Aug. 19, 1952 A. LAWSON 2,607,513

VALVE MECHANISM FOR FOUNTAIN TOOTHBRUSHES

Filed Oct. 29, 1947

Fig. 1.

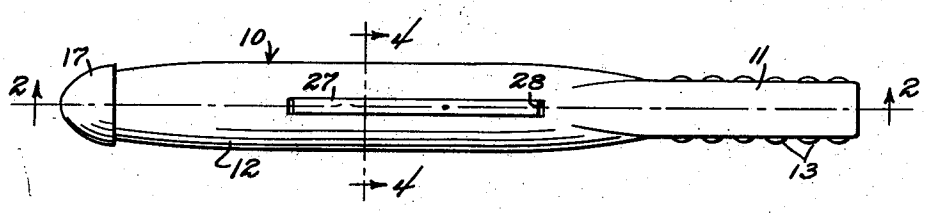


Fig. 2.

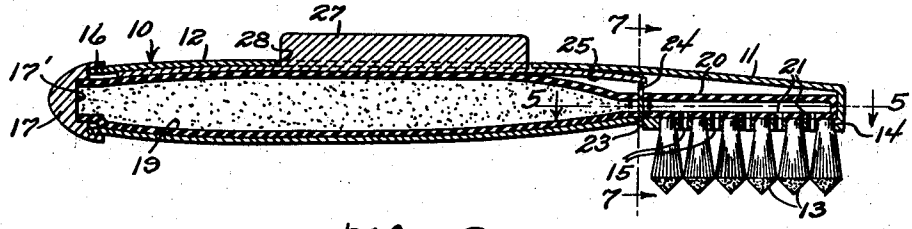


Fig. 3.

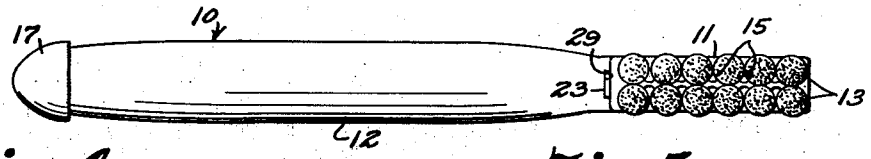


Fig. 4.

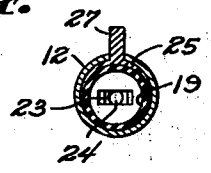


Fig. 5.

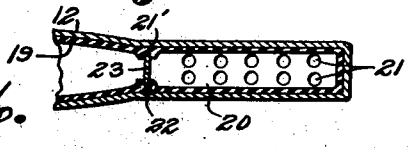


Fig. 6.

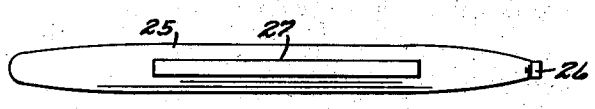
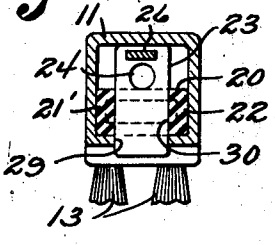


Fig. 7.



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VALVE MECHANISM FOR FOUNTAIN TOOTHBRUSHES

Anna Lawson, Detroit, Mich.

Application October 29, 1947, Serial No. 782,760

1 Claim. (Cl. 222—212)

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This invention relates to a toothbrush and more particularly to a fountain toothbrush which is simple in construction and efficient in operation.

An object of the invention is to provide a toothbrush of this character that has a unique valve construction, for the dispensing of the contents of a paste tube carried by the handle of the toothbrush.

With the above and other objects and advantages in view, the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the accompanying drawing in which:

Figure 1 is a top plan elevational view of an embodiment of the invention;

Figure 2 is a longitudinal sectional view on the line 2—2 of Figure 1;

Figure 3 is a bottom plan elevational view of Figure 1;

Figure 4 is a sectional view on the line 4—4 of Figure 1;

Figure 5 is a sectional view on the line 5—5 of Figure 2;

Figure 6 is a plan view of the pressure and valve actuating plate and

Figure 7 is a sectional view on the line 7—7 of Figure 2.

