

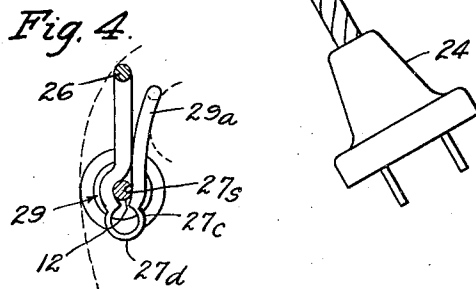
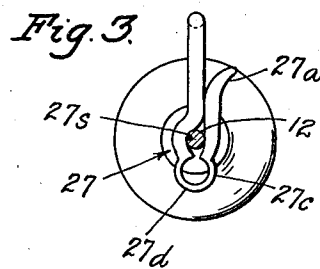
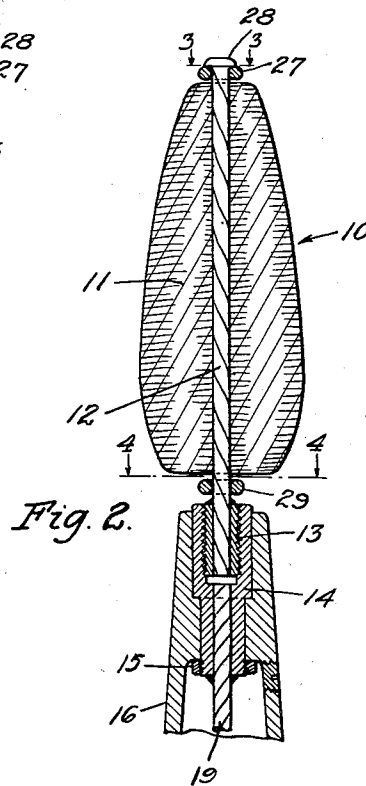
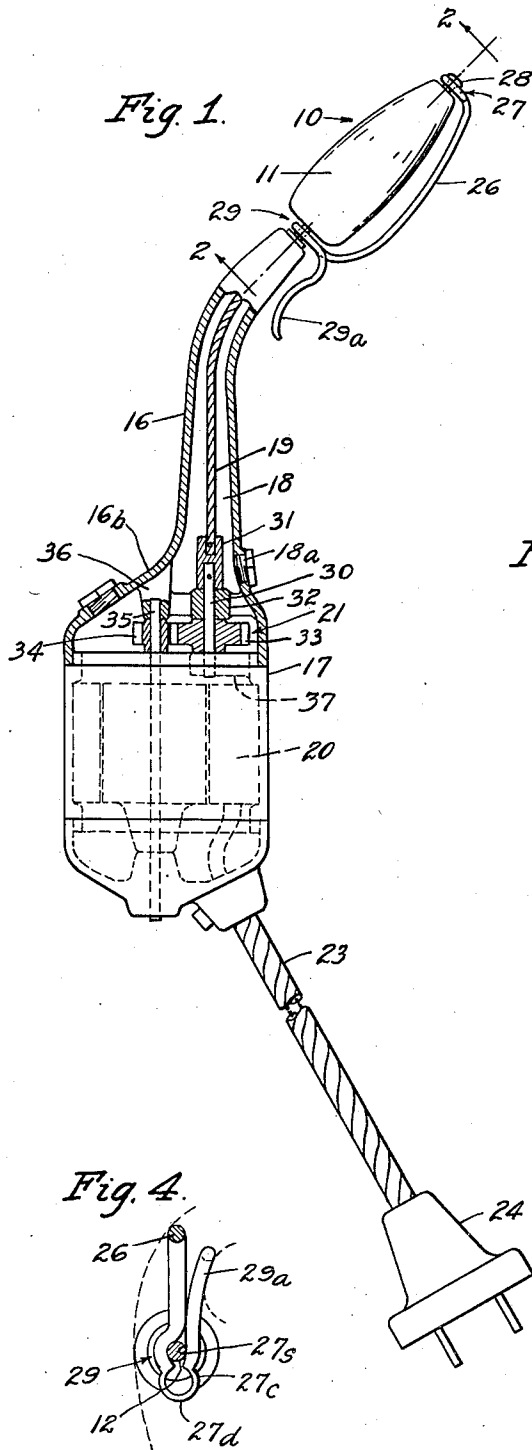
Sept. 6, 1938.

J. GOLD

2,129,002

ELECTRIC TOOTH BRUSH

Filed June 15, 1937



INVENTOR
Jacob Gold
 BY *Robt W. Pearson*
 ATTORNEY

UNITED STATES PATENT OFFICE

2,129,002

ELECTRIC TOOTH BRUSH

Jacob Gold, Los Angeles, Calif.

Application June 15, 1937, Serial No. 148,343

2 Claims. (Cl. 15—23)

This invention pertains to a motor driven tooth brush.

