March 4, 1924. 1,485,963

W. E. CURRY

PROTECTOR FOR DENTAL HANDPIECES

Filed Aug. 9, 1922

Fig. 1.

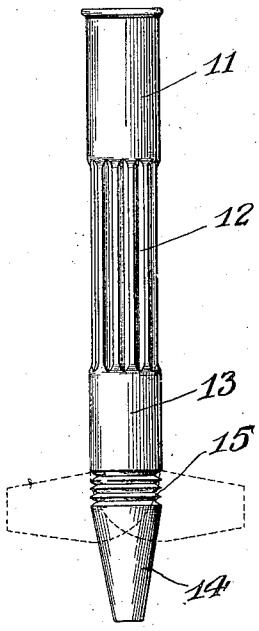
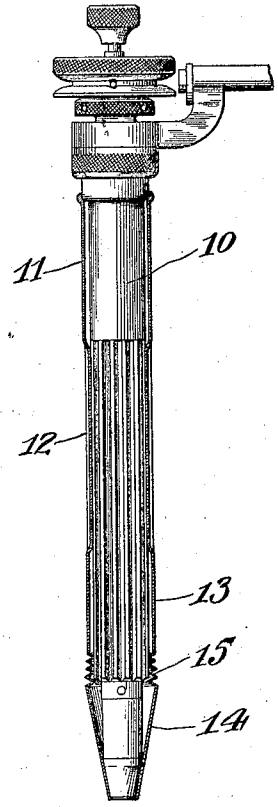


Fig. 2.



Inventor

Ward E. Curry

By Franklin A. Hoag

Attorney

Patented Mar. 4, 1924. 1,485,963

UNITED STATES PATENT OFFICE.

WARD E. CURRY, OF BRADENTOWN, FLORIDA, ASSIGNOR TO CURRY HAND-PIECE PROTECTOR CO., OF HILLSBOROUGH COUNTY, FLORIDA, A COMMON LAW COMPANY.

PROTECTOR FOR DENTAL HANDPIECES.

Application filed August 9, 1922. Serial No. 580,793.

To all whom it may concern:

Be it known that I, WARD E. CURRY, a citizen of the United States, residing at Bradentown, in the county of Manatee and State of Florida, have invented certain new and useful Improvements in Protectors for Dental Handpieces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to sanitary protectors for dental hand-pieces and has for an object to provide a protector of some cheap and relatively flexible material which will protect the hand-piece from contact with the hand of the user and with the mouth of the patient and which may be thrown away and discarded following each operation.

A further object of the invention is to provide a protector for a dental hand-piece which is adjustable to various types of hand-pieces either straight or angles and to angles of various divergencies from straight to comply with and operate in conjunction with the hand-pieces of modern practice.

A further object of the invention is to provide a protector for a hand-piece which shall grip the hand piece in such manner as to maintain this firmly upon the hand-piece during the operation and offer no obstruction to the proper manipulation of the hand-piece during such operation.

A further object of the invention is to provide a protector in the form of a tubular member which will slip over and upon the outside of and cover the hand-piece with an elbow joint intermediate its length to provide for the necessary hinging or angular movement of the angle hand-piece.

With these and other objects in view the invention comprises certain novel parts, units, elements, combinations, constructions, functions and inter-actions as disclosed in the drawings, together with mechanical, operative and functional equivalents thereof, as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a view of the improved protector of the preferred type shown in side elevation;

Figure 2 is a view of the protector in diametrical longitudinal section in its operative position upon a modern hand-piece of the straight type.

Like characters of reference indicate corresponding parts throughout the several views.

In the present practice of modern dentistry the engine is provided with a hand-piece which is conventionally shown at 10 in Figure 2. The present invention is intended to operate in conjunction with hand-pieces of various types and makes and the showing of the particular type of hand-piece in such figure is intended as no limitation upon the present invention.

The invention comprises a tubular member properly proportioned to slip over and upon the hand-piece 10 indicated at Figure 2. It comprises preferably a cylindrical part 11 properly proportioned to slip over the upper part of the hand-piece and with a fluted section 12 which constricts the diameter of the tube in normal position. This fluted section 12 when slipped over the hand-piece will expand by reason of its fluted construction to accommodate itself to the size of the hand-piece and yet to grip the hand-piece properly and firmly so that the hand of the operator grasping the outside of this protector will have a firm hold upon the hand-piece contained therein. Preferably also, though not essentially, a second cylindrical part 13 is provided spaced opposite the part 11 relative to the fluted section 12. This cylindrical part 13, while not essential to the invention is desirable in view of the fact that an elbow joint is connected directly with this part connecting a tapered extremity 14 with the section 13. This tapered section 14 is proportioned to fit over the chuck of the hand-piece as indicated more particularly at Figure 2 so that the bur or other tool may be inserted through the opening in the end of this tapered portion

into the chuck in the usual and ordinary manner.

The elbow joint intermediate the sections 13 and 14 may be of any type providing the necessary flexibility of the parts so that the tip 14 may be swung to an angular position relative to the axis of the parts 11, 12 and 13 some of which positions are indicated by dotted lines at Figure 1.

As shown in the drawings this elbow is a bellows joint provided by means of accordion folds 15 formed circumferentially in the tubular structure. It is obvious that this accordion construction will permit the movement of the tip 14 as indicated while maintaining at all times a closed relation of the protector. It follows, therefore, that the protector being placed upon the hand-piece will permit the movement of the angle as may be required to perform the operation in hand or the angle may be placed upon the hand-piece prior to the placing of the protector thereon and the bellows joint of the protector will yield as it is being placed upon the hand-piece with the angle thereon. In any arrangement of the hand-piece the protector is formed wholly to the end of the chuck whereby the part of the hand-piece introduced into the mouth of the patient is covered by this protector and the changing of the protector between each two operations will insure a clean and aseptic surface to be introduced into the mouth of the patient at each sitting.

As the protector is designed simply to be slipped over the hand-piece and to remain thereon during one operation whether the hand-piece be of the straight type or the angle type, it is believed that any further explanation of the operation of the device or its relation to the hand-piece would be superfluous.

What I claim to be new is:

1. A sanitary protector for dental hand-pieces comprising a tubular member proportioned to cover and grip the hand-piece and having a bellows joint formed intermediate its ends.

2. A sanitary protector for dental hand-pieces comprising a tubular member proportioned to cover the hand-piece and having circumferential folds formed intermediate its ends producing a bellows joint facilitating the positioning of one section of the tube at an angle relative to the other.

3. A sanitary protector for dental hand-pieces comprising a tubular member proportioned to cover and grip the hand-piece and provided with circumferential corrugations adjacent one end producing a flexibility facilitating the positioning of one section of said tubular member with its axis at an angle relative to the other.

4. A sanitary protector for dental hand-pieces comprising a tubular member having intermediate its length a longitudinally fluted section proportioned to grip the hand-piece, a tapered joint at one end proportioned to fit the chuck of the hand-piece, and a circumferentially corrugated section intermediate the fluting and the tapered extremity providing a flexibility in the tubular member facilitating the positioning of the tapered joint at an angle relative to the axis of the tubular member.

In testimony whereof I hereunto affix my signature.

WARD E. CURRY.