

W. B. MILLER.
DENTIST'S MANDREL.
APPLICATION FILED OCT. 18, 1909.

952,437.

Patented Mar. 15, 1910.

Fig. 1.

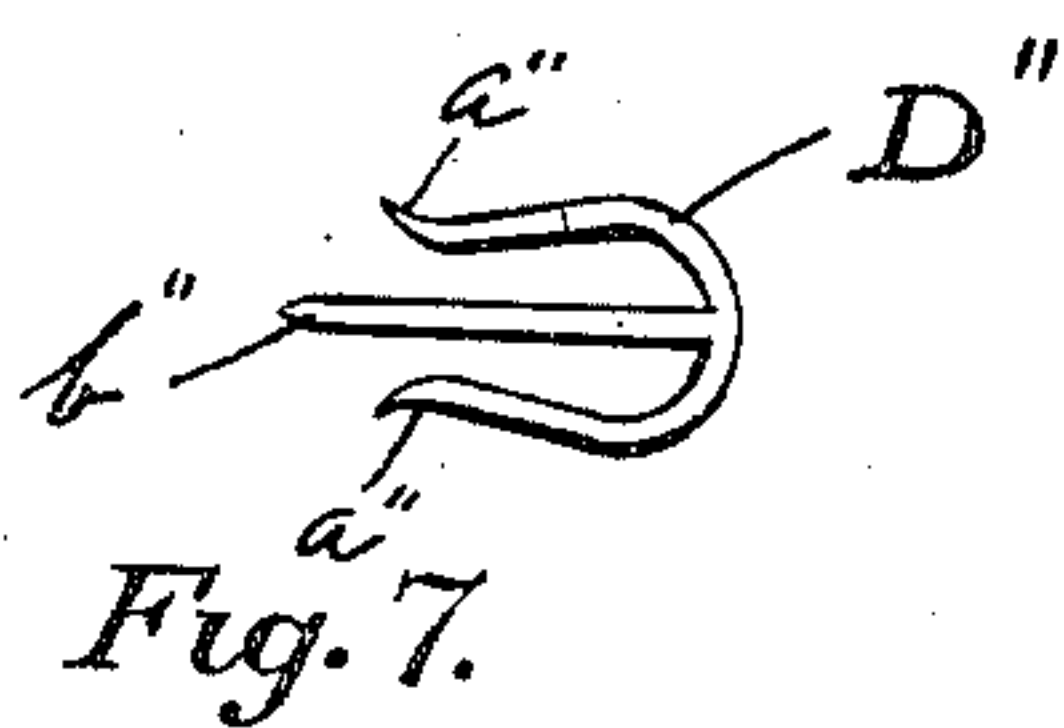
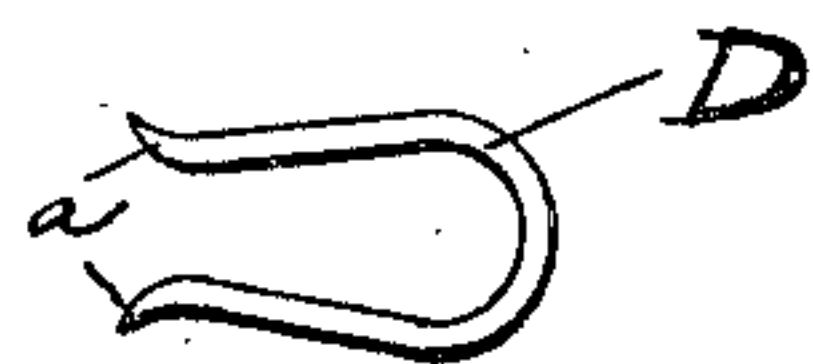


Fig. 7.

