July 7, 1931. H. R. PRIEST 1,813,361

TOOTH CLEANER AND POLISHER

Filed Aug. 25, 1930

Fig. 1.

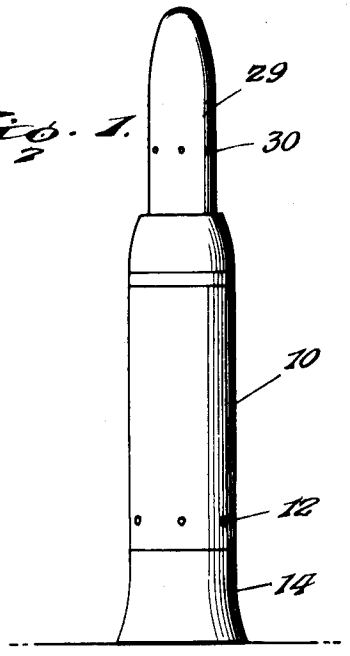


Fig. 2.

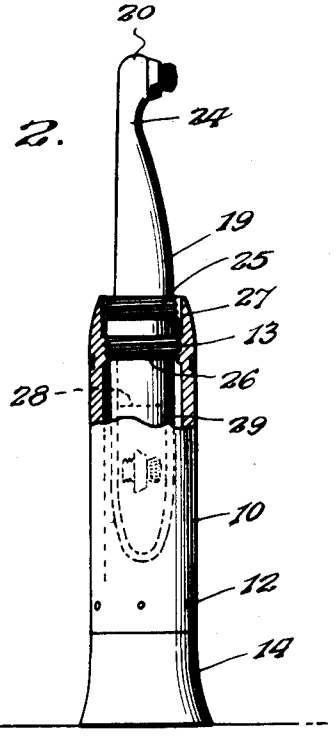
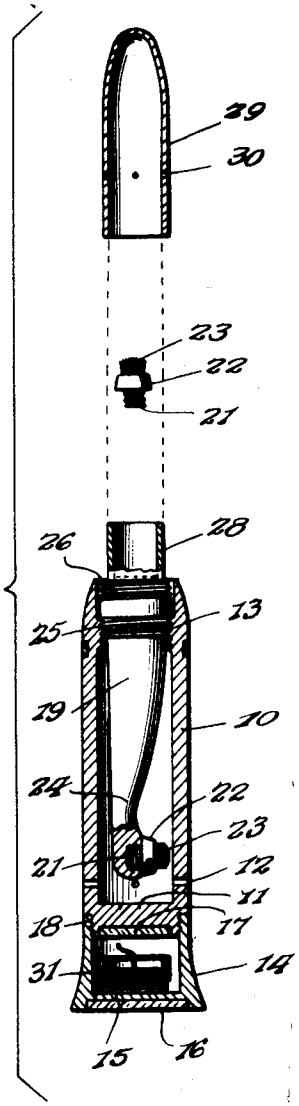


Fig. 3.



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UNITED STATES PATENT OFFICE

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TOOTH CLEANER AND POLISHER

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This invention relates to tooth cleaners and polishers and has for an object to provide a device of this character having the shank provided with a removable pointed cap constituting a magazine for spare brushing and cleaning elements, the shank terminating opposite the magazine in a hollow head threaded to detachably receive a unitary single tuft cleaning and polishing element.

A further object of the invention is to provide the shank of the tooth cleaner and polisher with spaced sets of threads adapted to be selectively engaged with a threaded portion of a grip whereby the shank may be enclosed within the grip when not in use or may be extended in axial prolongation of the grip when in operative position.

A still further object of the invention is to provide the grip with an open end which is threaded remotely from the end so as to project beyond the threaded portions of the shank and form a protection for said threaded portions as well as conceal the same when the shank is disposed in either operative or inoperative position.

A further object of the invention is to provide the grip with a cap which is flared outwardly and terminates in a flat end wall whereby the device may be stood upright on the cap as a base to protect the bristles from contamination, both the cap and the grip being provided with mirrors which facilitate thorough inspection of the teeth during the cleaning and polishing operation.

A further object of the invention is to provide the shank with a nipple for receiving the pointed magazine, said nipple and magazine forming a prolongation of the shank and being entirely exposed when the shank is concealed by the grip so that the pointed magazine may be readily removed for access to the spare cleaning and polishing elements without disturbing the shank.

With the above and other objects in view the invention consists in certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of this specification:

Fig. 1 is a side elevation of the cleaning and polishing device closed,

Fig. 2 is a side elevation of the cleaning and polishing device open with a portion broken away, and

Fig. 3 is a longitudinal sectional view of the device with the pointed magazine removed and showing a spare cleaning and polishing element.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, 10 designates a hollow casing or grip which is closed at one end, as shown at 11, and is provided near the closed end with ventilating openings 12. The open end of the grip is provided with an interiorly threaded portion 13 remote from the end edge of said open end.

