Oct. 31, 1933. K. AKIZAWA 1,932,878

TOOTHBRUSH

Filed Aug. 27, 1932

Fig. 1.

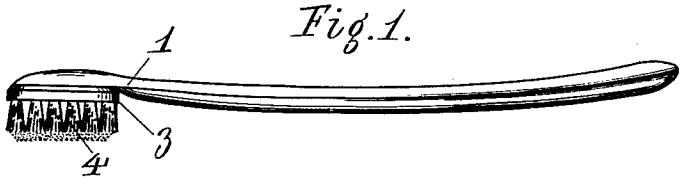

Fig. 2.

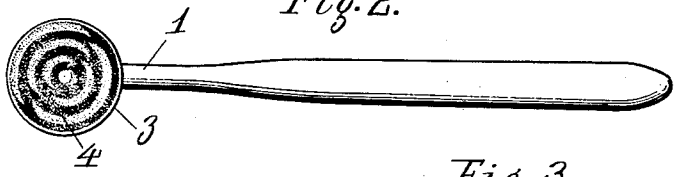

Fig. 3.

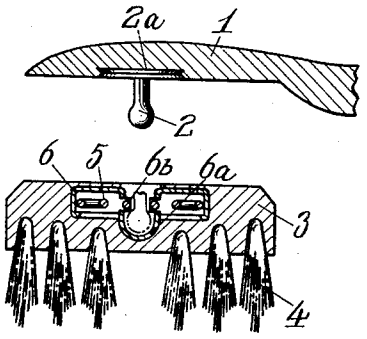

Fig. 5.

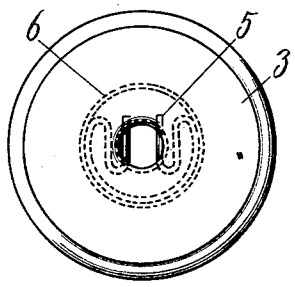

Fig. 4.

Inventor:
Kuniyoshi Akizawa
By E. F. Wendroth
Atty

Patented Oct. 31, 1933

1,932,878

UNITED STATES PATENT OFFICE

1,932,878

TOOTHBRUSH

Kuniyoshi Akizawa, Osaka, Japan

Application August 27, 1932, Serial No. 630,734, and in Japan September 5, 1931

1 Claim. (Cl. 15—176)

This invention relates to improvements in a tooth brush which comprises a shank and a detachable bristle back member. It has for its object to provide a rigid and reliable holding means for the bristle back member, which is rotatably held on a knob on the shank so that it rotates while it is in use, and the bristles are evenly worn all over the surface.

Fig. 1 is a side elevation of the brush according to this invention, and Fig. 2 is a plan view thereof.

Fig. 3 is a part sectional elevation of the shank. Fig. 4 is a sectional elevation of the bristle back member, and Fig. 5 is a plan view thereof.

The tooth brush of this invention consists of a shank and a bristle back member which is detachably held by the shank, the holding means being the characteristic feature of this invention.

Referring to the drawing, an end of the shank 1 is somewhat flattened and widened so as to make a spoon-like shape. At the centre of the flattened end is fixed a knob 2 which may be made integral with the shank, or separately therefrom and firmly fixed thereto with a cementing material. According to the example shown in Fig. 3, the knob 2 is made of a metal having a grooved flange 2*a*, the latter part being moulded in the body of the shank.

The bristle back member has a base plate 3 with bristle 4 set therein. On the back side of the plate is moulded therein in a spring member, which comprises a spring 5 and a case 6 therefor. The case has a central projection 6*a*, and each end of the spring 5 fits into the slits 6*b* on the opposite side of the central projection. The size of the central projection is such that the knob of the bristle back member can be loosely inserted into the cavity of the projection. When the knob fits into the cavity, the spring's ends firmly hold the neck of the knob so that the bristle back member is connected to the shank although the former can freely rotate on the latter.

The shank and the base plate of the bristle back member can be made of any convenient material, but a plastic material such as celluloid and resinous compounds is preferable, because the knob and the spring member can be moulded in the bodies of the shank and the base plate without requiring any cementing material.

The tips of the bristles are cut so as to make a concentric wave form as shown in Fig. 2, therefore the sectional view of the bristle on any radial plane is the same as shown in Fig. 4.

When this tooth brush is in use, the bristle member rotates on the knob 2 by the friction on the teeth, so that each part of the bristle wears in the same manner and at the same speed, therefore a bristle member lasts longer. In case the bristle is worn off, it may be replaced by a new one, and the shank can be used for a long time.

What I claim is:—

A tooth brush which comprises a shank and a bristle back member detachably held by the former, the holding means consisting of a knob provided at an end of the shank and a spring member provided at the centre of the base plate of the bristle back member which base plate is made in a circular disc form, the knob being rotatably held by the spring member, and the tips of the bristles of the bristle back member being cut in concentric wave form.

KUNIYOSHI AKIZAWA.