

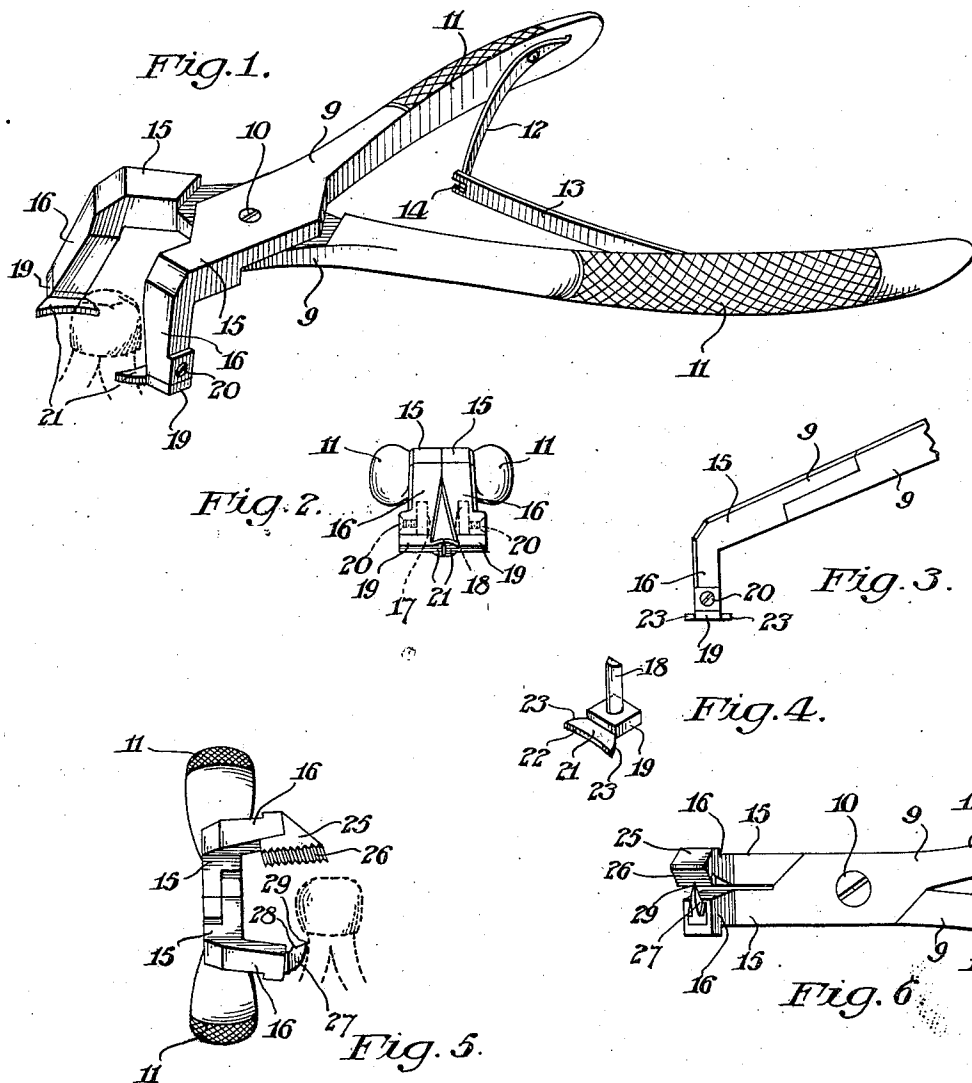
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J. GOLDBERG

DENTAL TOOL

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UNITED STATES PATENT OFFICE.

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DENTAL TOOL.

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To all whom it may concern:

Be it known that I, JACOB GOLDBERG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dental Tools, of which the following is a specification.

My invention relates to dental tools, and more specifically to a tool designed for use by dentists for conforming or fitting a crown in close relationship to the neck of a tooth. My invention further contemplates the provision of a tool of such character that the crown adjusting devices may be removed from the tool, and crown slitting devices substituted in place thereof.

