

J. D. CONEY.
DENTAL POLISHING DEVICE.
APPLICATION FILED OCT. 11, 1910.

999,964.

Patented Aug. 8, 1911.

Fig. 1.

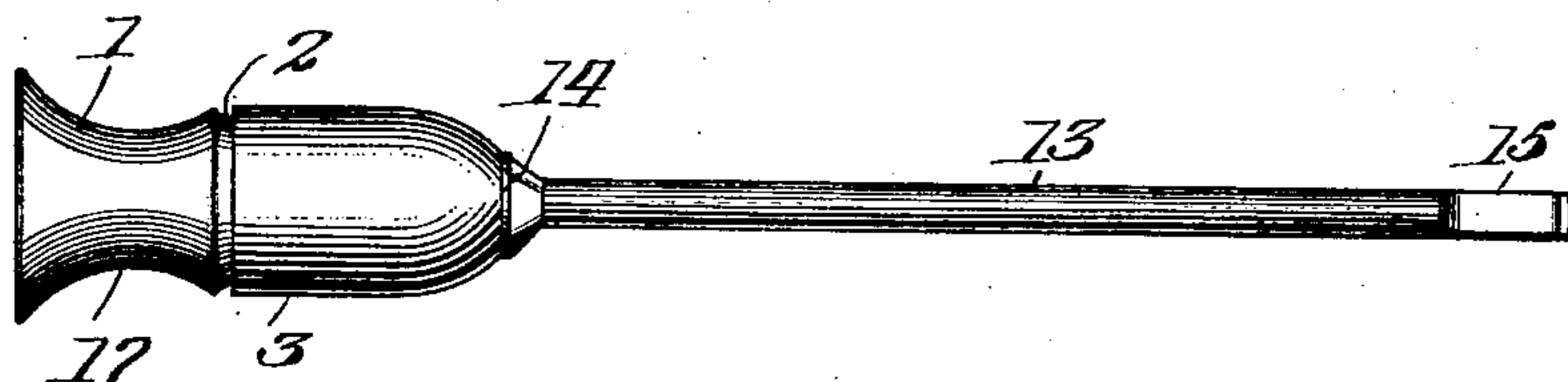
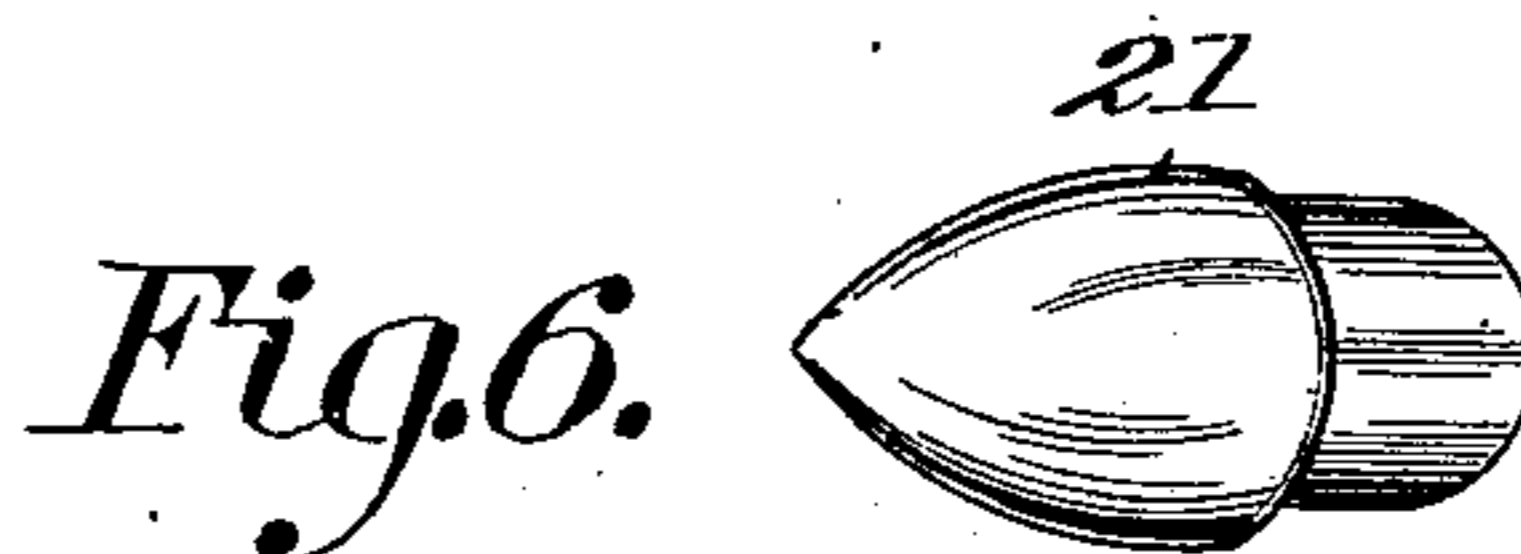
