

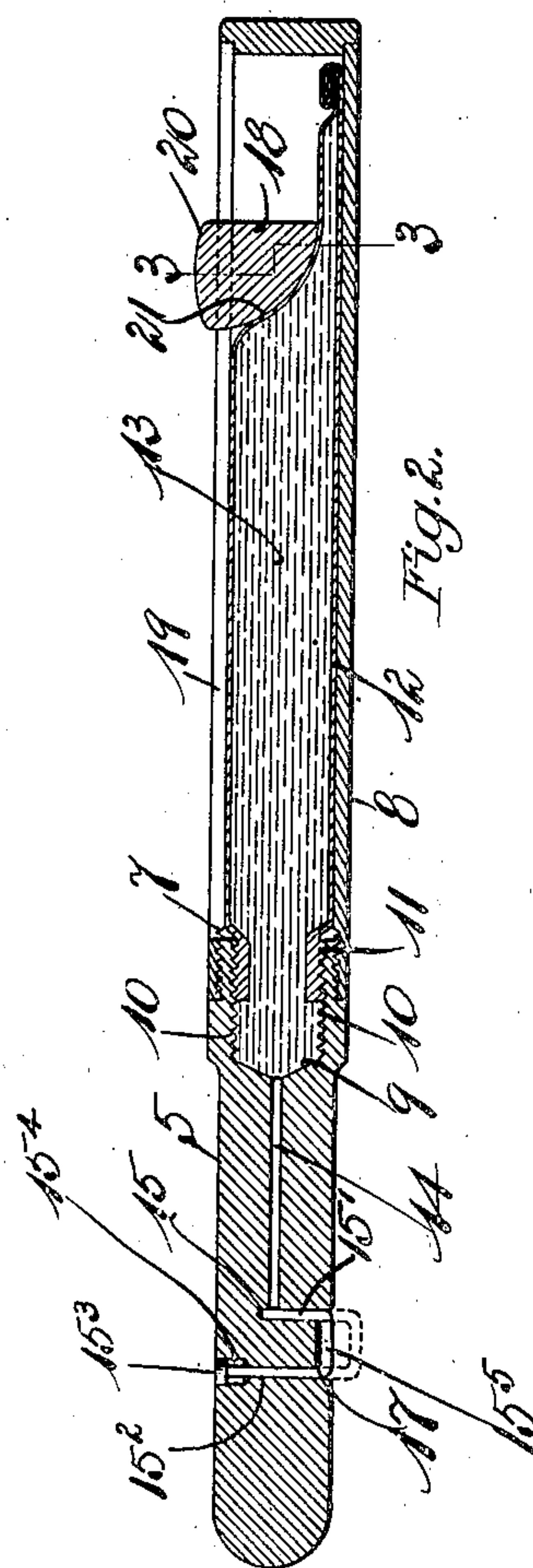
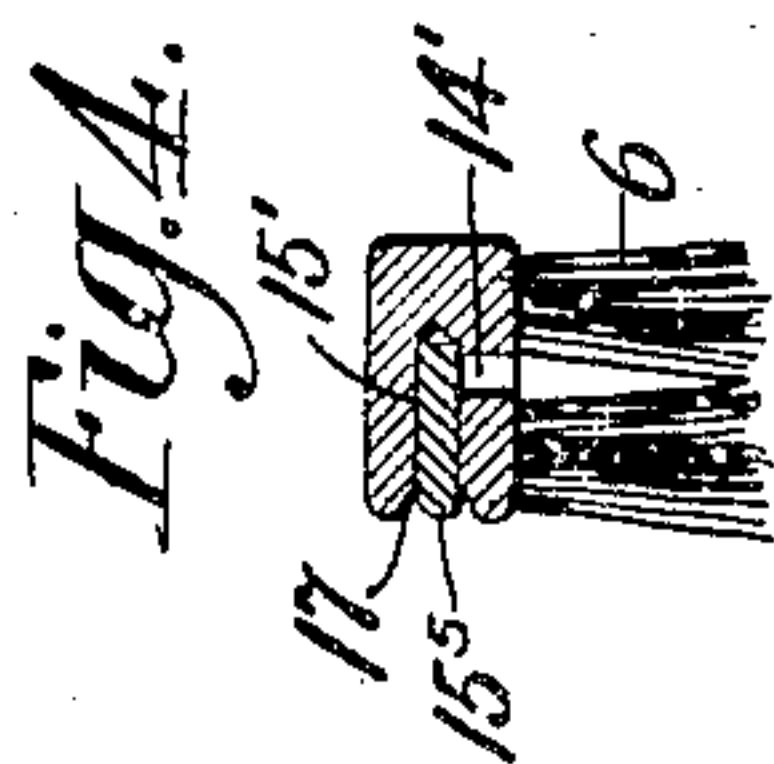