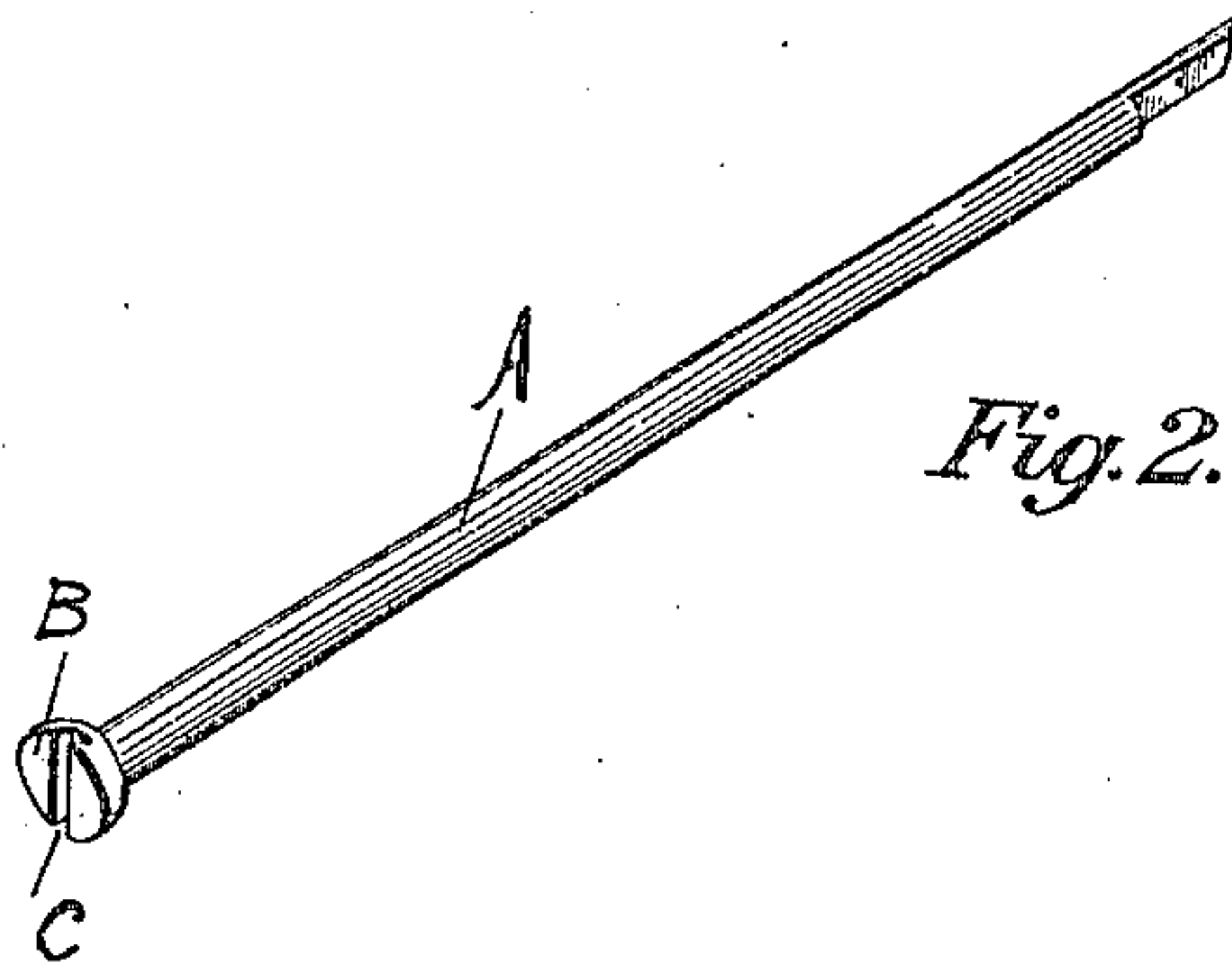


Fig. 2.

Fig. 3.

