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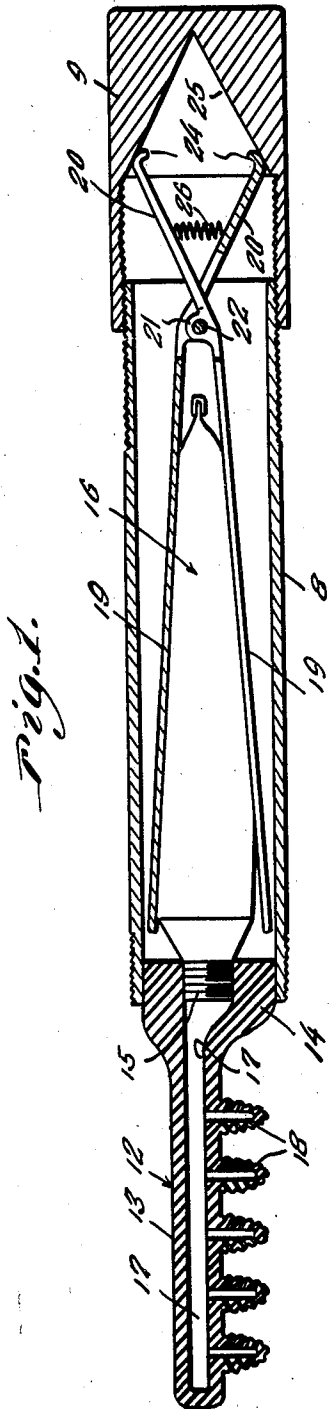
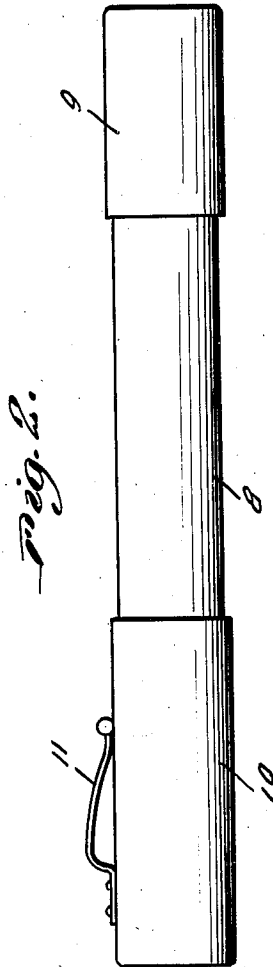
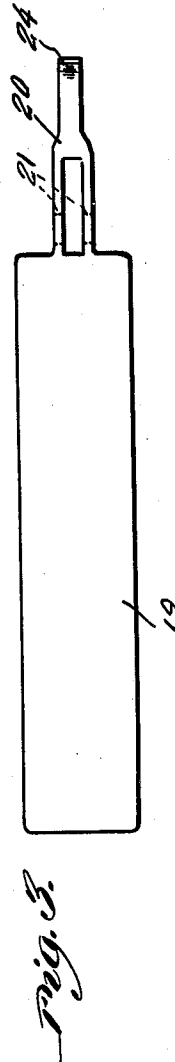
H. D. CASSANOS ET AL

