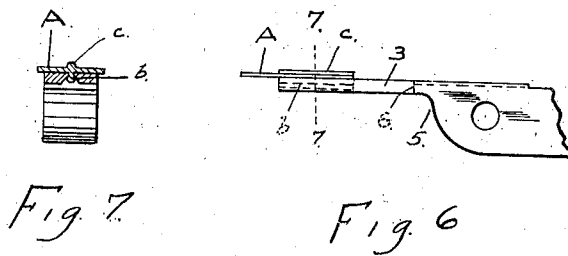
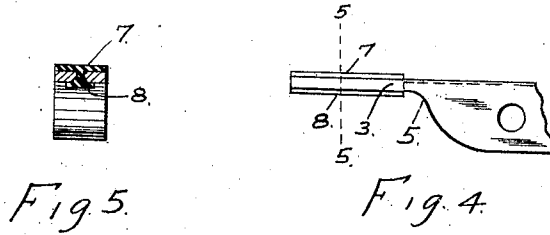
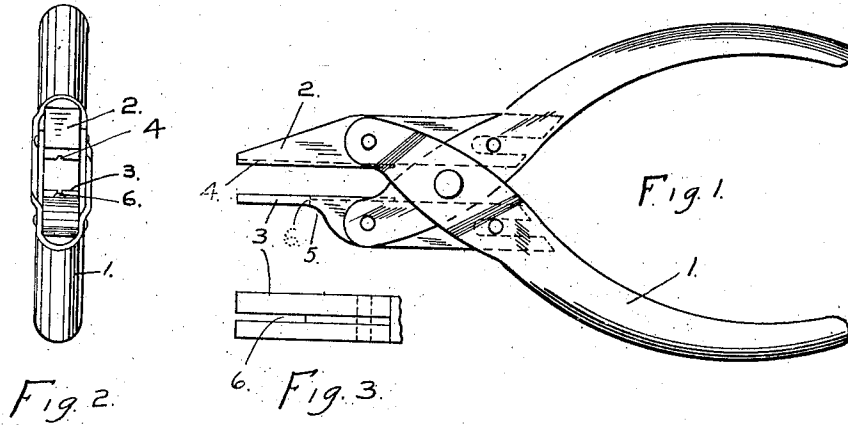


G. W. GRANT.
DENTAL PLIERS.
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1,058,745.

Patented Apr. 15, 1913.



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UNITED STATES PATENT OFFICE.

GEORGE W. GRANT, OF BUCYRUS, OHIO, ASSIGNOR TO THE COLUMBUS DENTAL MANUFACTURING COMPANY, OF COLUMBUS, OHIO, A CORPORATION OF OHIO.

DENTAL PLIERS.

1,058,745.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE W. GRANT, a citizen of the United States, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Dental Pliers, of which the following is a specification.

My invention relates to combination dental pliers and is particularly directed to the provision of a pair of pliers of a type and form calculated to render them particularly effective for use in dental work.

One of the essential features of my pliers resides in their applicability to the holding of artificial teeth, for instance, when it is desired to grind such teeth.

Difficulties attendant upon grinding artificial teeth are a source of considerable annoyance to the average dentist, for the reason that hitherto there has been no instrument calculated to effectually grasp and retain such an artificial tooth during such grinding operation. Where ordinary pliers have been used, a firm grip could not be gotten on the tooth without exerting a great pressure, resulting frequently, in the breaking of the tooth. Even under a great pressure, the tooth will change positions by sliding due to the vibrations during grinding. My invention is desirably represented for this purpose by a surface of frictional material desirably taking the shape of soft rubber. The material, however, may vary as to nature and is preferably applied in the form of a detachable surface for one of the jaws. This detachable surface is preferably rendered applicable by some simple means of connection and this simple means of connection is also utilized by me in my preferred embodiment of pliers as a means for facilitating the gripping and retaining of a tooth backing which may be ground or operated upon in any desired way.

The preferred embodiment of my invention is shown in the accompanying drawings, in which similar characters of reference designate corresponding parts, and in which—

Figure 1 is a side elevation of my improved pliers which are desirably of the parallel-jaw type, Fig. 2 is an end view looking from the left of the structure shown in Fig. 1, Fig. 3 is a detail view of the lower jaw of the tool shown in Fig. 1, Fig. 4 is a detail of this lower jaw with the sup-

plemental frictional surface applied thereto, Fig. 5 is an end view of this lower jaw with such supplemental jaw applied thereto, Fig. 6 is a detail view of this lower jaw supporting a tooth backing, and, Fig. 7 is an end view of the structure shown in Fig. 6.

In the drawings, the pliers are shown at 1 as having an upper jaw 2 and a lower jaw 3, the upper jaw 2 being desirably grooved as at 4. The lower jaw is preferably cut away as at 5 and provided with a slot 6 extending inward from its outer extremity to any desired length. The slot is preferably of a substantially dove-tail formation, although this is not absolutely essential to attain the benefits of my invention. Operating in conjunction with this lower jaw, I preferably utilize a detachable surface element 7 comprising a body and a depending T-shaped tongue 8. This T-shaped tongue 8 is formed so as to permit the bifurcated end of the jaw 3 to straddle and embrace its shank. It will be readily apparent that the surface member may be slipped into the slot 6 as described, with practically no difficulty and it will be retained therein with sufficient strength to render the jaw member suitable for gripping an artificial tooth. The ordinary artificial tooth is placed upon the friction element 7 and the curved surface common to practically all teeth, will normally seat itself in the groove 4 of the upper jaw member, thus firmly centering the tooth and maintaining it in such position allowing the operator to grind the bottom of the tooth the desired amount. When it is desired to grind or operate upon a tooth backing and at the same time firmly hold the same, the surface element 7 may be removed and a backing A placed upon the lower jaw by sliding its rib *b* thereinto, which leaves its upper rib *c* in position to fit within the groove 4 in the upper jaw 2. Thus the backing is firmly gripped and held in place and may be operated upon with assurance of its firm retention between the jaw members. This is equally true of operation upon an artificial tooth.

What I claim, is—

1. Dental pliers comprising handles, and jaws, one of said jaws having a frictional facing coöperatively mounted with an exposed longitudinally extending groove on the other of said jaws.

2. Dental pliers comprising handles, and

jaws, one of said jaws having its end bifurcated, and a frictional facing provided with a T-shaped formation to fit in said bifurcation, the other of said jaws cooperating
5 with said frictional faces.

3. Dental pliers comprising handles, and jaws, one of said jaws having its end bifurcated, the other of said jaws having an exposed longitudinal groove therein, and a
10 frictional facing provided with a formation to fit in said bifurcation.

4. Dental pliers comprising handles, and jaws, one of said jaws having its end bifurcated, and the other of said jaws being provided with a cooperating exposed longitudi-
15 nally extending groove.

5. Dental pliers comprising handles, and jaws, one of said jaws being bifurcated and having its outer portion cut away to form a comparatively thin tongue, the other of
20 said jaws having an exposed longitudinally extending groove centrally formed therein, and a removable frictional facing provided with a T-shaped formation to fit in said bifurcation.

In testimony whereof I affix my signature
25 in presence of two witnesses.

GEORGE W. GRANT.

Witnesses:

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H. E. COOK.