

No. 770,115.

PATENTED SEPT. 13, 1904.

F. C. ROOD.
DENTAL APPLIANCE.
APPLICATION FILED JUNE 8, 1904.

NO MODEL.

Fig. 1

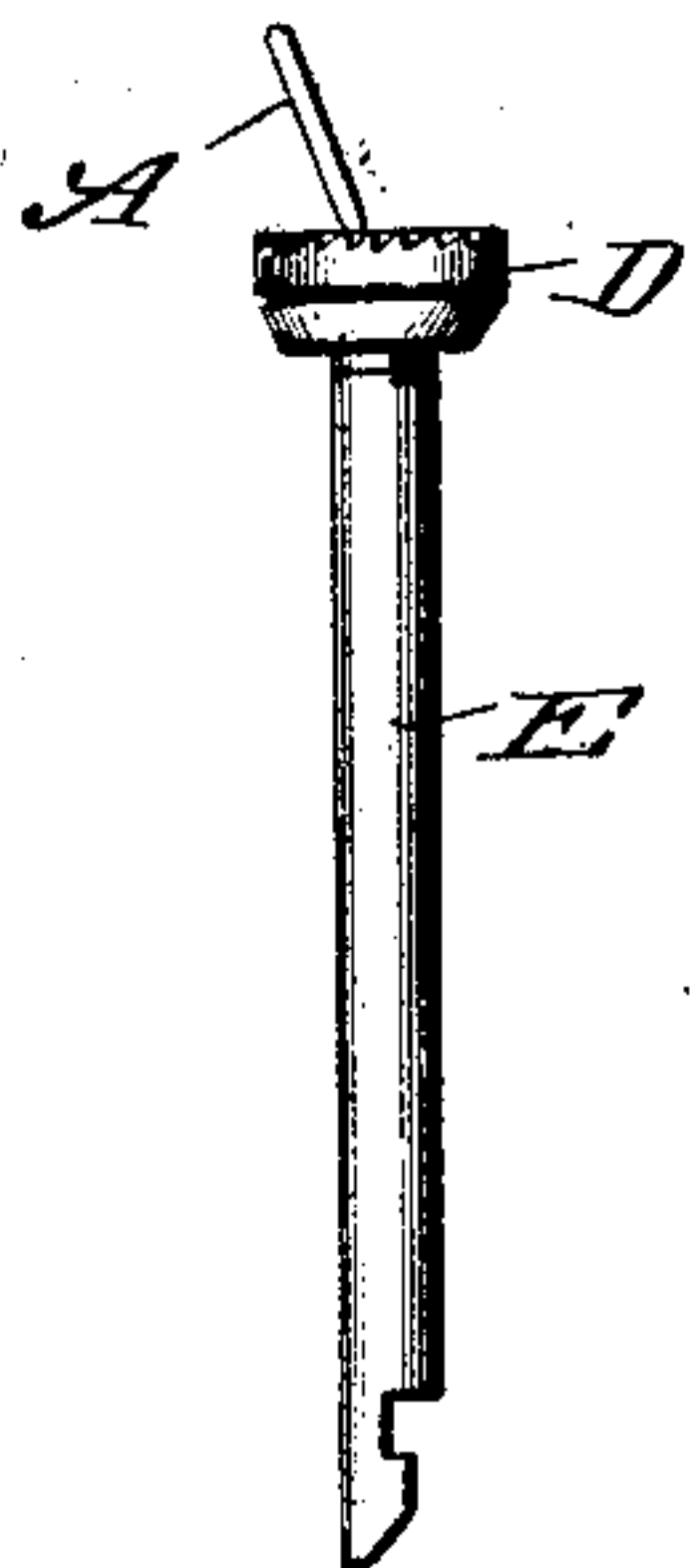


Fig. 2.