2,053,697

TOOTHPASTE DISPENSER

Filed Feb. 15, 1935

2 Sheets-Sheet 1



Inventors

H. D. Cassanos
H. D. Cassanos

By *Almon A. O'Brien*
Attorney

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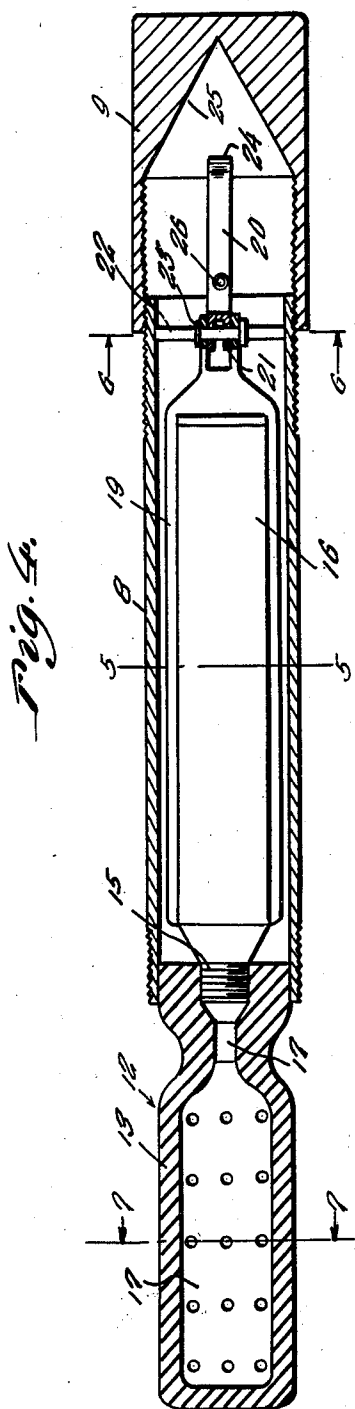
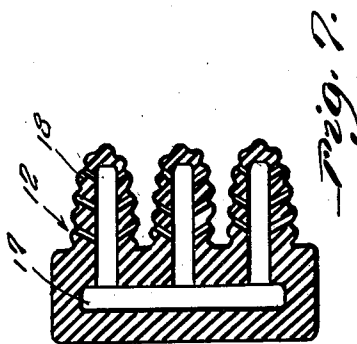
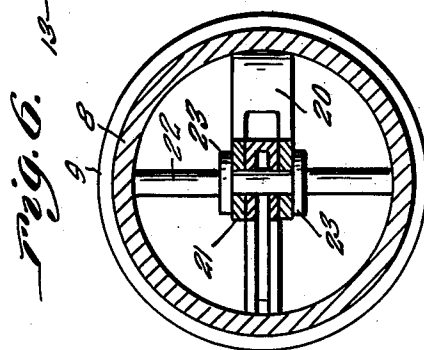
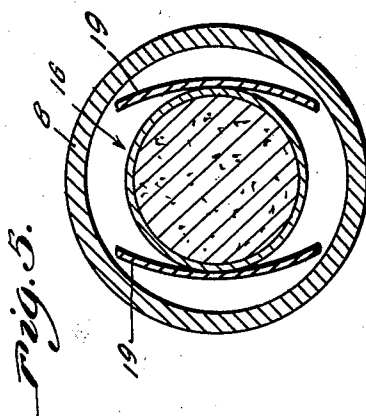
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TOOTHPASTE DISPENSER

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2 Sheets-Sheet 2



Inventors

H. D. Cassanos
H. D. Cassanos

By *Alvanor A. O'Brien*
Attorney

UNITED STATES PATENT OFFICE

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TOOTHPASTE DISPENSER

Harilaos D. Cassanos and Demetrios Harry
Cassanos, Woburn, Mass.

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1 Claim. (Cl. 221—60)

This invention relates to a unique toothpaste dispenser of relatively small size especially, but not necessarily, adapted to be carried in one's pocket and held in place by a clip or the like similar to present day fountain pens.

As a matter of fact, the invention may be conveniently referred to as a fountain toothbrush in that it contains, as a part thereof, a tube of toothpaste and novel squeezing and ejecting means for dispensing the paste in a uniform and convenient manner for brushing and massaging purposes.

One feature of the invention is predicated upon the adoption and use of a simple open ended cylindrical shell serving as a container for the toothpaste tube, said shell also serving to accommodate mechanical tube compressing means, and constituting a carrier for the multiple nipple or bristle equipped brush head, its removable protecting cap, as well as a rotary operating cap located at that end opposite to the brush.

Of particular importance is the double acting tube compressing implement or tool located on the interior of the structure and constructed for cooperation with a rotary actuating cap on one end of the cylindrical shell.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is a view of the complete structure, said view being taken on a central line longitudinally of Figure 4 and disclosing the parts in section and partly in elevation, the brush being exposed by removal of the complemental protective cap.