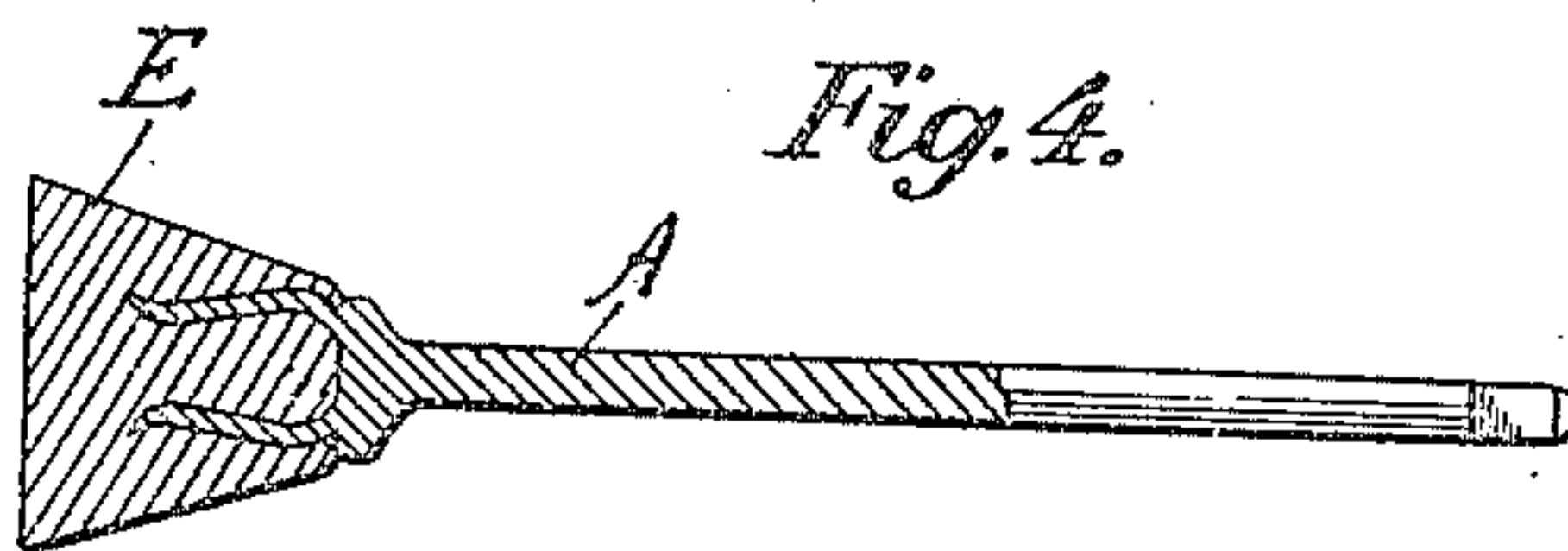


Fig. 4.

Fig. 5.

