Dec. 12, 1933. E. DOLL 1,939,001

TOOTHBRUSH

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Fig. 1.

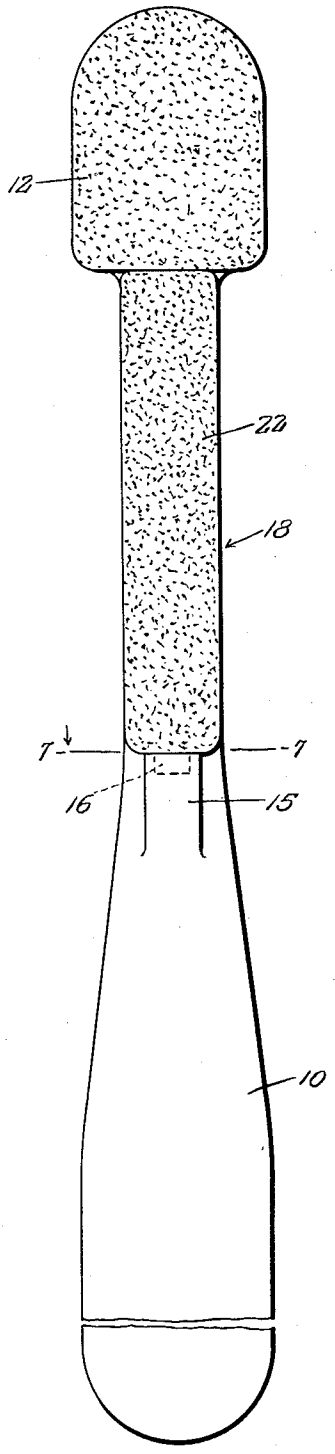

Fig. 2.

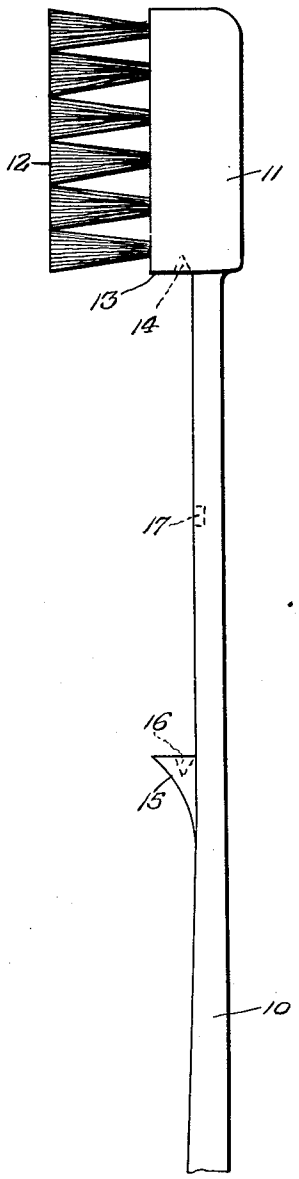

Fig. 3.

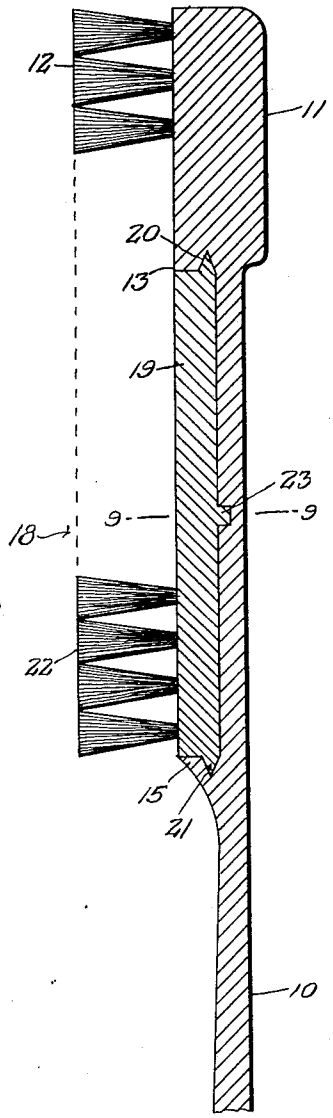

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Fig. 4.