The grip is provided with a cap 14 which preferably is flared outwardly and terminates in a disk end wall 15 which provides a base upon which the entire device may be stood upright on end. The cap is provided with a mirror 16 and also the end wall of the grip is provided with a mirror 17, both mirrors permitting thorough inspection of the teeth during the cleaning and polishing operation. Preferably, the cap is threaded onto the grip, as shown at 18, and is stream lined so as to present its outer surface flush with the outer surface of the grip.

As best shown in Figs. 2 and 3, a shank 19 is provided at one end with a hollow head 20, the same being screw threaded to receive the threaded neck 21 of a socket 22 in which a single tuft bristle element 23 is rubber set and forced thereinto under pressure. The shank is reduced, as shown at 24, near the head 20 and remote from the reduced portion is substantially cylindrical in cross section, the diameter of said cylindrical portion of the shank being such as to permit of the same being received within the open end of the tubular grip 10.

The shank 19 is provided with spaced

screw threaded portions 25 and 26 which are selectively engageable with the above mentioned screw threads 13 of the grip so that the shank may be housed by the grip, as best shown in Fig. 3, or may be extended in axial prolongation of the grip, as best shown in Fig. 2. The screw threads 25 nearest the head 20 are engaged with the screw threads 13 of the grip when the shank is housed by the grip and the screw threads 26 are engaged by the screw threads 13 of the grip when the shank is disposed in operative position to extend in axial prolongation of the grip.

The inner wall of the grip between the extreme edge of the open end thereof and the screw threads 13 is smooth and substantially conical in contour, as shown at 27, to permit of the shank being reversed as just described.

It will be noted that when the shank is disposed in either of its two positions, as best shown in Figs. 2 and 3, the grip extends beyond the threaded portions of the shank and thus no threads are exposed while at the same time the grip forms a protection for the threads to prevent injury thereof.

Contiguous to the threaded portion thereof, the shank is provided with an axial nipple 28, as best shown in Fig. 3, the same being of slightly less diameter than the diameter of the threaded portion of the shank. The nipple receives a pointed magazine 29 which is provided with ventilating openings 30 and is adapted to be detachably secured to the nipple by either threads or a friction smooth connection or otherwise. The magazine is sufficient in length and in diameter to house a plurality of spare cleaning and polishing elements, one of such elements being shown in Fig. 3. The magazine is of sufficient diameter to be easily received within the tubular grip, as best shown in Fig. 2, when the device is in operative assembly.

It will be particularly pointed out that the nipple 28 as well as the magazine 29 is entirely exposed beyond the grip 10 when the shank is housed in the grip, as shown in Fig. 3. As a result of this construction, the magazine may be easily removed from the nipple to permit of access to the spare cleaning and polishing elements without disturbing the shank or grip. Furthermore, the magazine by being exposed beyond the grip when the shank is housed therein, presents a neat and attractive appearance should the device be carried in a pocket, somewhat resembling the appearance of a fountain pen so as not to attract undue attention.

By referring now to Fig. 3, it will be seen that the cap 14 is of sufficient magnitude to contain a dental floss carton 31 which preferably is formed of metal. Consequently, the device presents in a single unitary structure all the elements necessary for cleaning and polishing the teeth and maintaining the same in a sanitary condition, including mirrors, dental floss, and cleaning and polishing elements.

Having thus described the invention, I claim:

1. A tooth cleaning and polishing device comprising a shank, a nipple on one end of the shank, a removable cap on the nipple constituting a magazine for spare polishing and cleaning elements, the shank terminating opposite the nipple in a hollow threaded head, a single unitary tuft cleaning and polishing element threaded into said head, and a tubular grip housing the shank and removably engaging the shank near the nipple to permit of the nipple and magazine being exposed beyond the grip for access thereto without disturbing the shank.

2. A tooth cleaning and polishing device comprising a shank provided with spaced threaded portions near one end thereof, a tubular grip having an open end threaded internally to selectively receive either of said threaded portions of the shank, a nipple on the shank extending beyond said open end of the grip when the shank is reversed to be concealed within the grip, and a magazine for spare cleaning and polishing elements detachably engaged on said nipple.

3. A tooth cleaning and polishing device comprising a tubular grip, a shank having a reduced end terminating in a head, a tooth cleaning and polishing unitary tuft of stiff bristles rubber set in a socket, said socket having a threaded neck removably engaged in said head, said shank terminating remote from said head in a nipple, and a pointed magazine for spare tooth cleaning and polishing elements removably engaged on said nipple, said shank being adapted to be selectively engaged in the open end of said grip to dispose either said magazine or said cleaning and polishing element within said grip.

4. A tooth cleaning and polishing device comprising a tubular grip, a shank having an end removably engaged in said grip, said shank being provided with a nipple, and a magazine removably engaged on said nipple, said shank being adapted to be housed within said grip, said nipple being exposed beyond said grip when the shank is housed therein whereby the magazine may be removed without disturbing the shank, said shank being provided remote from the nipple with a tooth cleaning and polishing element.

In testimony whereof I affix my signature.

HARRY R. PRIEST. [L. S.]