

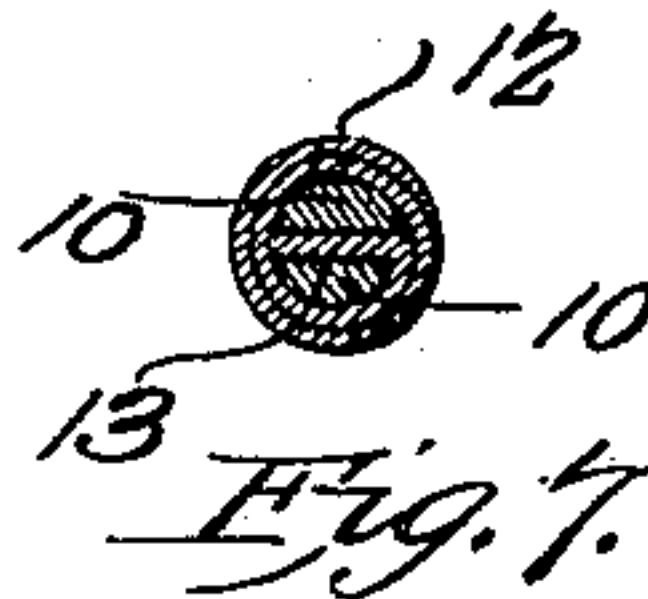
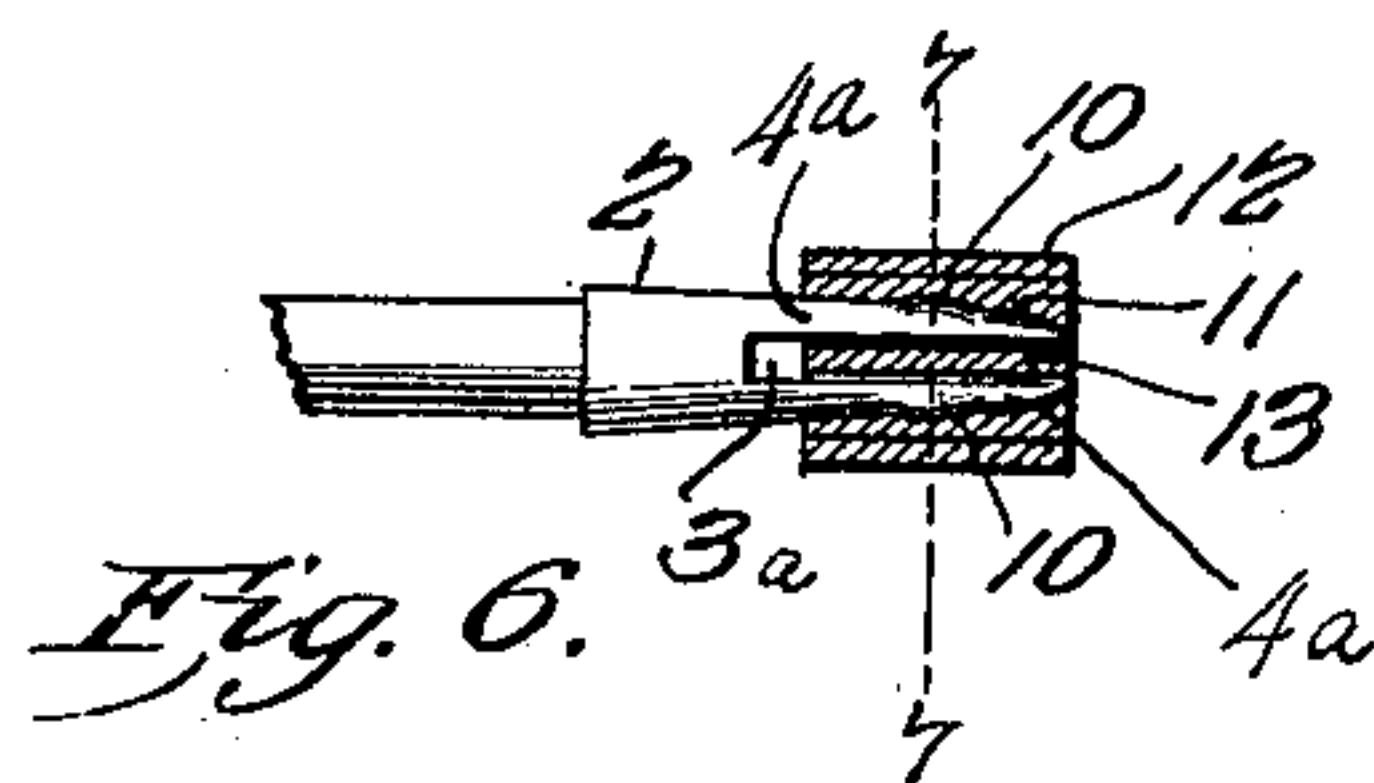