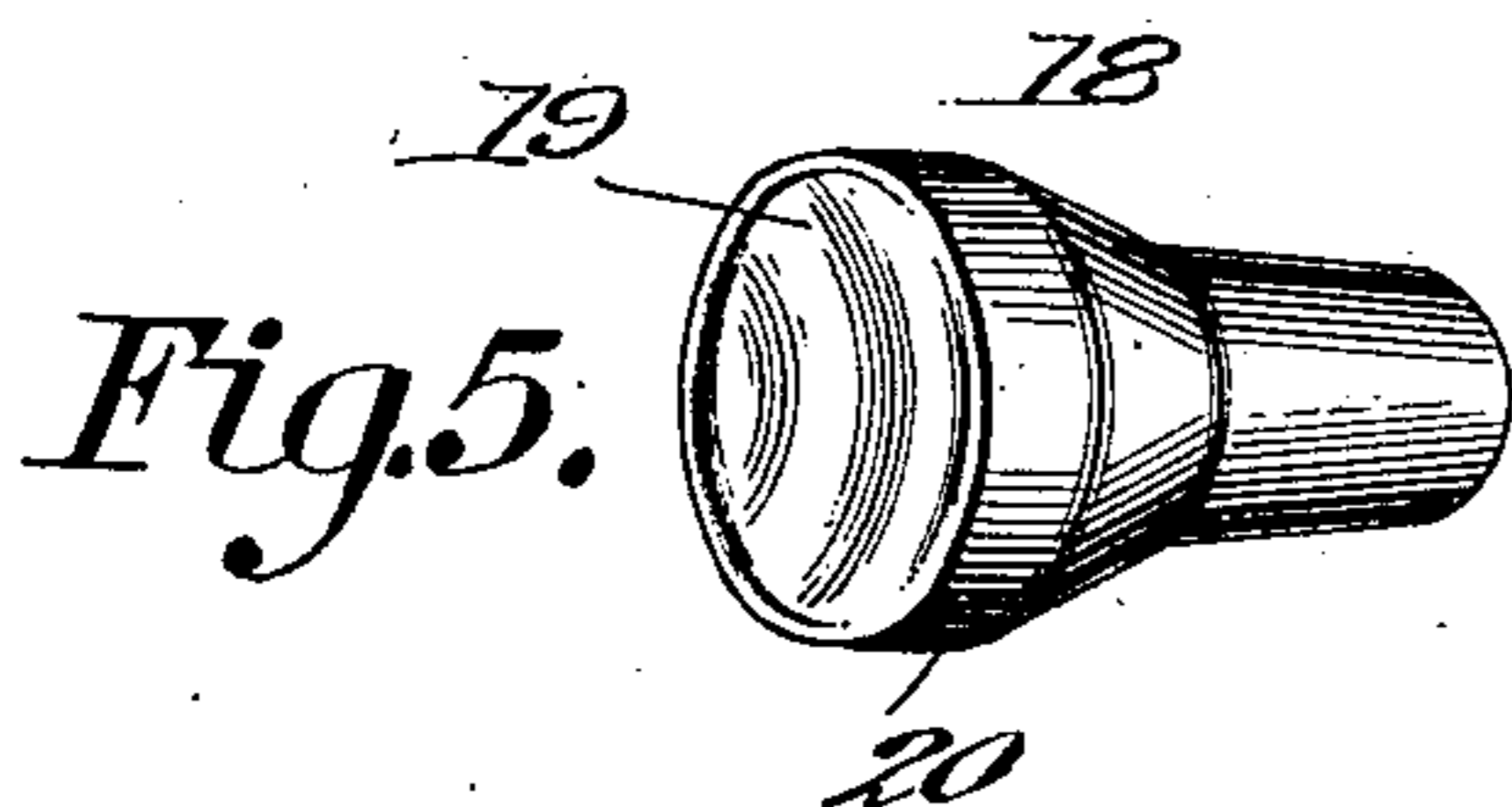
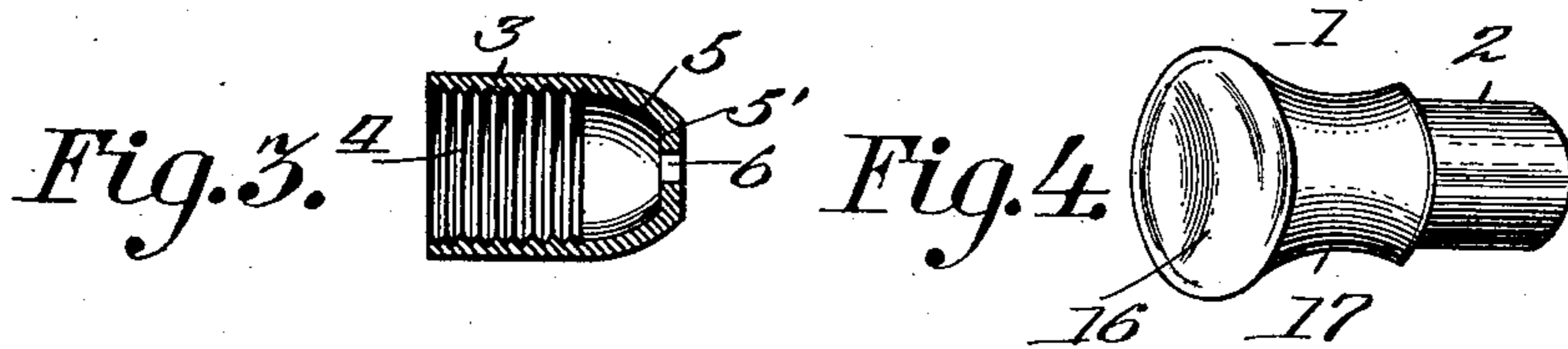
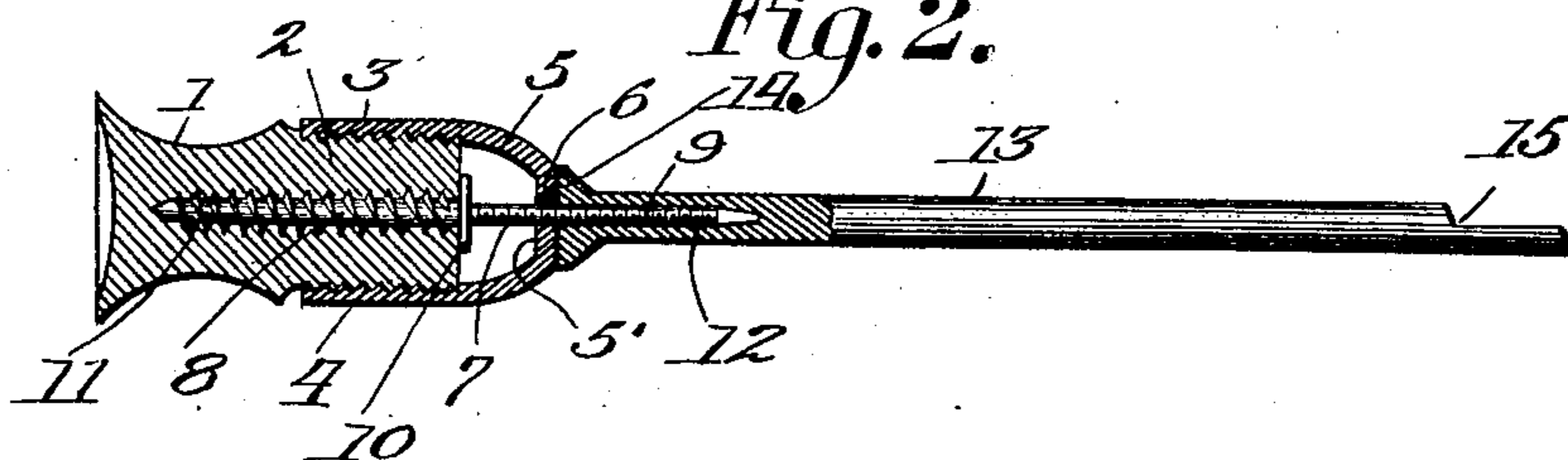


