

A. M. STRYKER.

TOOTH BRUSH.

APPLICATION FILED FEB. 24, 1908.

910,970.

Patented Jan. 26, 1909.

Fig. 1.

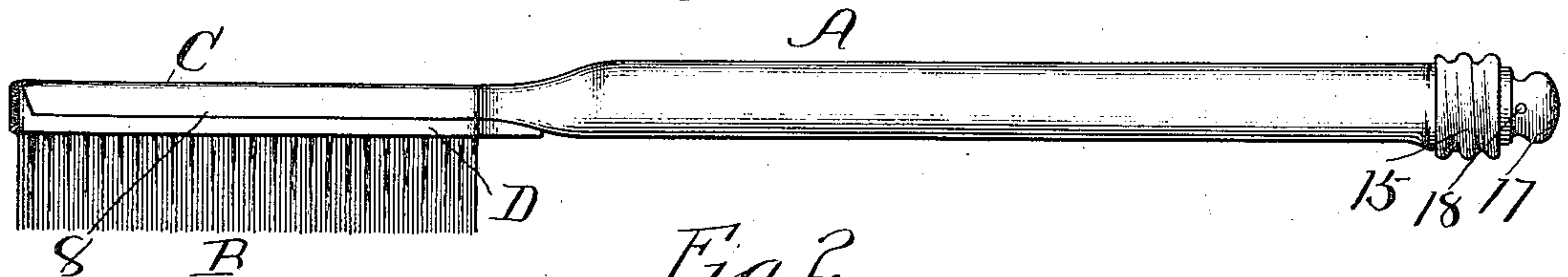


Fig. 2.

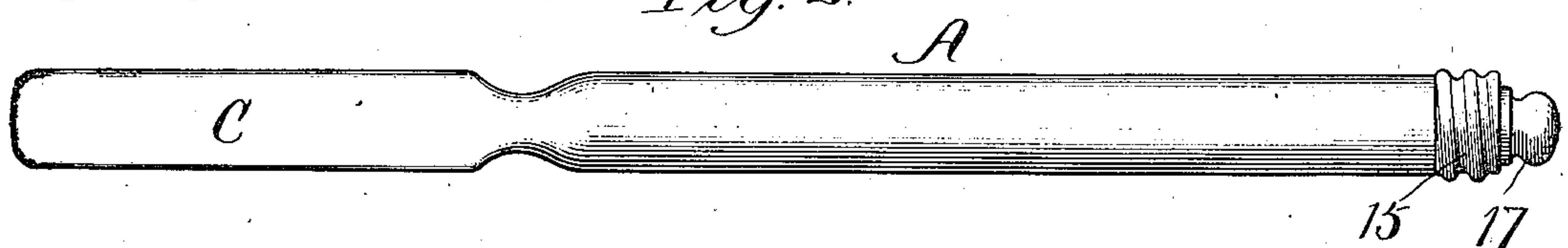


Fig. 3.

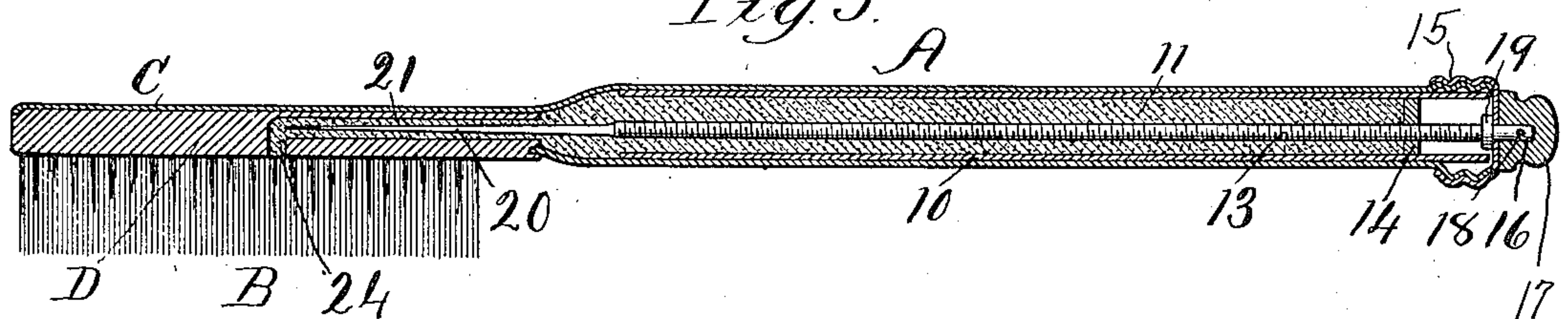


Fig. 4.

