May 29, 1928. 1,671,891

J. A. DOLAN

TOOTHBRUSH

Filed Sept. 28, 1927

Fig. 1,

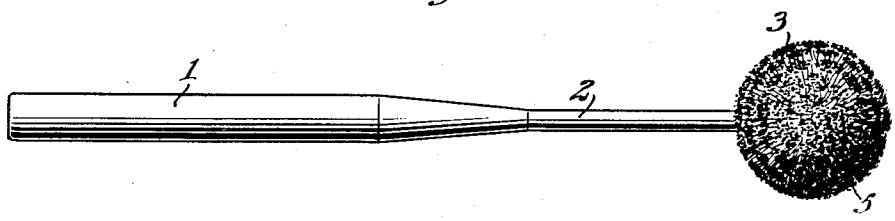
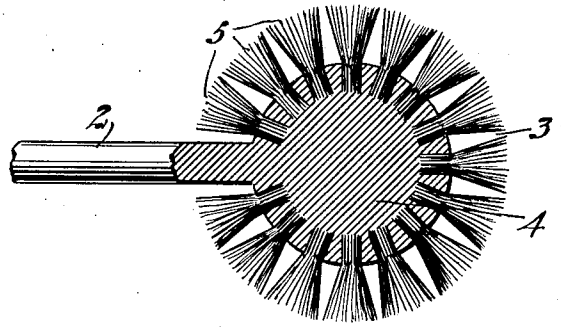


Fig. 2.



WITNESSES

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Patented May 29, 1928. 1,671,891

UNITED STATES PATENT OFFICE.

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TOOTHBRUSH.

Application filed September 28, 1927. Serial No. 222,612.

This invention relates to toothbrushes, an object of the invention being to provide a toothbrush, having a ball or spherical-shaped brush at the end of the shank or handle, which is capable of a wide range of manipulation by reciprocating and rotary motion to most effectually clean the teeth.

My improved brush has many advantages over other types of brush, some of which may be enumerated as follows:

The ball or spherical-shaped brush fits any shaped mouth or any conformation of teeth and can move freely throughout the curves and contour of the jaws and effectually clean the inner and outer faces of the teeth as well as the cusps, and dislodge any food particles between the teeth.

The brush is capable of a rotary or oscillating motion as well as a reciprocating motion, and the bristles of the brush always tend to throw any food particles outwardly from the gums and not press into the gums.

The brush may be placed inside the mouth with the jaws partially separated, and a rotary motion imparted to the brush to effectually clean the inner surface of the teeth.

This rotary motion may of course be imparted to the brush while cleaning any portion of the teeth, and the shape or form of the handle or shank of the handle facilitates the operation.

The brush most effectually cleans the molars as well as the front teeth both inside and out, and provides an effectual device which does not give discomfort to the user but is most efficient in the performance of its functions.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view in elevation showing my improved toothbrush;

Figure 2 is a somewhat enlarged view in longitudinal section through the brush and the shank.

For purposes of description I shall divide the device into three parts, namely, a handle 1, a shank 2 and a brush 3, but it is to be understood that these parts have fixed relationship and all save the bristles of the brush may be molded or formed into a single, integral member.

The brush 3 is of spherical form and comprises a ball or spherical enlargement 4 fixed to or integral with the shank 2 and having throughout its surface tufts of bristles 5. It will be noted that all the tufts are positioned radially relative to the axis of the ball or spherical enlargement 4 and that they are so shaped as to form a ball or spherical brush.

The shank 2 is preferably cylindrical in form or, in other words, curved in cross section, and the handle 1 may be of similar shape or may be of any other desired shape, and I of course do not limit myself to the particular material employed in forming the handle, shank and ball or enlargement 4 but these parts may be molded or otherwise formed so as to constitute a single integral member.

In operation, the spherical brush may be positioned anywhere in the mouth and may be given either a reciprocating or a rotary motion. The rotary motion is imparted by grasping the handle 1 between the thumb and fingers of the hand and rotating or oscillating the hand; the shank portion 2 being relatively narrow and circular in form permits the brush to be located against the inner surfaces of the teeth of both jaws, and a rotary motion imparted to the spherical brush to thoroughly clean the inside of the teeth. The outside of the teeth and cusps of the teeth may be cleaned in like manner, and also a reciprocating or rocking motion may be imparted as desired.

It will be noted that, by reason of the fact that the tufts 5 of bristles project radially from the ball or spherical enlargement 4, both in the reciprocating and rotary motions of the brush the food particles are moved in a direction away from the gums.

The ball or sperical brush presents a surface of such shape that cleaning action may be imparted to the teeth, utilizing the entire surface contour of the brush.

This spherical brush may of course be made in various sizes and various changes might be made in the general form and arrangement of the parts without departing

from my invention and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. As a new article of manufacture, a toothbrush including a handle and a spherical brush head on the end of the handle.

2. As a new article of manufacture, a toothbrush including a handle, a spherical enlargement or ball on one end of the handle, and tufts of bristles secured to the ball projecting from all faces of the ball and all of said tufts positioned radially relative to the axis of the ball.

3. As a new article of manufacture, a brush including a handle, a cylindrical shank on the handle, a spherical enlargement or ball on the end of the shank, and bristles projecting in all directions from the ball and fixed thereto, said handle, shank and ball or enlargement constituting a single integral member.

Signed at New York in the county of New York and State of New York this 26th day of September A. D. 1927.

JOHN A. DOLAN