is slidably mounted within the barrel and abuts one end of the tube 20. Buttons 21 have their shanks 22 passed through the slots and secured to the follower. It will be noted that the follower has a concave surface 23 that engages the end of the tube and facilitates crimping thereof. From this construction it will be seen that it is only necessary to slightly press the button along the slot and the cam action between the walls of the slot and the shanks will exert pressure great enough to squeeze the proper amount of paste from the tube through the passage into the outlets. In this particular construction the buttons are always exposed to view and may be very easily manipulated.

It is, of course, to be understood that the invention may be constructed in various other manners and the parts associated in different relations and, therefore I do not desire to be limited in any manner except as set forth in the claims hereunto appended.

Having thus described my invention what I claim is:

1. A dispensing device for tooth brushes comprising a barrel provided with spiral slots and having an outlet, a paste tube arranged within the barrel and having its out-

let in communication with the outlet of the barrel, a follower slidably mounted within the barrel and having a concave surface engaging the end of the tube, and buttons secured to the follower and moving in said slots. 10

2. A dispensing device comprising a bar-

rel having spiral slots formed therein, a follower within the barrel, and operating elements connected to the follower projecting through and movable in said slots for giving rectilinear as well as partial rotary movement to the follower.

WILLIAM ELLSWORTH ROBERTS.