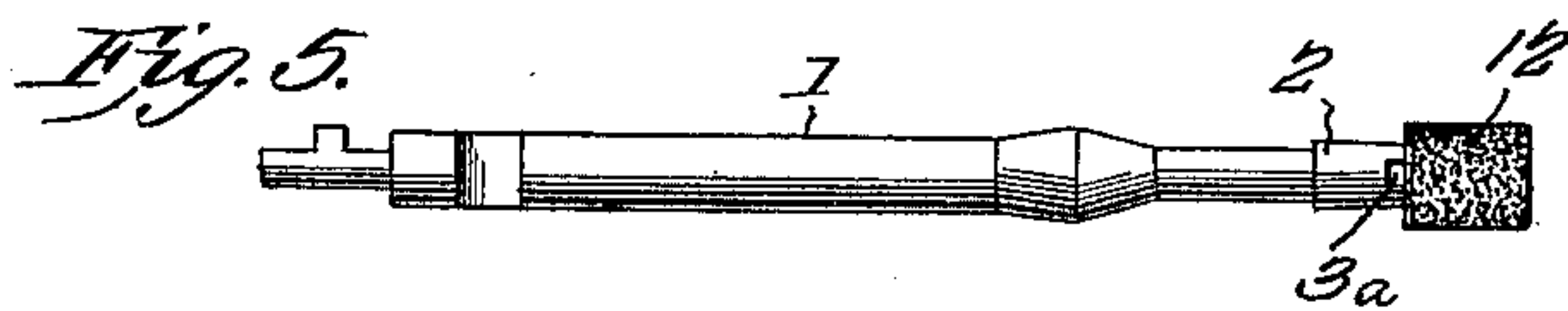
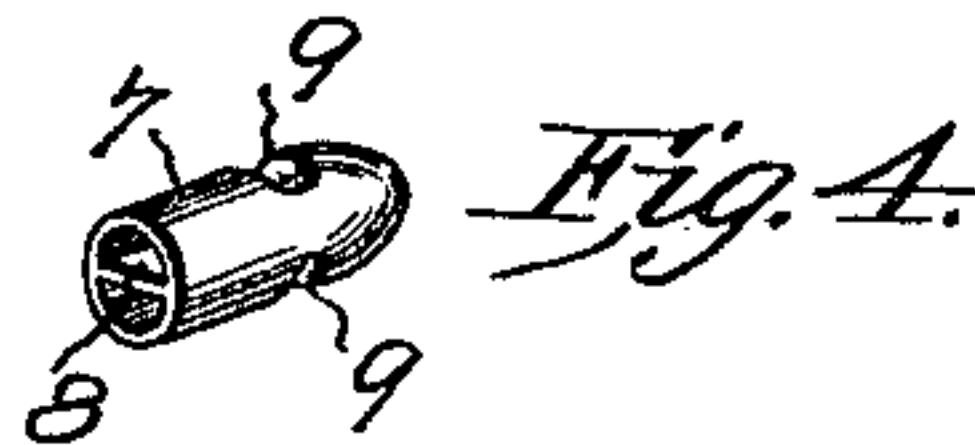