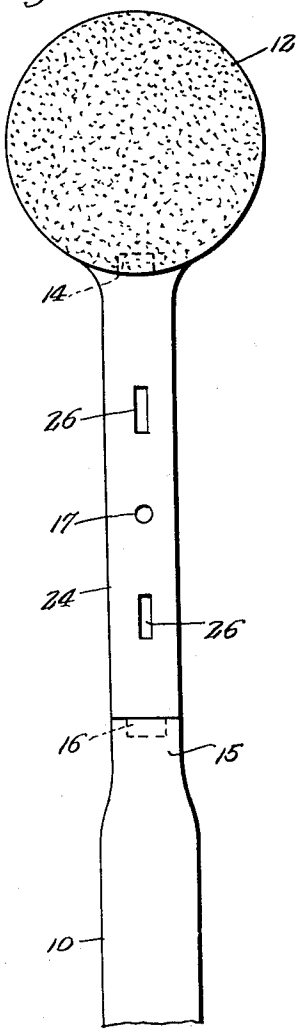


Fig. 5.

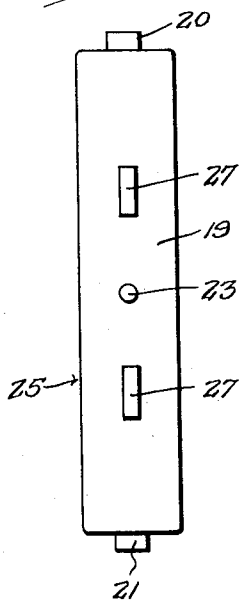


Fig. 6.

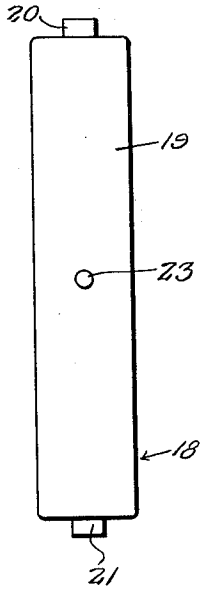
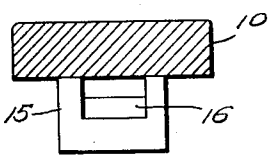


Fig. 7.



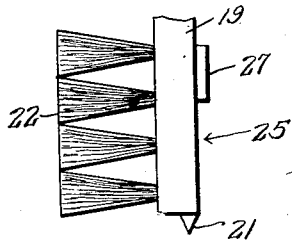
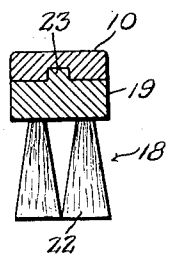


Fig. 8.

Fig. 9.



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TOOTHBRUSH

Emil Doll, West New York, N. J.

Application April 18, 1933. Serial No. 666,751

3 Claims. (Cl. 15—176)

This invention relates to an improved toothbrush notable as a contribution to the trade and art in that it is of a double-acting convertible type.

Briefly stated, the fundamental novelty is predicated upon a two-in-one brush construction embodying a main unit fixedly mounted and a complemental unit detachably mounted.

Needless to say, I am aware of the fact that the prior art to which the invention relates is characterized by toothbrushes embodying renewable or replacement units wherein the handle is constructed with a standardized holder and the replacement sections or units correspondingly constructed for special adaptation to the holder, this arrangement being utilized with the thought of providing a single handle and simple inexpensive renewable units for cooperation therewith.

The inventive conception here involved comprehends the renewal or replacable unit idea, together with the companion association of the renewable unit with a permanent unit whereby to permit the permanent unit to be used for certain work for which it is most satisfactory, and the supplemental or secondary detachable unit to be applied to increase the brush area and to permit the device to serve in the capacity of a conventional full-sized brush.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:

Figure 1 is what may be designated as a bottom plan view of the complete assembled brush constructed in accordance with the principles of the present inventive conception.

Figure 2 is a side elevational view of the structure shown in Figure 1 with the longitudinally elongated detachable brush unit removed.

Figure 3 is a longitudinal sectional view through the assembly shown in Figure 1.

Figure 4 is a view similar to Figure 1 with the removable section detached and showing a slightly different configuration and other modified features.

Figure 5 is a plan view of the detachable or renewable brush unit or section applicable to the construction illustrated in Figure 4.

Figure 6 is a view similar to Figure 5 showing the form of brush section or unit utilized in Figures 1 to 3 inclusive.

Figure 7 is a section taken approximately on the plane of the line 7—7 of Figure 1.

Figure 8 is a fragmentary end view of Figure 5.

Figure 9 is a cross section, the section being taken somewhat on the plane of the line 9—9 of Figure 3.

Generically stated, the invention is virtually the same throughout all of the views with the slight exception of configuration and slight addition of details. Nothwithstanding this, attention is first called to Figures 1, 2, 3, and 6. As here shown, the numeral 10 designates the brush handle. This is made of pyralin, celluloid, or some equivalent flexible water-proof material.