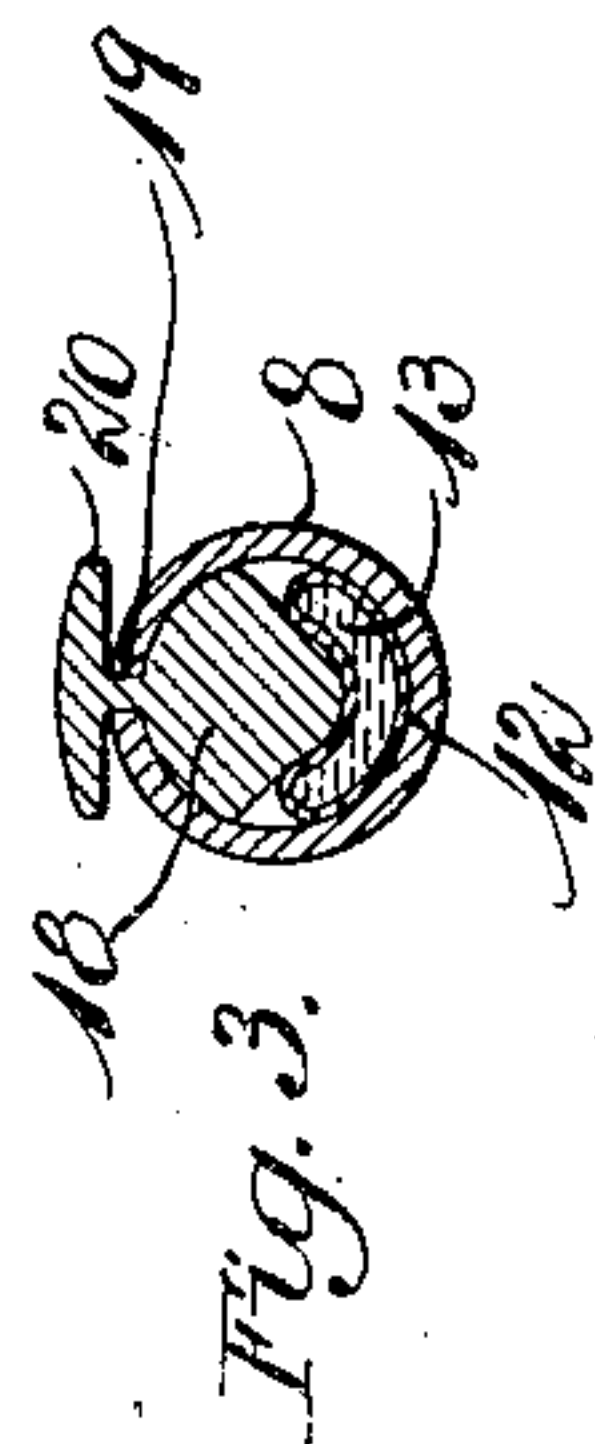
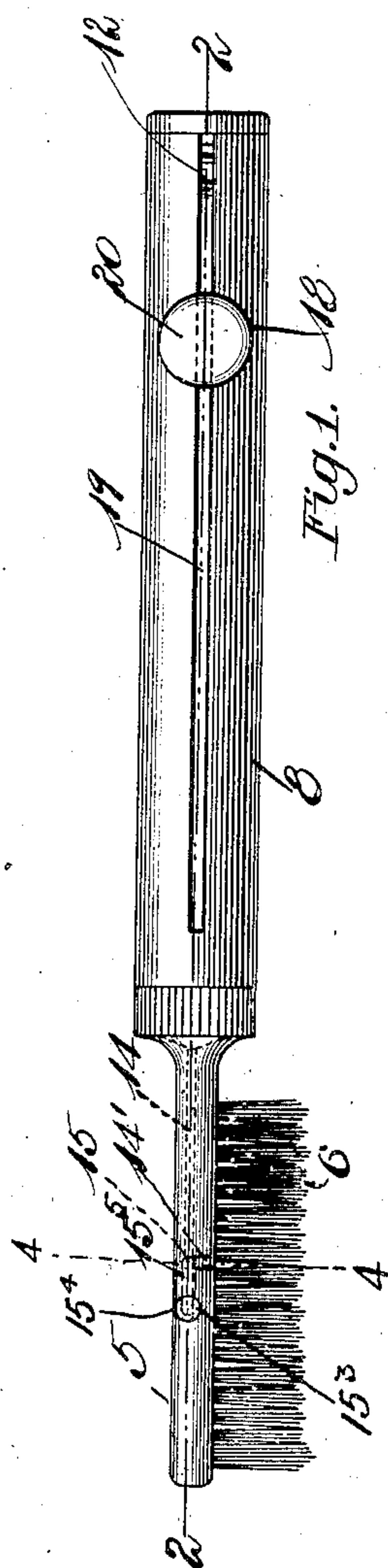
No. 818,000.