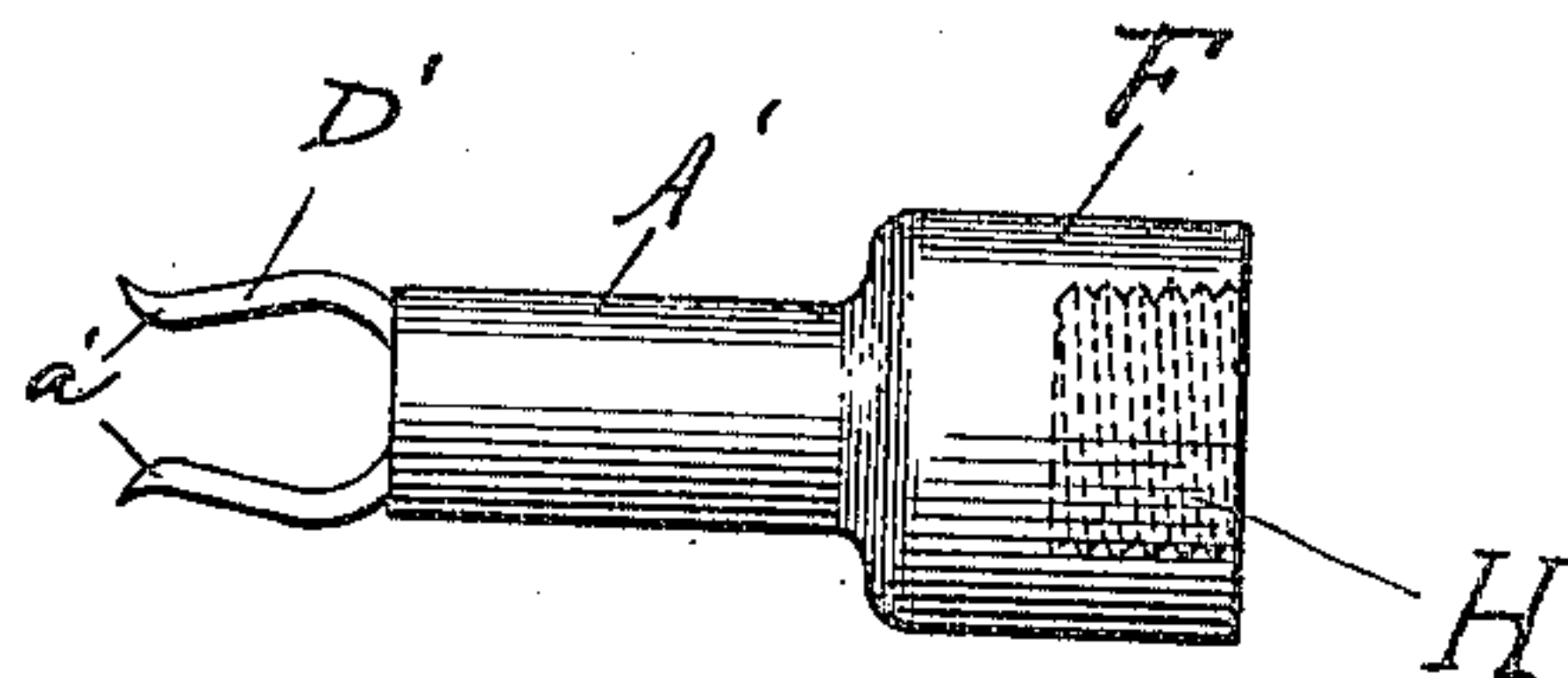
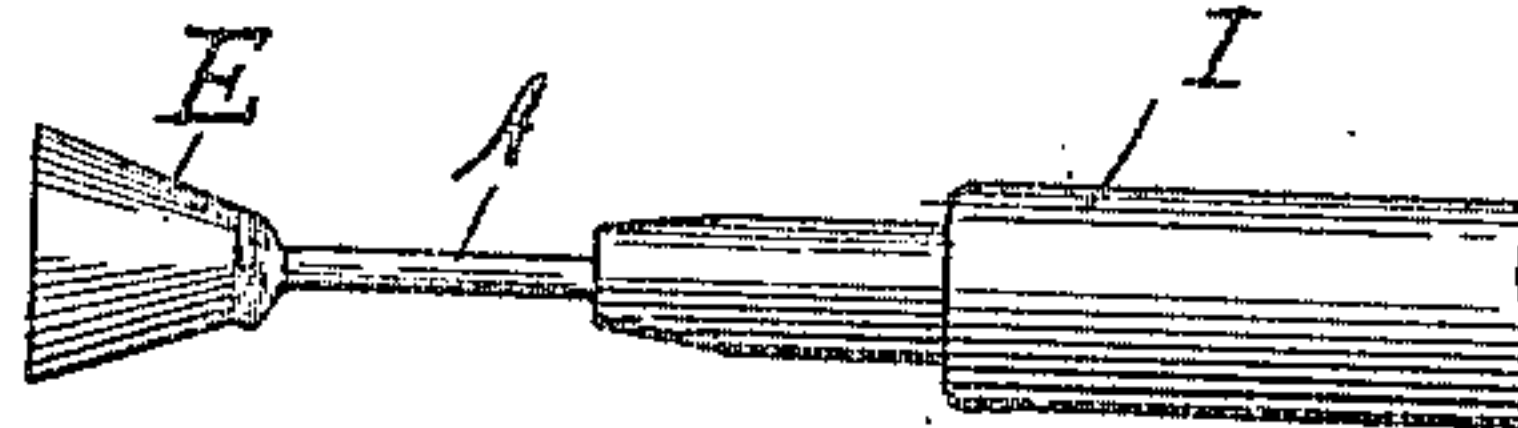


Fig. 6.