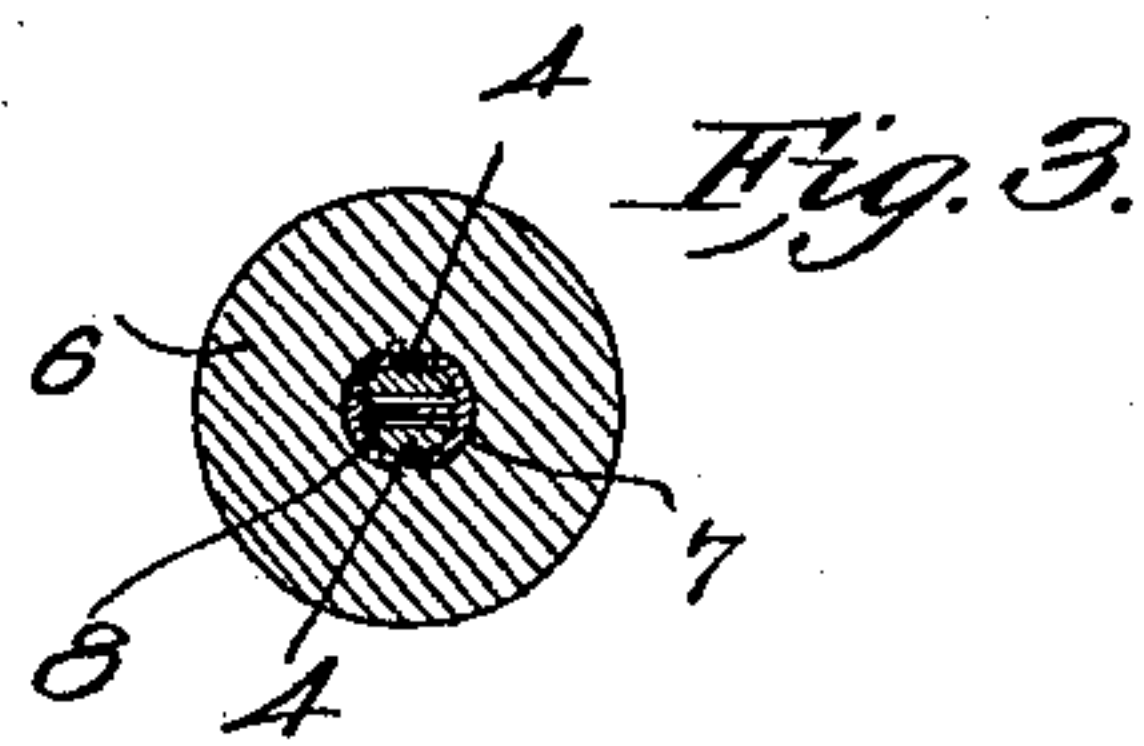