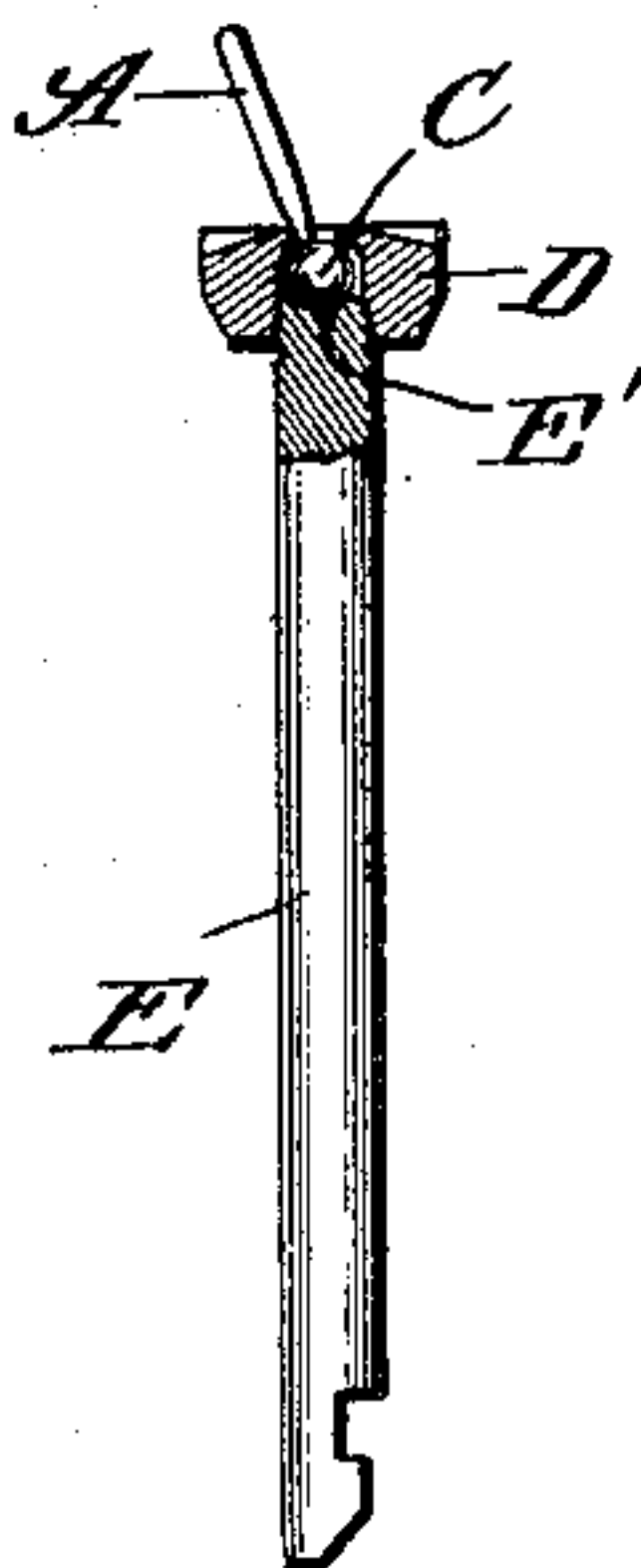


Fig. 3.

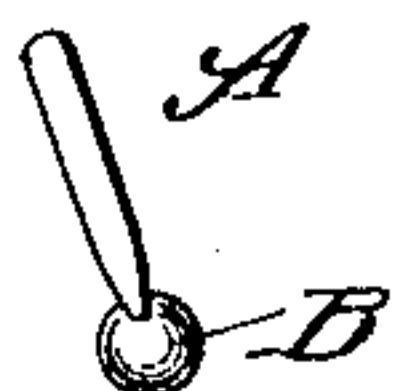


Fig. 4.



Fig. 5.



Fig. 7.