Among the objects of the invention are the following:

- 5 To provide a tooth brush and a mounting means therefor of a small, portable type which can be more conveniently supported by the hand of the user during the application of the brush to the teeth; to provide an improved combined
- 10 brush shank and a motor casing construction wherein is housed an electric motor for operating the brush proper; and to furnish an improved mouth guard to prevent the bristles of the brush proper from irritating the fleshy tissues of the
- 15 mouth while said brush is being rotated by the motor.

Other objects, advantages and features of the invention will hereinafter appear.

- 20 Referring to the accompanying drawing, which illustrates what is at present deemed to be a preferred embodiment of the invention,

Fig. 1 is a view of the complete device, partly in side elevation and partly in longitudinal mid-section.

- 25 Fig. 2 is an enlarged view taken on line 2—2 of Fig. 1.

Fig. 3 is a cross sectional detail on line 3—3 of Fig. 2.

- 30 Fig. 4 is a cross sectional detail on line 4—4 of Fig. 2.

- Referring in detail to the drawing, the rotatable brush proper 10 is shown as having the shape of an elongated ovoid, the bristles 11 thereof being supported, for example, upon a twisted wire shaft 12 which has secured to its inner end an externally threaded sleeve 13. Said sleeve 13 is screwed into a shouldered coupling member 14. Said coupling member is held in place by an internal nut 15 screwed thereonto, and has its bearing in the outer end portion of a shank 16, said shank being an extension of the motor casing 17.
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- Axially through said shank 16 extends a passage 18 for the flexible shaft 19, the outer end of which is secured to the member 14 while its inner end is operatively connected with the electric motor 20 by means of the reduction gearing 21. The shank 16 tapers from the motor casing toward the brush proper, the outer end portion of said shank being deflected in an arcuate manner, as shown, in order to enable the user more conveniently to apply the brush to his teeth.
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- The motor casing 17, preferably at the end thereof opposite to the shank 16, is furnished with a two-conductor cord 23 which carries a
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plug-in attachment 24 for connecting with the electric service connections of a dwelling or office. The motor housing 20 may be made sufficiently small for convenient grasping by the hand of the operator.

The brush proper 10 is furnished with a bowed mouth guard 26. Said guard 26 has its outer end portion furnished with a resilient eyeleted portion 27 which is loosely mounted upon a projecting end portion of the shaft 12 having a head 28. Said eyeleted portion 27 has a deflected end portion 27a for springing over the shaft 12. This eyeleted portion is rebent, as shown in detail in Fig. 3, and its rebent portion has a seat 27s to receive the shaft 12 and beyond said seat an arcuate part 27c which is thinned at 27d to add to the resiliency thereof. The opposite end of the guard 26, also loosely mounted upon the shaft 13 by a similarly eyeleted part 29, and is furnished with a handle or finger hold 29a. Said handle consists of a longitudinal extension of the inner end portion of the wire which forms said guard 26, beyond its eyeleted part 29 (see Fig. 4). The person using the device will use this handle or finger hold to keep the guard 26 in a position to protect his tongue or lips while the motor rotated brush is being applied to the teeth.

It will also be noted that the rotary tooth brush may be removed and substituted by a rotary massaging head for the gums, or by motor propelled implements to be applied manually from said rotary propelling means.

The flexible shaft 19 is shown coupled to the gearing shaft 30 by a coupler 31, access being afforded to said coupler by an opening in the casing wall closed by a screw threaded plug 18a. Said shaft 30 has its bearing in a spider 32 carried by the expanded base portion 16b of the casing extension 16. To said shaft 30 is secured the gear 33 driven by gear 34 secured to the motor shaft 35. The bearing structure is completed by the extension 36 carried by the part 16b and the extension 37 carried by the body portion of the motor casing.

The device may be used either with or without the mouth guard 26. Said mouth guard is applied by springing its eyeleted portions 27 and 29 laterally around the shaft or spindle 12 to the attached positions best shown in Figs. 3 and 4.

I claim:

1. In a device of the kind described, a casing having an extension, a motor driven spindle carried by said extension, brush bristles carried

by said spindle, and a mouth guard mounted loosely upon said spindle and extending from end to end of said brush bristles in a spaced relation alongside of them, said mouth guard having a laterally opening spring eye at each end mounted detachably upon said spindle.

2. In a device of the kind described, a casing having an extension projecting outwardly therebeyond, a motor driven spindle carried by said extension, brush bristles carried by said spindle,

and a mouth guard mounted loosely upon said spindle and extending from end to end of said brush bristles in a spaced relation alongside of them, said guard having a handle portion and consisting of a wire-like member eyeleted at each end to form bearings on said shaft, and said handle portion consisting of a longitudinal continuation of said wire beyond the inner eyeleted part thereof.

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