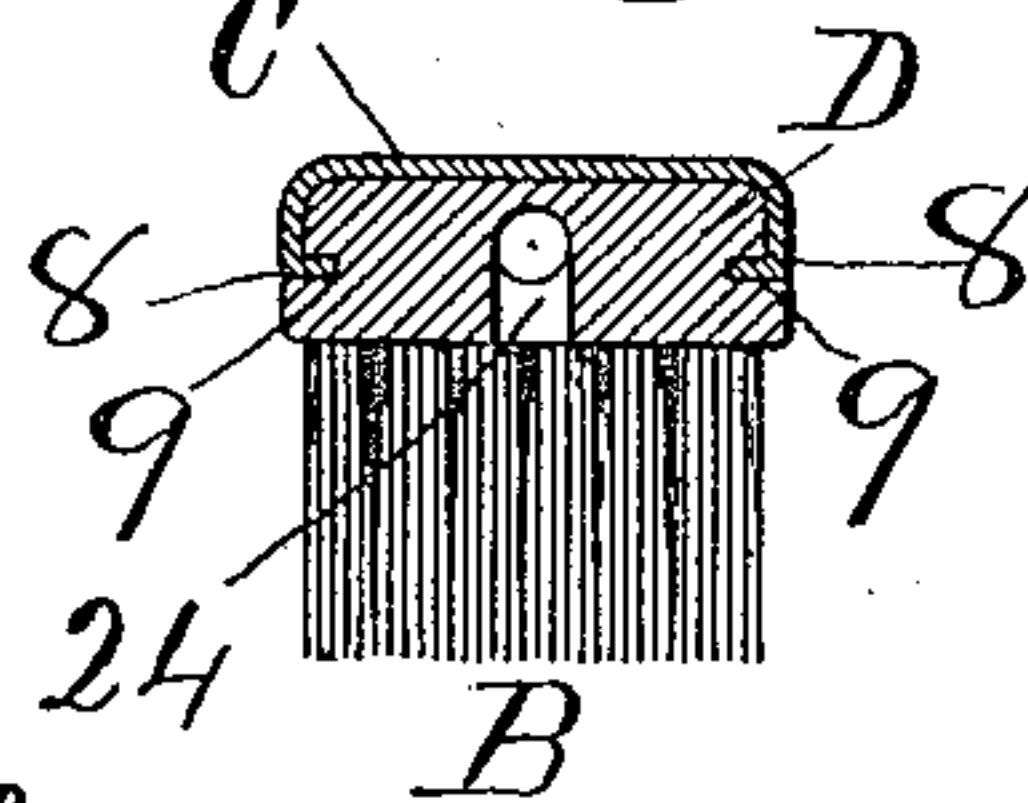


Fig. 5.

