

L. KARAS.
TOOTHBRUSH.
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1,335,689.

Patented Mar. 30, 1920.

Fig. 1.

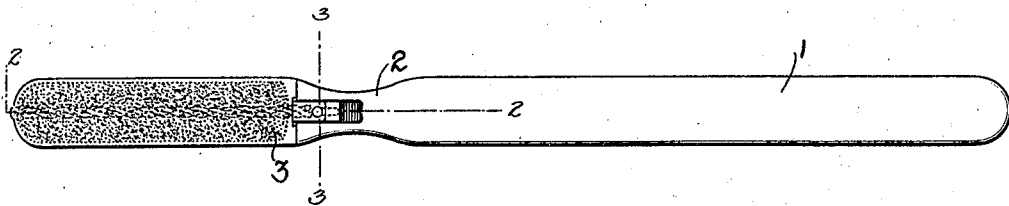


Fig. 2.

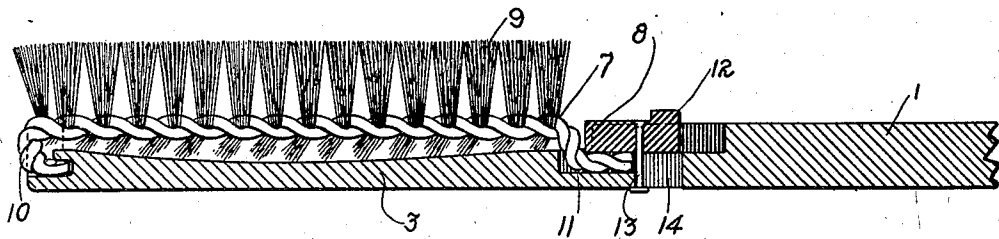


Fig. 3.

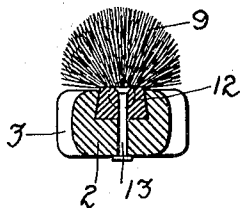


Fig. 4.

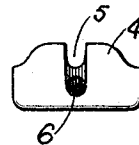


Fig. 5.

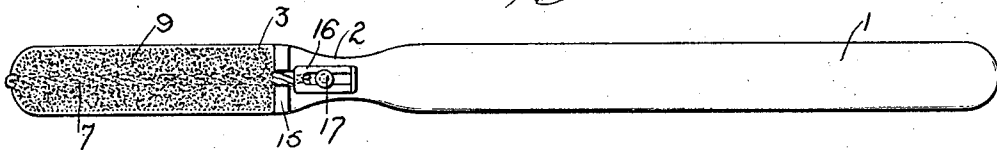
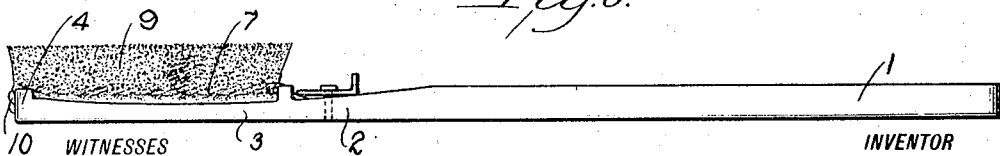


Fig. 6.



WITNESSES

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TOOTHBRUSH.

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To all whom it may concern:

Be it known that I, LOUIS KARAS, a citizen of Russia, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Toothbrush, of which the following is a full, clear, and exact description.

This invention relates to a toothbrush, and aims to provide a device of this nature in which that portion of the head containing the bristles is entirely removable, so as to be renewable and thus save a great amount of expense in connection with the purchasing of new toothbrushes, in that one handle may be used indefinitely and any number of new bristle parts may be secured thereto.

A further object to be accomplished by this invention is that by means of the removal of the head with which the bristles are associated such bristles may be cleaned far more easily than the bristles employed in connection with the usual toothbrushes which are not removable from the handle.

I appreciate that any number of constructions have been developed embodying a removable head construction associated with a handle for a toothbrush, but these constructions have proved impracticable for the reason that the head was, for the most part, locked into place by means of some cumbersome contrivance or else such head was sprung into place, so that any unusual strain would result in the head becoming removed from the handle of the brush.