Fig. 2.



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DENTAL POLISHING DEVICE.

999,964.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed October 11, 1910. Serial No. 586,577.

To all whom it may concern:

Be it known that I, JESSE D. CONEY, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Dental Polishing Device, of which the following is a specification.

The invention relates to improvements in dental polishing devices.

10 The object of the present invention is to improve the construction of dental polishing devices, and to provide a simple, efficient and inexpensive polishing device, capable of use in the hand piece of an ordinary dental engine and designed for cleaning natural teeth in the mouth of a patient, and adapted to hold a quantity of abrasive or polishing material to facilitate the application of the same to the teeth operated on.

20 A further object of the invention is to provide a polishing device of this character, equipped with means for stiffening soft rubber, cork or other material and for preventing the same from breaking out at the sides.

25 With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

30 In the drawing:—Figure 1 is a side elevation of a dental polishing device, constructed in accordance with this invention. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a detail sectional view, illustrating the construction of the socket. Figs. 4, 5 and 6 are detail perspective views, showing different forms of polishing heads.

45 Like numerals of reference designate corresponding parts in all the figures of the drawing.

50 In the embodiment of the invention illustrated in the accompanying drawing, 1 designates a dental polishing head, designed for cleaning natural teeth in the mouth of a patient, and constructed of soft rubber, cork, or any other suitable material, and provided at its inner portion with a

cylindrical shank 2 to fit within an interiorly threaded socket 3. The socket 3, which is constructed of metal, or any other suitable material, consists of a cylindrical outer portion having interior screw threads 4 and an inner tapered portion 5, having an end wall or bottom 5' provided with a central perforation 6 for the passage of a screw 7. The shank of the soft material when screwed into the socket is engaged by the threads 4 and is spirally indented by the same, as clearly illustrated in Fig. 2 of the drawing. The socket not only assists in holding the polishing head in place, but it reinforces the same and prevents the polishing head from breaking out at the sides.

65 The screw 7 consists of outer and inner portions 8 and 9, and it is provided at the juncture of the same with a head or collar 10, which fits against the end of the shank of the polishing head. The polishing head is provided with a longitudinal opening 11 to receive the threaded outer portion 8, which is preferably provided with coarse threads analogous to those of a wooden screw for engaging the polishing head. The outer portion 8 of the screw extends centrally through the polishing head from one end of the shank to within a short distance of the outer end of the polishing head, and it is adapted to stiffen and support the same. The inner threaded portion 9 passes through the opening 6 in the inner end wall or bottom of the socket 3 and extends into an interiorly threaded bore or opening 12 of a mandrel 13. The bore or opening 12 is centrally arranged and extends inward from the outer end 14 of the mandrel. The outer end 14 is provided with a flat end face to fit the end wall or bottom of the socket, and it is preferably tapered inwardly, as shown. The inner end 15 of the mandrel is of the usual construction to fit in the hand piece of an ordinary dental engine. When the parts are assembled and the mandrel is screwed against the end wall of the socket, it operates to draw the screw inwardly and creates a pressure at the outer threaded portion of the screw, and also at the threads of the socket, which results in firmly securing the polishing head in place. The screw threads are shown right handed, so that the forward rotation due to the action of the dental drill will tend to tighten the parts instead of unscrewing the same, but they may be made

either right or left handed to correspond with the direction of rotation of the actuating member.

The polishing heads may be of different shapes. As illustrated in Figs. 1 to 4 inclusive, the polishing head 1 is provided with a concave outer end face 16, forming a cup-shaped recess, adapted to hold a quantity of pumice, emery dust, or other abrasive or polishing material to enable the same to be readily applied to the teeth, and the side faces 17 of the polishing head 1 are concave, forming a tapered projecting peripheral edge to adapt the polishing head for cleaning between the sides of the teeth where the latter are more or less close together. The polishing head 18, illustrated in Fig. 5 of the drawing, has a cup-shaped concavity 19 in its outer end, and is provided with a cylindrical side face 20 for cleaning the front and inner sides of the teeth. A conical polishing head 21 is illustrated in Fig. 6 of the drawing, and is designed for cleaning the teeth near the gum margins.

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

1. A polishing device of the class described including a socket, a polishing head having a shank fitted in the socket and held by the walls thereof, a mandrel abutting against the exterior of the inner end of the socket, and a fastening device connecting the mandrel with the socket and extending into the same and into the shank of the polishing head.

2. A polishing device of the class described including a socket, a mandrel having a threaded opening and fitted against the socket, a polishing head having a shank arranged within the socket, and a screw having inner and outer threaded portions, the outer threaded portion engaging the polishing head and the inner threaded portion being extended through the socket and engaging the threaded opening of the mandrel.

3. A polishing device of the class de-

scribed including an interiorly threaded cylindrical socket, a mandrel fitted against the inner end of the socket and having a threaded opening, a polishing head provided with a cylindrical shank of soft material screwed into the socket, the threads of the socket being embedded in the soft material of the shank, and a screw having inner and outer threaded portions, the outer threaded portion being extended into the polishing head and the inner threaded portion being extended through the inner end of the socket and engaging the threaded opening of the mandrel and securing the latter and the socket together.

4. A polishing device of the class described including a socket having an inner end wall or bottom provided with an opening, a polishing head having a portion fitted within the socket, a mandrel having a threaded opening and provided with an enlarged outer end fitting against the inner end of the socket, and a screw having inner and outer threaded portions, the inner threaded portion being extended through the opening of the socket and engaging the threaded opening of the mandrel.

5. A polishing device of the class described including a socket, a solid polishing head having an integral shank fitted in the socket and held by the walls thereof, said polishing head being also provided with a concave face forming a cup-shaped recess extending entirely across the end of the polishing head to the periphery thereof and adapted to hold polishing material, the sides of the polishing head beyond the socket being concave and forming at the juncture of the end and the sides a projecting peripheral polishing portion.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JESSE D. CONEY.

Witnesses:

GEORGE L. BUBB,

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