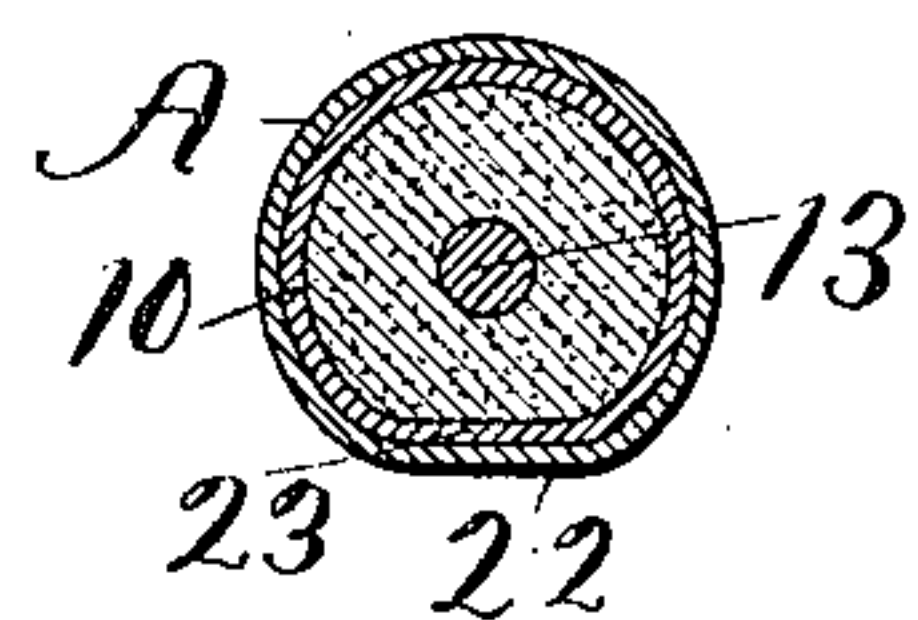


Fig. 6.

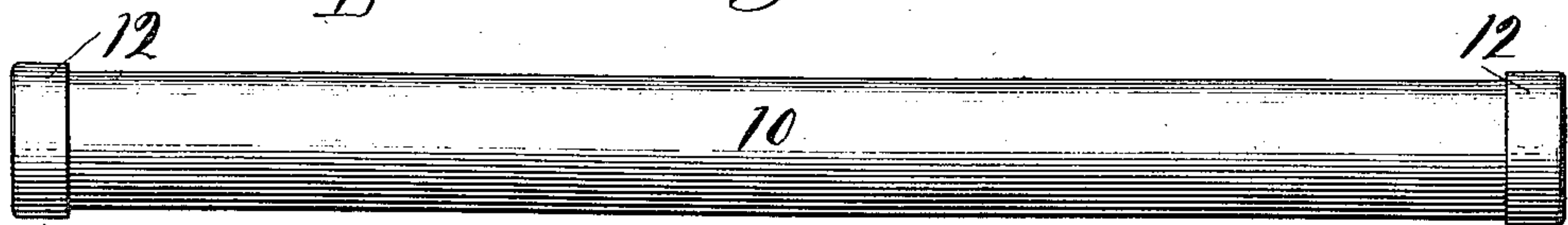
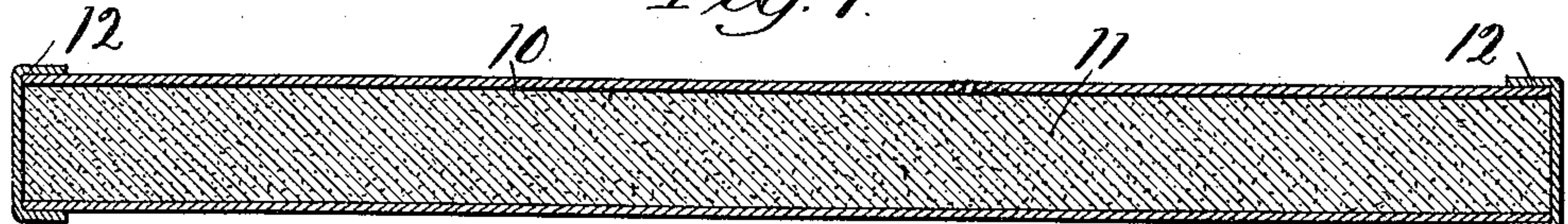


Fig. 7.



Witnesses:

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Atty.



# UNITED STATES PATENT OFFICE.

AURIOL M. STRYKER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO GEORGE B. HAINES,  
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## TOOTH-BRUSH.

No. 910,970.

Specification of Letters Patent.

Patented Jan. 26, 1909.

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*To all whom it may concern:*

Be it known that I, AURIOL M. STRYKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tooth-Brushes, of which the following is a specification.

This invention relates to brushes and more especially to tooth-brushes of the hollow handle type; and has for its object to provide a device of this character for mechanically supplying a dentifrice or other substance to the bristle-part through the handle, as will be hereinafter set forth in detail.

Figure 1 is a side elevation. Fig. 2 is a plan. Fig. 3 is a longitudinal section. Fig. 4 is a transverse section on a line through the bristle-part. Fig. 5 is a transverse section on a line through the tubular handle. Fig. 6 is an elevation of a tube for holding the dentifrice. Fig. 7 is a longitudinal section thereof.

A represents a tubular handle and B the brush-part separable therefrom. The handle will ordinarily be composed of metal such as aluminum, German silver or the like that may be best adapted for the purpose.