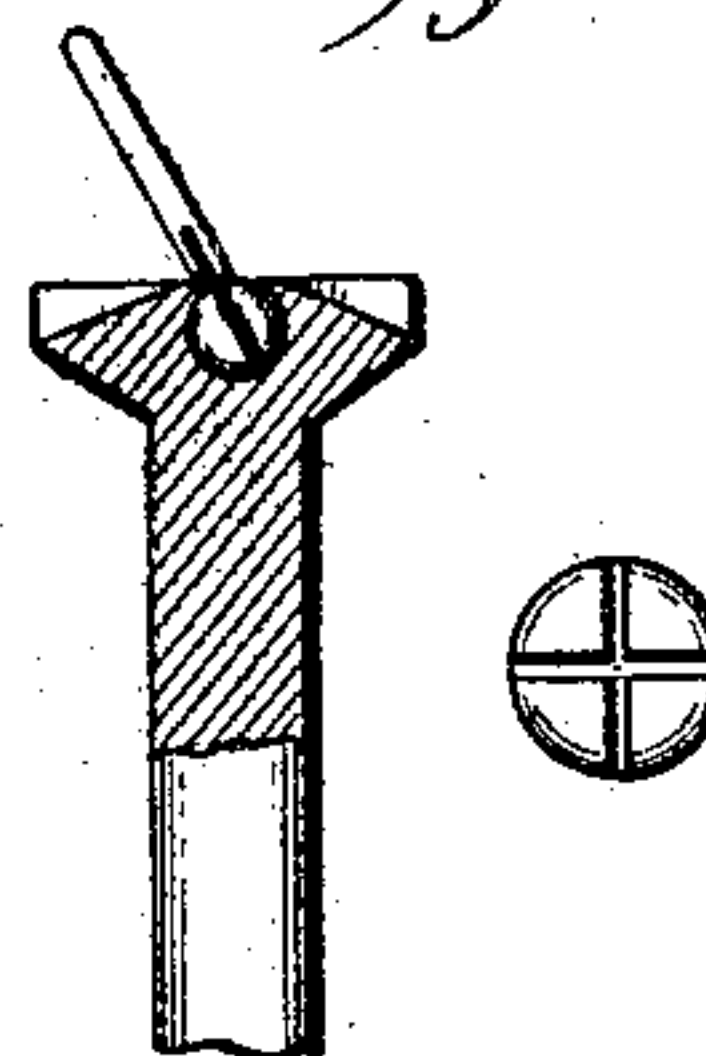
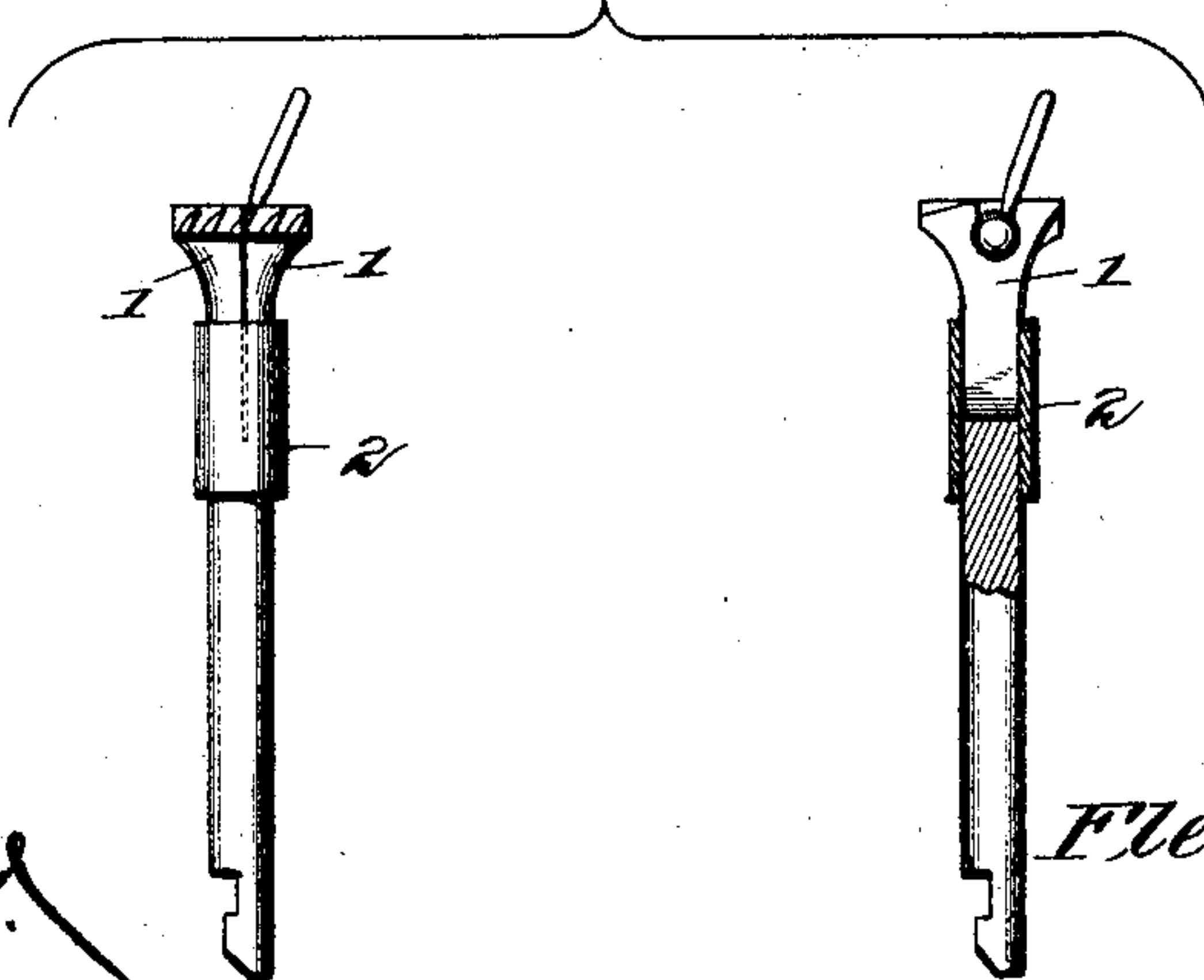