Witnesses

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DENTIST'S MANDREL.

952,437.

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To all whom it may concern:

Be it known that I, WILLIAM B. MILLER, citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Dentists' Mandrels, of which the following is a specification.

My invention relates to improvements in mandrels especially adapted for holding a soft or spongy material, such as cork and other like substances, and which are intended for polishing or grinding.

The object of this improvement is to prevent the splitting of the cork and also to prevent rotation of the same on the mandrel.

A further object is to provide a mandrel by means of which the head can be rotated in either direction without danger of breakage or loosening of the cork.

As an illustration of such a device reference is made to the accompanying drawings, in which,

Figure 1 shows the holding device. Fig. 2 shows a mandrel with a slotted head for receiving the holding device. Fig. 3 shows the parts assembled. Fig. 4 shows a complete mandrel with a cork applied, a part of which is in section. Fig. 5 shows my invention adapted to a mandrel for use on a lathe. Fig. 6 shows the mandrel in position in the ordinary dental engine. Fig. 7 shows a modification of the holding device.

Similar letters refer to similar parts throughout the several views.

My invention consists of a mandrel "A" having a head "B" with a diametrical slot "C" therein. The slot is of the exact width of the yoke-shaped prongs "D" which are inserted therein and fastened by means of solder or any other secure means of holding. These prongs are preferably made of piano wire and are formed in substantially the shape shown in Fig. 1. The ends "a" are turned slightly outward so that when they are inserted in the cork it will cause a spreading of said prongs which, therefore, firmly grip the edges of the openings in the cork and thereby hold it securely in position. The mandrel is shown applied to cork in Fig. 4, and this is done by merely inserting the prongs in any ordinary cork, and after putting the mandrel in the dental engine, truing up the cork in any desired shape. In order to reduce the length of these prongs,

a central prong "b'", as shown in Fig. 7, may be inserted, which makes the device like a neptune trident, except that the central prong is longer than the outer ones. The object of this is to penetrate the cork at its center for a considerable distance so as to support it firmly on the end of the mandrel, and the outer prongs "a'" are merely of sufficient length to penetrate the cork and prevent it from rotating. They are made of substantially the same shape as the prongs "a" in Fig. 1, so that they will readily grip the cork in the same manner. This device may be applied equally well to large or small mandrels, and in Fig. 5 a mandrel adapted to be put on a lathe is shown. In this case a screw-threaded opening "H" is made in the enlarged portion "F" by means of which it is fastened to the chuck. The cork is held in the same manner as the case of the small mandrel adapted to be used on the dental engine.

Heretofore the only means of holding a cork on the end of a mandrel for polishing teeth, plates, etc., has been a screw-threaded point. This is very unsatisfactory for the reason that in a soft cork it will readily rotate, thereby rendering the same useless. In many cases the turning in of this screw splits the cork which also renders it useless. Both of these difficulties are overcome by the use of my device, which readily enters and grips any kind of a cork, whether dense or spongy, and will hold it in such a position until it is worn down to such a degree that it is of no further use. By using the form of holding device shown in Fig. 7 the liability of scratching of the teeth, filling, or plate, by reason of the cork wearing down to the time is practically eliminated for the reason that the central supporting device, which is the tine "b'" is depended upon principally to support the rotating cork, and the tines "a'" are merely of sufficient length to hold the cork in position on the central tine and prevent its rotation. For this reason there is never any danger of scratching the teeth or the filling by reason of the wearing of the cork.

With this and other objects in view, I claim—

1. The combination of a mandrel and a head having two prongs for engaging a cork or similar material, said prongs being bent

outwardly from said head, and inwardly and again outwardly at the point, substantially as described.

2. The combination of a mandrel and a
5 head having two prongs for engaging a cork or similar material, said prongs being bent outwardly from said head, and inwardly

and again outwardly at the point, and a straight central prong extending beyond the outer prongs, substantially as described.

WM. B. MILLER.

Witnesses:

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