The tubular handle is provided with an integral false back extension forming a cap C covering the back D of the brush B, which is detachable from the handle. The cap-extension C of the handle is provided with angular intumed flanged edges 8 on each side of which engage grooves 9 running longitudinally in the back D of the brush, as best shown in Fig. 4. This arrangement permits of the brush and handle parts being assembled and separated by a wedging longitudinal movement.

The principal object in making the brush and handle in two separable parts is to conveniently permit of a new brush end being substituted for one that is worn out, the same handle being used indefinitely, which is a great and economical advantage when the handle-part is made out of expensive material and of an ornamental character.

A magazine or tube 10 is an independent, separate part and forms a receptacle for the dentifrice 11, which in this instance, is in the form of a paste. The respective ends of the magazine are provided with protecting caps 12 which are removed before the same and

its contents are inserted in the tubular or hollow brush-handle for practical use, as best shown in Fig. 3.

A screw-threaded spindle 13 is inserted longitudinally through the magazine. This spindle has a piston 14 threaded thereon so as to be capable of an advance forward feeding movement when the spindle is rotated in the right direction. This piston bears against the contents of the magazine from the rear end, as best shown in Fig. 3, which indicates that all the parts are assembled in position for use.

The outer end of the tubular handle is closed by a removable cap 15, having a threaded engagement therewith. This cap is perforated for the passage therethrough of the outer end 16 of the spindle 13. A head or knob 17 is mounted on the end 16 and is secured in place by a pin 18. A collar 19 is mounted on the spindle 13 and bears against the inner side of the cap 15 and prevents any back thrust of the spindle in the operation of feeding the dentifrice into the brush-part.

The inner needle end 20 of the spindle extends into a passage 21 formed in the back of the brush and serves to keep said passage open and prevent cloggings.

The tubular handle is flattened on the under side as at 22, and the magazine tube correspondingly flattened as at 23, as shown in Fig. 5. This feature prevents the magazine tube and the feeding piston from turning when the spindle is rotated. The horizontal passage 21 opens downward through an aperture 24, through which the contents of the magazine reaches the bristles.

It is obvious that a dentifrice in a powder or liquid form may be used instead of paste. When the contents of the magazine-tube is exhausted it may be recharged or another tube substituted therefor, as they will be sold separately from the brush and the manipulating spindle and parts.

In practical use a portion of the contents of the magazine tube may be forced into the brush end as needed by grasping the head between the thumb and finger and turning the same, which imparts a corresponding movement to the spindle and advances the piston which presses against the body of the contents. A partial turn of the spindle will ordinarily deliver a sufficient quantity for



use at one time. This arrangement dispenses with the necessity of having to carry the dentifrice separate from the brush, and both the dentifrice and brush are ready for simultaneous use.

Having thus described my invention, what I claim is:—

1. A tooth-brush, comprising a hollow handle and a brush-part having a feed-passage opening from one into the other, a magazine tube inserted in said handle, a rotatable threaded spindle extending longitudinally therethrough and provided with a needle-end extending into said passage, a piston mounted on said spindle, and means for rotating the same in imparting a feeding movement to said piston.

2. In a tooth brush, the combination with a hollow handle portion, of a separable brush portion, means for detachably securing said brush portion to the handle portion, said brush portion having a channel formed therein, the rear end of which opens into the hollow handle, a piston and a rotative member longitudinally disposed in said hollow handle the forward end of which projects into the channel of the brush portion, said rotative

member being adapted to impart longitudinal movement to said piston.

3. In a tooth brush, the combination with a hollow handle portion, of a separable brush portion, means for detachably securing said brush portion to the handle portion, said brush portion having a channel formed therein, the rear end of which opens into the hollow handle, and a rotative member longitudinally disposed in said hollow handle, the forward end of which projects into the channel of the brush portion, said rotative member being threaded, a piston mounted on said rotative member, a cap threaded upon the rear end of the hollow handle, a magazine tube adapted to be slipped into said hollow handle said tube being held against rotation, with relation to said handle, said rotative member being rotatively mounted in said cap and being removable with said cap.

In testimony whereof I affix my signature in presence of two witnesses.

AURIOL M. STRYKER.

Witnesses:

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J. B. DONALSEN.