A further disadvantage of the constructions embodied in the patented devices aforementioned is that the bristles terminate at a point far short of the end of the brush handle, which results in an inefficient brushing of the teeth, in view of the fact that the end of the handle contacts with the hard surfaces, such as bones and teeth, within the mouth, and these most inaccessible portions of the mouth, which require the greatest amount of care in view of the fact that decay of the teeth usually sets in at such places, are not cleaned efficiently by means of these brushes.

I have now constructed a brush which has for its object to provide a removable head which shall be applied to a handle by means of an extremely simple construction and locked thereto; and, although the same is instantly removable for any purpose whatsoever, no possibility exists of the head

becoming accidentally detached from the brush handle.

A further object of my invention is the provision of a removable head by means of the construction of which it is possible to apply bristles to a point adjacent the end of the brush handle so that the inaccessible portions of the mouth above referred to may be reached.

Reference is had to the accompanying drawings which illustrate one practical embodiment of my invention, and in which—

Figure 1 is a bottom plan view of the preferred form of my device;

Fig. 2 is an enlarged sectional side view taken along line 2—2 of Fig. 1;

Fig. 3 is an enlarged section taken through line 3—3 of Fig. 1;

Fig. 4 is a front view of the handle of the brush;

Fig. 5 is a bottom plan view of a modified form of construction; and

Fig. 6 is a side view of the device illustrated in Fig. 5.

In all of these views, like reference numerals indicate similar parts, and the reference numeral 1 indicates a handle, which is usually provided with a neck portion 2 and an end portion 3.

The handle 1 is preferably provided adjacent its outer end with a transversely-extending rib 4 formed with a groove 5 extending around and communicating with an opening 6 formed in the outer end of the handle 1, for a purpose hereinafter specified.

A removable head, including a twisted wire body 7 having its inner end bent downwardly, as indicated by the reference numeral 8, is applied to the outer end of the handle 1. Bristles 9 extend through the entwined portions of the wire body 7, and the outer end of such body is bent downwardly and rearwardly, as indicated by the reference numeral 10, seats in the groove 5 and projects into the opening 6.

The downwardly-bent inner end of the body 7 is adapted to project into a shouldered groove 11, and spaced from the base of such groove, and riding within the same, is a hand-actuated slide 12, which may be movably secured to the neck portion 2 by means of a slidable-headed pin 13 extending through the slot 14.

Referring now to my modified form, illustrated in Figs. 5 and 6, it will be seen that

this construction, similar to the device illustrated in the figures aforementioned, embodies a handle provided with a neck and an end to which there is removably applied a head embodying a twisted-wire portion 5 7, bristles 9 and a hooked end, provided for the removable head, which projects into an opening formed below the rib 4 so as to hold the same in applied position.

10 However, in this form of device, I preferably provide a second grooved rib 15 through which the inner end of the body 7 projects, this inner end being held in position by means of a slotted slide member 16 which is held to the neck 2 of the handle 1 by means of a headed pin 17.

15 In operation it will now be appreciated that the head may be quickly applied to the handle by engaging the hooked end of the body 7 with the opening 6 formed in the other end of the handle 1, at the same time making sure that such body seats within the groove 5 and projects rearwardly into the groove 11. By simply pushing the slide member 12 forwardly, the inner end of the body 7 will not alone be prevented from becoming disengaged from the handle 1, but will also be securely pressed into the groove 11 in such a manner as to prevent any motion outside of such body with respect to the handle. 30

With reference to the construction illustrated in Figs. 5 and 6, it will be seen that

the only difference in the construction is that lateral stresses exerted upon the head 35 of the brush are taken up by means of the rib 15, and the slide member 16 merely serves to hold the inner end of the body of the removable head from any upward motion.

40 It will be seen, referring more particularly to Figs. 1, 2, 5 and 6, that by virtue of my improved means of applying the head to the handle of the brush, such head does not terminate at a point short of the end of the handle; and by reason of this construction it will be possible to extend the 45 bristles 9 along such head to a point adjacent the outer end of the handle.

50 It is to be appreciated that any number of modifications in my construction may be resorted to without in the least departing from the scope of my invention.

Having thus described my invention, I desire to claim:

55 A tooth brush including a handle, ribs formed transversely near one end thereof and having transverse grooves, a bristle holder removably applied to said handle and extending through said grooves, the outermost end of said bristle holder extending 60 downwardly parallel to the outer face of the end of the handle and inwardly into an opening formed therein, and means at the other end of the bristle holder for securing said holder in place.

LOUIS KARAS.