PATENTED APR. 17, 1906.

C. R. STEVENSON.

TOOTH BRUSH.

APPLICATION FILED MAR. 23, 1905.



Witnesses:

Witnesses:
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Inventor:

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UNITED STATES PATENT OFFICE.

CHARLES R. STEVENSON, OF BOSTON, MASSACHUSETTS.

TOOTH-BRUSH.

No. 818,000.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed March 23, 1905. Serial No. 251,589.

To all whom it may concern:

Be it known that I, CHARLES R. STEVENSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Tooth-Brushes, of which the following is a specification.

The object of this invention is to provide a tooth-brush having a hollow handle in which can be placed a collapsible tube of dentifrice-paste, the brush and handle being so constructed that by means of a slide particularly designed and constructed therefor said tube can be compressed and said paste forced out of said tube in small quantities through a passage in the bristle-holder to the bristles. Thus at all times the holder or handle will contain a supply of paste, with means attached to said handle whereby said paste can be readily forced into the bristles as needed.

The invention consists in the combination and arrangement of parts set forth in the following specification, and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a side elevation of my improved tooth-brush. Fig. 2 is a longitudinal section, partly in elevation, taken on line 2 2 of Fig. 1. Fig. 3 is a transverse section taken on line 3 3 of Fig. 2. Fig. 4 is a transverse section taken on line 4 4, Fig. 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 5 is a holder with bristles 6 attached thereto. Said holder is exteriorly screw-threaded at 7 to engage the interiorly-screw-threaded end of a hollow handle 8. The holder 5 is also provided with a chamber 9 at one end thereof, which is interiorly screw-threaded at 10 to engage the exterior screw-threads 11, formed upon one end of a collapsible tube 12 in the usual manner, said tube being located in the interior of the hollow handle 8. A passage-way 14 leads from the open end of the tube 12 to about the central portion of the holder 5 and longitudinally thereof and opens outwardly at 14' to connect with the bristles 6. The passage-way 14 is closed by means of a plug or slide, consisting of a U-shaped pin or slide 15. One prong 15' of said slide extends transversely partly across said holder and across the passage-way 14. The other prong 15² of said slide extends entirely across the holder 5 and terminates in an enlarged portion or head 15³, which fits in a recess 15⁴. The portion of

said slide 15⁵ which connects the prongs 15' and 15² constitutes a finger-piece, and the holder 5 is recessed at 17 in order that the user may insert the nail of the thumb or finger behind the finger-piece 15⁵ and withdraw the slide sufficiently so that the prong 15' will pass out of the passage 14 and allow the paste to pass through the passages 14 and 14' through the bristles when the tube 12 is compressed, as hereinafter described.

It will be understood that the prong 15' acts as a stop to prevent the dentifrice from passing through the passages 14 and 14' when in the position illustrated in Fig. 2, and when said slide is moved to the position illustrated in dotted lines in said figure the passages 14 and 14' are open for the dentifrice to flow therethrough, while the head 15³ passes to the bottom of the recess 15⁴ and abutting against the bottom of said recess acts as a stop to prevent the slide from being accidentally withdrawn from the holder.