Fig. 6.



WITNESSES:

Frederick D. Bradford
Perry B. Karpine

INVENTOR

Fletcher C. Rood

BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

FLETCHER CHARLES ROOD, OF WALLA WALLA, WASHINGTON.

DENTAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 770,115, dated September 13, 1904.

Application filed June 8, 1904. Serial No. 211,624. (No model.)

To all whom it may concern:

Be it known that I, FLETCHER CHARLES ROOD, a citizen of the United States, residing at Walla Walla, in the county of Wallawalla and State of Washington, have made certain new and useful Improvements in Dental Appliances, of which the following is a specification.

My invention is an improvement in dental appliances, and particularly in devices for use in trimming the roots of teeth in preparing said roots for crowning with a Richmond, Logan, or other dowel or pin crown; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation, and Fig. 2 a vertical longitudinal section, of a trimming or facing instrument embodying my invention. Fig. 3 is a detail perspective view of the pin. Fig. 4 is a detail perspective view of the cutter. Fig. 5 is a detail perspective view of the shaft or shank. Fig. 6 illustrates a somewhat different means for securing the movable pin, and Fig. 7 illustrates a still different means for securing the movable pin.

In the facing or trimming instruments commonly used the pin to engage in the root-canal to prevent the implement from slipping is rigid with the cutter, so that in order to permit the operation of the cutter at an angle to the axis of the tooth it is necessary to enlarge the root-canal, which is objectionable, as it requires the otherwise unnecessary removal of tooth structure as well as prevents the close adaptation between the pin of the finished crown and the root to be crowned. By my invention, therefore, I seek to connect the pin A, which enters the root-canal in the use of the instrument, movably with the cutter, so the cutter can be turned to different angles without displacing the pin from the root-canal and without necessitating any unnecessary enlargement of such canal in the root.