Referring more in detail to the drawing, the reference numeral 10 designates a toothbrush constructed in accordance with the invention.

The brush 10 comprises a hollow head 11 and a hollow handle 12 extending rearwardly from the head and formed integrally therewith.

The head 11, on its undersurface, covers the two parallel rows of related spaced bristle tufts 13 which are secured in sockets 14 in any conventional manner. Extending longitudinally of the head 11 are two parallel rows of apertures 15 which are so spaced that they are positioned inwardly of the outermost tufts and intermediate of the rows of tufts, and each individual tuft.

The rear end of the handle 12 is open and threads 16 are provided at the extreme end of the handle to receive the screw cap 17 thereon.

The cap 17 has a central socket 17', in which is mounted the open rear end of the flexible collapsible tube 19 which, at the forward end, has a portion 20 which extends inwardly of the head 11. The portion 20 is provided with apertures 21 which, when the portion is in proper position, aline themselves with the apertures 15 in the head 11.

The head 11 is substantially rectangular in

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shape, so that once the portion 20 is in place, it will not be displaced to eliminate alinement of the apertures.

Inwardly of the portion 20, at the rear end thereof, there is provided the opposed slotted bosses 21' and 22 respectively, in which is slidably mounted the valve 23. The valve 23 is provided with a port 24 which will register with the portion 20 to permit toothpaste or the like that is placed in the tube 19 to pass from the tube into the portion 20 to dispense the contents through the apertures 15 and 21, as will be later described.

The handle 12 might be termed a cigar shaped handle, and a plate 25, conforming to the shape of the handle, is placed in the handle in contact with the tube 19. The forward end of the plate 25 has a tongue 26 which is received in the opening in the valve 23 above the port 24. The plate 25 also has centrally thereof, an elongated projection 27 which extends outwardly of the handle 12 through the opening 28 in the handle. If the projection 27 is pressed inwardly, with the fingers, the tongue 26 on the plate will move the valve 23 outwardly of the handle through the slot 29 in the handle, and the slot 30 in the tube 19. Movement of the valve 23 will aline the port 24 with the portion 20 so that the contents of the tube 19 can be dispensed through the apertures 15 and 21.

In use, the cap 17 is removed to fill the tube 19 with toothpowder or toothpaste, and the cap is replaced. Downward pressure on the projection 27 will open the valve, and force the contents of the tube through the apertures to permit the paste to mingle with the tufts for cleaning the teeth in the conventional manner.

The toothbrush is simple in construction, and easily assembled or disassembled for the cleaning thereof.

It is inexpensive to manufacture, and easily operated, provides a handy compact assembly that is designed to eliminate the use of individual toothpaste or powder tubes or cases and toothbrushes.

It is believed that the above description will adequately explain the manner of operation and construction of the device, and it is to be understood that changes in the minor details of construction, arrangement and combination of parts may be resorted to, provided they fall within the scope of the appended claim.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

A valve structure for a fountain toothbrush, comprising a body formed with a hollow head and a hollow handle extending rearwardly of the head, apertures formed in said head, a flexible collapsible tube in said body having a portion conforming in shape to the handle and a portion conforming in shape to the head, said head conforming portion having apertures therein adapted to register with the apertures in the head, a plate in said handle in contact with said tube, a projection on the plate extending outwardly of the handle, opposed slotted bosses in said tube rearwardly of said head conforming portion, a valve slidably mounted in the slotted bosses in said tube rearwardly of said head conforming portion and formed with an opening therein, a tongue on said plate inserted in the opening in said valve, and said valve having a port therein adapted to register with said head

conforming portion when said projection is depressed causing the valve to be moved by the tongue to align the port with the handle portion and the head portion to permit toothpaste placed in said tube to be dispensed into the head portion and thence outwardly of said apertures.

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