A compressor 18 is adapted to slide longitudinally of the handle 8 and is guided in a slot 19, formed in said handle. Said compressor is provided with a cylindrical top 20, by means of which it is moved longitudinally of the handle 8. The portion of the compressor located inside the handle 8, as shown in Figs. 2 and 3, is formed to fit against the upper side of the interior of said handle and has a curved front face 21, which bears against the tube 12, as illustrated in Fig. 2, and when moved by the user toward the brush end of the handle forces the dentifrice 13 out of the tube 12 and through the passages 14 and 14' to the bristles 6. As soon as sufficient paste has been forced into the bristles the user closes the passage 14 by pushing the pin 15 into the position shown in Fig. 2, the object of said pin being to prevent water from entering the passage-way and flowing into the tube 12 and also to prevent paste from flowing into the bristles or allowing the same to do so according as said slide may be located in the position shown in full or dotted lines, respectively, in Fig. 2. My improved brush is used in the ordinary well-known manner.

The particular advantage derived from my improved tooth-brush as compared with prior forms of tooth-brushes containing a supply of dentifrice is that in addition to the dentifrice being always ready for use and always with the brush conveniently packed within a rigid handle, so that the collapsible tube cannot be compressed accidentally when

used in traveling, said handle forms a protector as well as a carrier for said tube. My improved tooth-brush has means for practically and efficiently compressing said tube gradually from one end to the other and forcing the paste contained therein into the bristles of the brush, and, further, my improved tooth-brush contains means for closing the passage-way through which dentrifice passes from the tube to the bristles of the brush, which means are located entirely within the holder for the bristles when said means are in position to close the passage-way and prevent the dentrifice from flowing out among the bristles, or, in other words, when the brush is in condition to be used, thus preventing any danger of the inside of the mouth being lacerated by a projection or projections upon the exterior of the brush proper or the holder for the bristles.

The form of the holder and of the handle is immaterial, as it is evident that handles and holders of different shapes and designs may be used without departing from the spirit of my invention.

Still another advantage of my improved tooth-brush consists in the fact that the same is very economical, saving waste of the dentrifice, and also the dentrifice being forced into the bristles at the bottom thereof becomes more thoroughly mixed and distributed throughout the entire area of the brush than is the case where it is placed upon the outside of the bristles.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a tooth-brush consisting of a holder with bristles fast thereto, a hollow handle detachably fastened to said holder, a collapsible tube of paste located in said handle and having screw-threaded engagement with said holder, said holder provided with a passage therein leading from one end of said tube to said bristles, and a plug extending transversely across said passage-way and located entirely within said holder when said passage-way is closed thereby.

2. As an article of manufacture, a tooth-brush consisting of a holder with bristles fast thereto, a hollow handle detachably fastened to said holder, a collapsible tube of paste located in said handle and having screw-threaded engagement with said holder, said holder provided with a passage therein leading from one end of said tube to said bristles, and a slide extending transversely across said passage-way and slidable on said holder, said slide located entirely within said holder when said passage-way is closed thereby, and means to prevent said slide from becoming detached from said holder.

3. As an article of manufacture, a tooth-brush consisting of a holder with bristles fast thereto, a hollow handle detachably fastened to said holder, a collapsible tube of paste located in said handle and having screw-threaded engagement with said holder, said holder provided with a passage therein leading from one end of said tube to said bristles, and a slide extending transversely across said passage-way and slidable on said holder, said slide having a finger-piece thereon and located entirely within said holder when said passage-way is closed by said slide, and means to prevent said slide from becoming detached from said holder.

4. As an article of manufacture, a tooth-brush consisting of a holder with bristles fast thereto, a hollow handle detachably fastened to said holder, a collapsible tube of paste located in said handle and having screw-threaded engagement with said holder, said holder provided with a passage therein leading from one end of said tube to said bristles, and a compressor slidable longitudinally of said handle, said compressor having a curved front face adapted to compress said tube and force the contents thereof through said passage to said bristles.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES R. STEVENSON.

Witnesses:

CHARLES S. GOODING,
ANNE J. DAILEY.