As shown and preferred, the pin A is universally jointed in connection with the cutter by forming such pin A with a ball B, seated in a socket C in the under side of the cutter,

the pin protruding through an opening formed through the cutter and projecting above the cutter, as shown. As shown in Figs. 1 and 2, the cutter D is screwed on the upper end of the shank E, and the latter has in its upper end a socket or depression E', which coöperates with the socket in the under side of the cutter D in securing the ball of the pin A. The pin, as suggested, extends through the cutter and projects above the same, so that said pin may enter the root-canal in the use of the invention. By this construction the pin is practically swiveled at its lower end in connection with the cutter, so the latter may swing over at an angle in any direction, thereby enabling the dentist to cut any desired bevel on the end of the root to be crowned without necessitating any enlargement of the root-canal further than enough to admit the pin A and likewise the pin of the finished crown which may be made of the same size platinum wire as the pin A, and it will be understood that by providing a number of different sizes of removable pins A one can be readily selected suitable in size to the case being treated by the dentist.

The described construction of root-facing instrument not only permits the required preparation of the root with the least possible removal of tooth structure, but by reason of the close adaptation between the pin of the finished crown and the root to be crowned the root-crown when applied will be held immovably while the cement used in the final setting has time to thoroughly harden. Furthermore, the improved construction of facing admits of trimming or beveling the root below the gum-line without in the least injuring the gum, thus giving less pain to the patient and rendering the operation easier for the dentist. By removing the pin from the facing-cutter the blades of the latter may be readily sharpened by the dentist provided with a suitable stone. Manifestly the cutters may be of any approved style and may be supplied with the cutting-teeth on the upper ends or faces, as shown in Figs. 1, 2, and 4, or may have cutting-teeth on both their upper faces and edges, as shown in Fig. 6, while for convenience it may in some instances be preferred to employ

the construction shown in Figs. 1, 2, 4, and 5 for securing the cutter to the shank.

It will be understood that I may employ different constructions for securing the universal joint between the projecting pin for entering the root-canal and the cutter. Thus, for instance, in Fig. 6 I show the cutter split longitudinally and having the ball-socket formed between its sections 1, and a sliding sleeve is supplied embracing the sections and movable to a position, as shown in Fig. 6, for holding the sections closed upon the ball, the broad idea of my invention residing in securing the pin loosely in connection with the cutter, so the cutter may be adjusted to any desired angle to properly operate upon the root. In Fig. 7 I show a still different construction of ball and socket. In this construction the cutter is formed integrally with its shaft or shank and has the socket, and the ball end of the pin is slitted longitudinally with slits crossing each other at a right angle, forming the ball in four sections, which may be sprung inwardly, allowing the ball to be forced or sprung into its socket.

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

1. A dental appliance consisting of a root facer or trimmer, comprising a cutter for facing a root, and a pin secured at one end loosely in connection with the cutter, and adjustable

on said connection to different angles relative to the axis of the cutter.

2. A dental appliance substantially as described, comprising the cutter, and the projecting pin universally jointed at one end in connection with the cutter.

3. A dental appliance comprising a cutter adapted for facing or trimming a root of a tooth, and a pin to enter the canal of such root and swiveled at one end in connection with the cutter, and adjustable on said end as a pivot to different angles relative to the axis of the cutter.

4. A dental appliance comprising the cutter, having a socket in its under side and having an opening through it and communicating with said socket, the pin provided with a ball seated in the socket in the under side of the cutter, such pin projecting through the opening in the cutter, and the shank on which the cutter is, threaded, said shank bearing at its end against the ball of the projecting pin.

5. A dental appliance comprising the cutter for facing a tooth-root and provided with a socket, and a pin to enter a root-canal and having a ball on one end held in the socket of the cutter, whereby the pin is universally jointed at one end to the cutter.

FLETCHER CHARLES ROOD.

Witnesses:

JOHN H. McDONALD,
OTTO B. RUPP.