The handle is here shown as terminating at its outer end in an enlarged head 11 carrying a cluster of bristes 12, the features 11 and 12 constituting the relatively small fixedly mounted brush head or unit. The numeral 13 designates an abutment face provided with a depression defining a keeper seat 14.

The numeral 15 designates a longitudinally spaced fixedly mounted lug which forms a secondary abutment to co-operate with the abutment 13, said lug having a depression defining a similar keeper seat 16. Between these members 13 and 15 the handle is formed with a shallow retention socket 17.

The longitudinally elongated substantially rectangular detachable and renewable brush unit is distinguished by the numeral 18. This comprises a bendable or flexible backing 19 whose end portions are provided with pointed detents 20 and 21 which are adapted to snap removably into the keeper seats 14 and 16 to bring the ends of the backing member 19 against the abutment faces 13 and 15. The backing member 19 carries a suitable assembly of bunched bristles 22 appropriately mounted. It is also provided on an opposite face with a stud 23 removably seated in the socket 17. That portion of the handle which accommodates the unit 18 is substantially the same in width as the backing member 19.

In the figures of the drawings under consideration, the fixed brush head or unit embodies the enlarged head portion 11 and the bristles 12 forming a substantially semi-elliptical brush unit which may be individually used. The brush unit 18 which constitutes a companion part is attachable for use in conjunction with the fixed unit and in the position shown in Figure 3.

Particular attention is called to the provision of the enlarged head portion 11 which provides strength and durability and which also functions as an abutment 13 having a keeper 14 to hold the adjacent end portion of the brush unit 18 removably in place. That portion of the handle which co-operates with the brush unit 18 is

flexible as is the backing member 19 to permit the parts to be bowed longitudinally to facilitate application and removal of said unit 18.

In Figures 4 and 5 the same reference characters are used to designate like parts. The main distinction here is that the fixed brush-unit is disc-like in outline or configuration. Otherwise, the construction is the same. In Figure 4 the portion 24 of the handle which accommodates the slightly revised unit 25 is modified to the extent of including additional sockets 26 to accommodate equalizing and stabilizing lugs or studs 27 carried by the backing member 19 of the brush unit 25. The features 17 and 23, as well as the features 26 and 27, obviously co-operate with the detents 20 and 21 and their keeper sockets 14 and 16 in securely holding the brush unit in place after it is snapped in its operative position.

The gist of the invention is in the provision of a flexible handle carrying a relatively rigid enlarged head at its outer end provided with a limited and predetermined arrangement of bristles for special use purposes. In other words, this makes a relatively small brush which is excellent for cleaning certain areas and surfaces of the teeth not easily accessible when a full sized brush is employed. At the same time, a full sized brush is permitted by simply snapping either of the units 18 or 25 into place. This affords a diversified, simplified, concise and convenient arrangement of features for selective and efficient use.

A careful consideration of the foregoing description in conjunction with the illustrative drawings will enable the reader to obtain a clear understanding of the purpose, features and advantages, the explicit construction, and the invention as hereinafter claimed.

It is to be understood that minor changes in shape, size, relative proportions, and materials may be resorted to in practice without departing from the spirit of the invention or the scope of the invention as now claimed.

I claim:

1. A double-acting toothbrush of the class described comprising a handle formed at its outer end with a relatively thick rigid disc-like head carrying brushing bristles, a longitudinally elongated renewable supplementary brushing unit embodying a backing and an assembly of bristles carried thereby, and co-acting means between the backing and adjacent portions of the handle to hold said elongated unit removably in place.

2. A toothbrush comprising an elongated handle terminating at its outer end in a relatively thick rigid head, one surface of said head constituting an abutment and having a depression defining a keeper seat, that portion of the handle adjacent said head being bendable, the bendable portion of the handle being formed at a point longitudinally spaced from said head with an outstanding abutment lug having a depression forming a second keeper seat, a detachable brush unit embodying a longitudinally elongated backing member for disposition between the abutment surface and abutment lug, said backing member being formed at its opposite ends with detents removably receivable in said keeper seats, and bristles carried by said backing member.

3. A tooth brush comprising an elongated handle terminating at its outer end in a relatively thick rigid head, one surface of said head constituting an abutment and having a depression defining a keeper seat, that portion of the handle adjacent said head being bendable, the bendable portion of the handle being formed at a point longitudinally spaced from said head with an outstanding abutment lug having a depression forming a second keeper seat, a detachable brush unit embodying a longitudinally elongated backing member for disposition between the abutment surface and abutment lug, said backing member being formed at its opposite ends with detents removably receivable in said keeper seats, and bristles carried by said backing member, said backing member being formed with at least one retention and stabilizing stud and the brush handle having a socket for removable reception of said stud.

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