Figure 2 is a view on a small scale, about actual size, showing the relative proportions and coordination of parts.

Figure 3 is a detail view of one of the levers of the collapsible tube compressing unit or implement.

Figure 4 is a horizontal sectional view taken at approximate right angles to Figure 1.

Figures 5, 6 and 7 are cross sections upon an enlarged scale, taken on the lines 5—5, 6—6, and 7—7 respectively of Figure 4.

The finished or complete toothbrush is of the general external appearance illustrated in Figure 2. It comprises a tubular body portion in the nature of a cylindrical shell 8 of appropriate material. This is externally screw threaded at the right hand end to accommodate a turnable or rotary cap 9. The opposite end is also externally screw threaded to accommodate a protective cap

10, which may, if desired, be provided with a pocket protection clip 11 so that the entire device may be conveniently carried in one's coat pocket, or the clip may be omitted when it is desired to carry the device in a purse or the like.

The brush per se is indicated by the numeral 12 in Figure 1. This brush is preferably made from a single body of rubber or equivalent material and the rectangular hollow back 13 is connected at one end to an enlarged annulus 14 which serves as a neck and fits into the adjacent end of the cylinder or shell 8. The collar or neck 14 is constructed to accommodate the screw threaded discharge neck 15 of the collapsible tooth paste tube 16. The tooth paste tube 16 is of course, proportioned to fit in the cylinder 8 in the approximate manner illustrated in Figure 1. The numeral 17 in Figures 1 and 4 denotes the restricted passage between the collar and back 13 which limits the flow of the paste into the distribution chamber 17 of said back. The usable side or face of the back is apertured and provided with a plurality of outstanding teats or nipples 18 properly bored and apertured to function as applicator bristles. Thus as the paste is squeezed into the compartment 17 it is flattened into ribbon form and gradually forced out through the apertured bristles so that said bristles may be employed in a well known manner for brushing the teeth and massaging the gums as desired.

The mechanical implement or unit for compressing the collapsible tube 16 comprises a pair of levers whose arm portions are of flat plate-like design as indicated at 19. If desired, they may be bowed slightly in the transverse direction to conform somewhat to the shape of the paste tube (see Figure 5). The slotted shank portions 20 of the levers are joined together in intersecting scissors-like fashion and provided with ears or the like 21 pivotally attached to a supporting axle 22 carrying retaining flanges 23 (see Figure 6 in particular). The free ends of the shank portions are fashioned as indicated at 24 to function as cams and these cams are engageable with the cam surface 25 formed by way of a conical cavity on the interior of the turnable cap 9. The numeral 26 merely designates an expansion spring for spreading the cams apart.

In practice, it is obvious that by turning the cap to feed it inwardly on the cylinder 8 the cam coacting elements 24 and 25 come into play to cause the levers to compress the tube 16 and to squeeze the paste therefrom through the passage 17 and into the distributing compartment of the applicator head 12. By ejecting sufficient

of the paste in this manner, it is evident that it is forced out in small jets through the passages in the nipples or bristles 18. The result is that we have thus produced a simple and economical fountain tooth brush possessing the desired expeditious and compensating properties. All of the parts have been carefully selected and mechanically joined to promote expediency and efficiency in operation.

10 It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

15 Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

20 Having thus described the invention, what is claimed as new is:

A paste dispensing means for a brush comprising a hollow handle, said hollow handle constituting a container for a conventional collapsible tooth paste tube, and a compressing device co-operable with said handle and including a pair of pivotally connected intersecting levers, one end portion thereof being fashioned to serve as compression arms diametrically engageable with the tooth paste tube, the opposite ends of said levers being disposed in outwardly diverging relationship, having a spring interposed therebetween, and having their free ends terminating in laterally bent elements defining cams, and a screw cap attachable to one end of the handle, said cap being formed internally with a conical cavity serving as cam actuating means for said cams, and said cams projecting into said cavity to be in constant contact with the operating surface thereof.

HARILAOS D. CASSANOS. 20
DEMETRIOS H. CASSANOS.