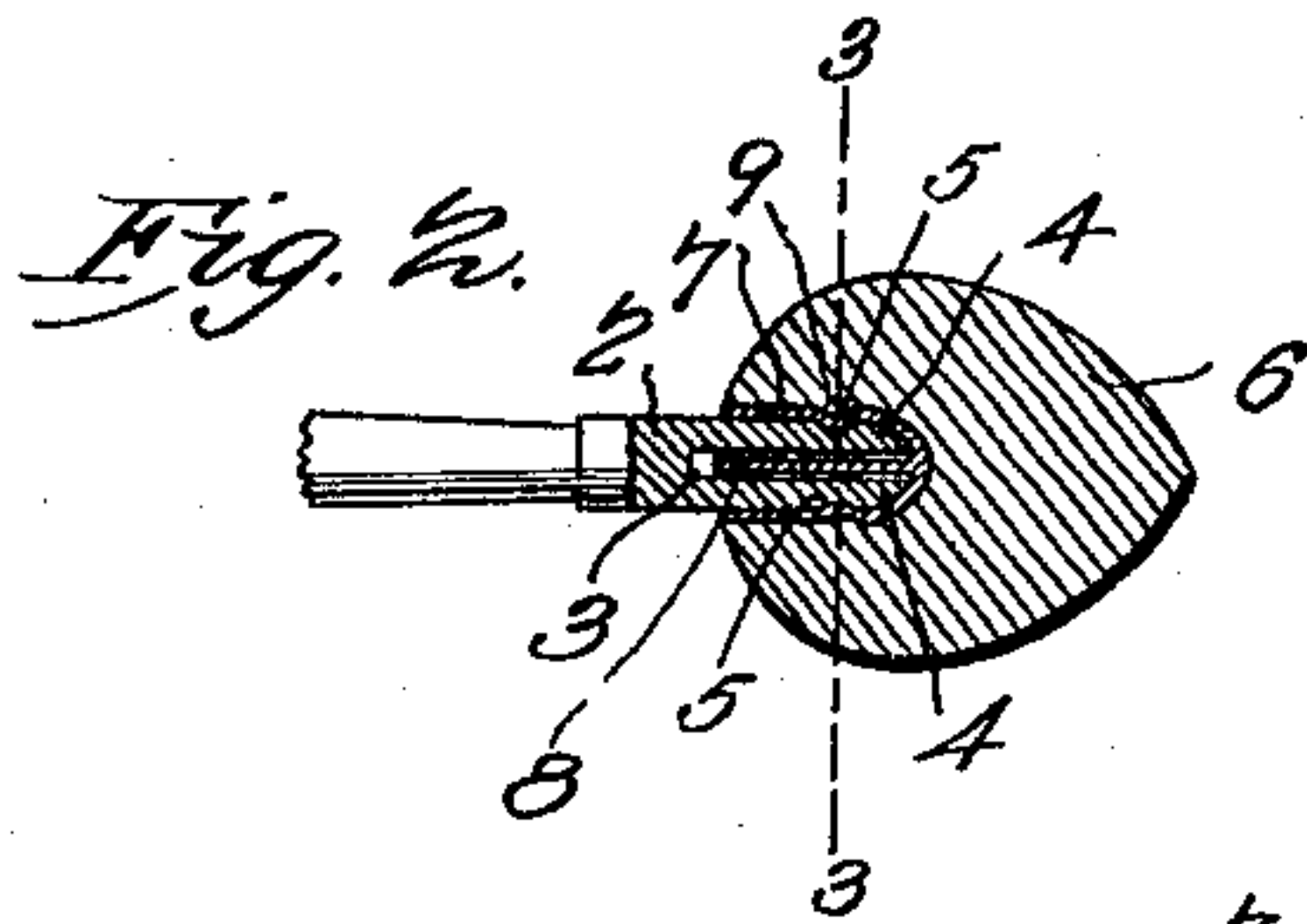
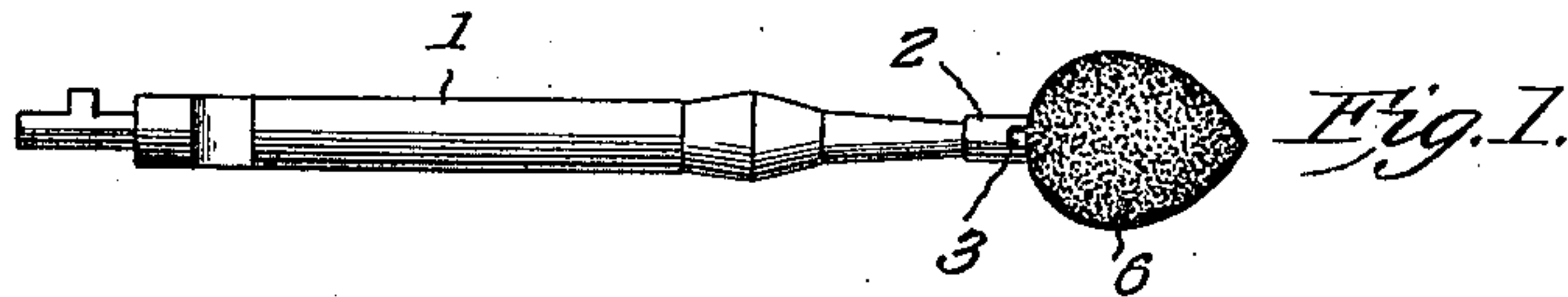
No. 685,659.

