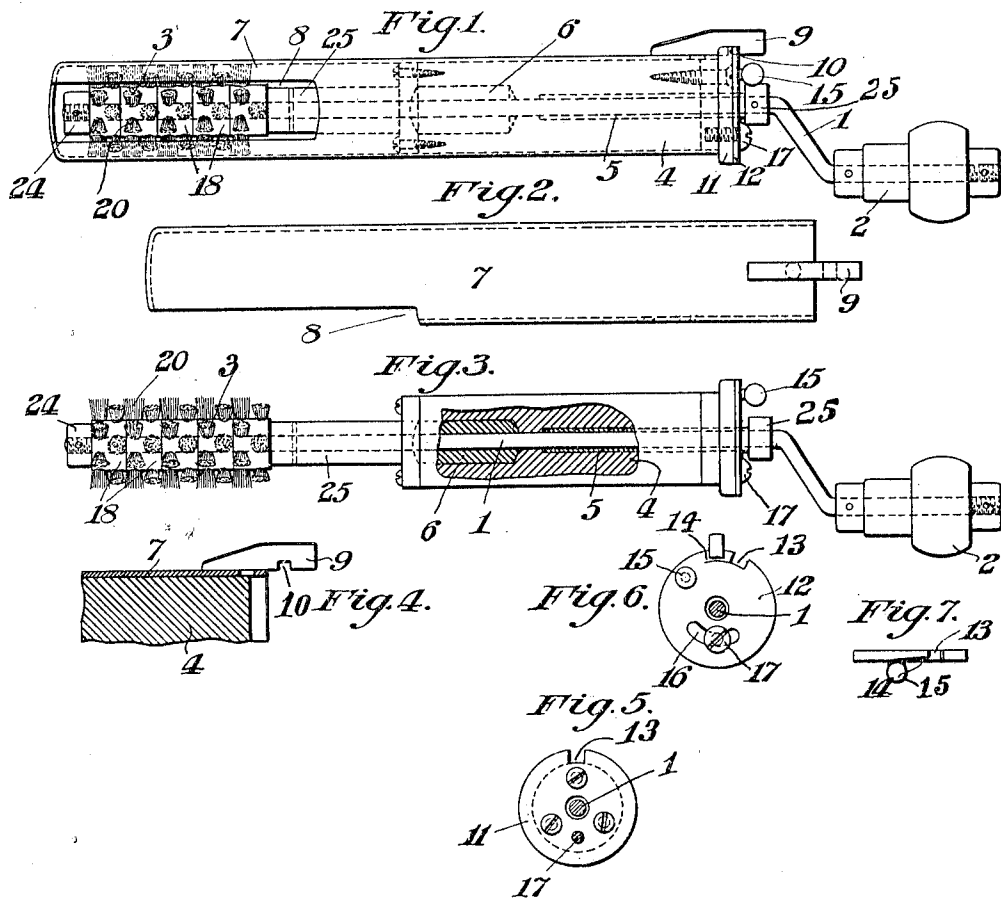


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 ROTARY TOOTH BRUSH.
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1,022,139.

Patented Apr. 2, 1912.



WITNESSES
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ROTARY TOOTH-BRUSH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH HORN, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Rotary Tooth-Brushes, of which the following is a specification.

My invention relates to improvements in rotary tooth-brushes, and the object of my invention is to furnish an efficient rotary tooth-brush which can be readily and thoroughly cleaned every time that it is used.

My invention is illustrated in the accompanying drawings, in which similar numerals of reference indicate similar parts throughout the several views and in which—

Figure 1, is a front elevation of my tooth-brush; Fig. 2, a top view of the removable casing of the brush; Fig. 3, a side elevation of the brush, the casing being removed; Fig. 4, a section of part of the body of the device and of part of the casing showing the keeper carried by the latter; Fig. 5, a front elevation of metal end secured to body; Fig. 6, a front elevation of rotating lock carried by the end of the body; Fig. 7, a top view of Fig. 6.

1 is a shaft one end of which carries a crank 2 and the other end of which carries a cylindrical brush 3 the details of which I will presently describe.

4 is the body of the device which is constructed of any suitable material, for lightness wood or fiber is preferable; the shaft 1 passes through this body or through a bushing 5 carried thereby. The bushing 5 projects out slightly beyond the rear end of the body and engages the stop or collar 25 carried on the shaft 2.

6 is a packing at the forward end of body 4 to prevent water from the brush 3 entering between the shaft 1 and body 4. At its extreme rear end the shaft 1 is bent to form, or carries, a crank 2 by means of which it and the brush 3 may be rotated.

The body 4 and the brush 3 are inclosed by a cylindrical casing 7 of thin metal. At its forward end the tank 7 is furnished with a longitudinal slot 8 in order that the bristles may be exposed so as to engage the teeth. The slot 8 is comparatively narrow and the chamber inclosing the brush forms

a reservoir for water during the operative action of the brush.

In an apparatus of this kind it is most important that means be provided for thorough cleaning and to this end the casing 7 may be completely removed giving access to its interior and to all parts of the brush. For retaining the casing 7 in place and for its easy removal I have secured to its rear end a projecting keeper 9 the under side of which is furnished with a notch 10. Rotatably carried upon the metal end 11 of the body 4 is a locking plate 12 which is furnished with a notch 13, Figs. 6 and 7, through which the keeper 9 may be slid, and with a cam face 14, best shown in Fig. 7, on its rear face which when the casing 7 is in position and the plate 12 turned on its center engages the rear end of slot 10 in keeper 9 and holds the casing tightly in place upon the body of the device.

15 is a knob on plate 12 to facilitate its turning.

16 is a slot in plate 12 and 17 a screw held by end 11 and passing through slot 16 to steady the plate 12 in its movements and to hold that part of it diametrically opposite the locking key 9 in place when it is forced against the keeper 9.

The brush itself consists, preferably, of staggered bunches of bristles 20 so that the water in the reservoir may circulate freely. Each row of bristles is carried upon a separate hub 18. The several hubs each of which forms a unit of the brush are placed upon the shaft 1 and a nut 24 on the outer end of this shaft forces them against each other and against a collar 25 secured to the shaft and securely holds them in place.

Having thus described my invention I claim as new and desire to secure by Letters Patent:—

1. In a tooth-brush, in combination, a cylindrical brush, a shaft carrying said brush, a crank for rotating said shaft, a cylindrical body carrying said shaft, a cylindrical case furnished with a slot for access to said brush, a notched key carried by the inner end of said case, and a rotatable notched locking plate carried by the inner end of said body for engaging said notched key.

2. In a tooth-brush, in combination, a cylindrical brush, a shaft carrying said brush,

a crank for rotating said shaft and brush, a cylindrical body carrying said shaft, a plate secured to the outside end of said body, a cylindrical slotted case inclosing said body and brush, a notched key projecting from the inner end of said body, and a notched disk having a cam face adjacent to the notch therein for engaging the notched key on said case, said disk being carried by the outside face of the plate on the outside end of said body and being adapted to rotate around said shaft as a center. 10

JOSEPH HORN.

Witnesses:

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