Patented Oct. 29, 1901.

G. M. WILLIAMS.
DENTAL IMPLEMENT.

(Application filed May 29, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

GILBERT M. WILLIAMS, OF MAYSVILLE, KENTUCKY.

DENTAL IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 685,659, dated October 29, 1901.

Application filed May 29, 1901. Serial No. 62,394. (No model.)

To all whom it may concern:

Be it known that I, GILBERT M. WILLIAMS, a citizen of the United States, residing at Maysville, in the county of Mason and State of Kentucky, have invented a new and useful Dental Implement, of which the following is a specification.

This invention relates to dental implements particularly adapted for use with a dental engine for grinding and polishing purposes, but can be employed for other purposes; and the object of the same is to provide simple and effective means for removably holding grinding and polishing attachments of various shapes and natures on the terminal of a mandrel and prevent the same from rotating while in use, whereby one mandrel may be employed to receive a number of different devices.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of a mandrel and removable attachment embodying the features of the invention. Fig. 2 is a longitudinal vertical section of the attachment and the terminal of the mandrel engaged thereby. Fig. 3 is a transverse vertical section on the line 3 3, Fig. 2. Fig. 4 is a detail perspective view of a socket used in the attachment. Fig. 5 is a side elevation of a mandrel embodying a slightly-modified form of the invention and showing a different form of attachment. Fig. 6 is an elevation of the mandrel-terminal in its modified form, showing the attachment in longitudinal section and embodying the features of construction of the device shown by Fig. 5. Fig. 7 is a transverse vertical section on the line 7 7, Fig. 6.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a mandrel adapted to be fitted to the usual flexible revolving shaft of a dental engine, though it is obvious that it may be applied to other suitable co-acting mechanisms. The free terminal 2 of the said mandrel is formed with a longitudinal slot 3 to provide two yielding or spring jaws 4, the said slot opening outwardly

through the end of said terminal. The outer portion of each jaw, at a suitable distance from the free end thereof, is formed with a recess 5, the portion of each jaw between its recess and the free end thereof constituting a locking means and with the recess forms a firm detachable securing construction for engagement by the attachment 6. The attachment 6 is the grinding or polishing device and may be of any shape, dimension, and material, the attachment shown being one form of the well-known corundum-point. In the rear portion of the said attachment a socket 7 is mounted and secured against movement, the said socket being provided with a diametrically-disposed web 8, longitudinally extending the full length thereof, and near its outer end also provided with diametrically-opposed indentations 9 to engage the recesses 5 in the jaws 4. The interior of the socket corresponds in contour to that of the jaws, and when the attachment is applied to the jaws it is securely held against accidental disengagement.

The modified form of the device shown by Figs. 5, 6, and 7 is the same in general particulars as that heretofore described, the jaws 4^a being produced by a slot 3^a, as before set forth; but said jaws in the present instance each have an outer projection 10 to fit in corresponding recesses 11 in the interior of the attachment 12, the latter being formed by rolling emery or other abrading material or otherwise constructing said attachment to provide a receptive socket therein with a diametrically-extending web 12. This correlative construction of the jaws and socket or receptive opening in the attachment to removably receive the jaws might be varied indefinitely as long as the salient features of construction are embodied.

The locking means in part constructed in the socket or receptive opening of the attachment and in part located in the jaws prevents the attachment from becoming accidentally separated from the jaws or mandrel-terminal, and when the jaws are in the attachment the web fits in the slot 3, and consequently the attachment is prevented from rotating on the mandrel. The yielding action of the jaws permits them to be snapped into place within the attachment and also

withdrawn from the latter in an expeditious manner by the operator, and different shapes or contours of attachments can be readily substituted for each other on the jaws to perform
5 different kinds of work.

As before indicated, the improved construction is particularly adapted for dental implements; but the same principle may be employed in tools used in other arts, and for this
10 purpose changes in the form, size, proportions, and minor details may be resorted to without departing from the principle of the invention.

Having thus described the invention, what
15 is claimed as new is—

1. In an implement of the class set forth, the combination of a mandrel of rigid form having resilient jaws at one end only with a slot between them, and an attachment hav-
20 ing a freely-removable application to the said jaws and formed with a receptive opening with a diametric web therein to respectively receive the jaws and enter the slot between the latter, the jaws and wall of the opening
25 on opposite sides of the web having locking means to prevent the attachment from becoming accidentally separated from the jaws.

2. In an implement of the class set forth, the combination of a rigid mandrel having terminal resilient jaws with a slot between
30 them, and an attachment freely removable from the said jaws and provided with a socket in one extremity to receive said jaws, said socket having a web extending diametrically thereacross, the wall of the socket on oppo-
35 site sides of the web being formed with recesses and the outer portions of the jaws projected to enter said recesses and form a lock to prevent the attachment from accidentally
40 slipping off the jaws.

3. In an implement of the class set forth, the combination of a mandrel having terminal jaws with a space between them and indentations in the outer portions thereof, and
45 an attachment having projections to engage said indentations and a web to enter the space between the said jaws.

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

GILBERT M. WILLIAMS.

Witnesses:

THOMAS A. DAVIS,
A. F. WOOD.