It is well known to dentists that it is difficult to properly fit gold or similar metallic crowns to a tooth for the reason that the crown of the natural tooth is ordinarily larger than the neck portion, and consequently, when the crown is so shaped as to fit over the enlarged portion of the tooth, a space will usually be left at the cervical margin of the crown which will permit the entrance of particles of food and other deleterious substances, causing further decay of the tooth and subsequent loosening of the crown therefrom. It will therefore be understood that it is essential that the crown be tightly fitted around the neck of the tooth for the foregoing reasons, as well also for presenting a more sightly appearance.

The object, therefore, of my present invention is to provide a simple and efficient tool whereby the crown may be tightly conformed to or fitted around the neck of the tooth in a convenient and expeditious manner by the dentist. A further object of my invention is to provide a tool of such character that the crown adjusting members may be removed therefrom, and crown adjusting members substituted in place thereof. A further object of my invention is to so shape the operating jaws of the tool (which jaws carry the crown adjusting members, or alternatively, the crown slitting members) in such manner as to afford the utmost convenience and facility during the various manipulations required, and causing a minimum of discomfort and annoyance to the patient.

The nature and characteristic features of my invention will be more readily under-

stood from the following description, taken in connection with the accompanying drawings forming part hereof, in which—

Figure 1 is a perspective view of a dental tool embodying the main features of my present invention, the same being shown in open condition in juxtaposition to a tooth having a crown mounted thereon which is to be adjusted thereto;

Fig. 2 is a front elevation of the tool, the parts being shown in closed condition to more clearly illustrate certain details of construction;

Fig. 3 is a side elevation of a portion of the tool, this view also illustrating certain details of construction;

Fig. 4 is a perspective view of one of the crown adjusting members detached from the tool proper;

Fig. 5 is an end elevation of the tool with the crown slitting members mounted in place therein, the same also being shown in operative relationship with respect to a tooth having a crown mounted thereon which is to be slit or cut for the purpose of removing the same from the tooth; and

Fig. 6 is an underneath plan view of the tool with the crown slitting members mounted therein, the tool being shown in closed condition.

Referring to the drawings, in the particular embodiment of my invention therein shown, the tool proper comprises a plier-like structure comprising two members 9 pivoted together as at 10, each of said members 9 having a handle portion 11, to which handle portions 11 there are secured spring members 12 and 13 which interlock with each other at their free ends, as at 14, the springs 12 and 13 tending to normally separate the handle portions 11. Each of the members 9 comprising the plier-like structure is provided with an operating jaw 15, each of which jaws 15 has a portion 16 extending angularly downward, forward and outward with respect to the members 9. The angular relationship of the portion 16 of each of the operating jaws 15 will be more readily understood by reference to Figs. 1, 2 and 3 of the drawings.

Each of the angularly projecting members 16 of the operating jaws 15 is provided with a recess 17 for the reception of a stud 18 of the crown adjusting member 19. The stud 18 of the crown adjusting member

19 is adapted to be held in place by means of a screw 20 threaded in the portion 16 of the jaw 15. The crown adjusting member 19 is provided with an extending portion 21 having an operating surface 22 which is preferably made slightly curved inwardly (see Fig. 4), and with its ends projecting to the front and rear, as at 23, from the main body portion of said member 19. The working surface 22 of the crown adjusting member 19 is made relatively narrow so that a greater pressure may be obtained at the proper places than would be the case if these surfaces were of greater width.

By loosening the screws 20, the crown adjusting members 19 may be removed from the ends of the operating jaws, and in place thereof there may be inserted the crown slitting members illustrated in operative position in Figs. 5 and 6 of the drawings. The crown slitting devices comprise a member 25 having a roughened surface 26 adapted to engage the top portion of the crown, this device being mounted in one of the extensions 16 of one of the operating jaws 15, while in the extension 16 of the other operating jaw 15 there is mounted a cutting tool 27 having a sharpened edge 28 terminating in a point 29, it of course being understood that the crown slitting members 25 and 27 are each provided with studs similar to the studs 18 of the crown adjusting members 19, for the purpose of securing the same in the operating jaws of the plier-like structure by means of the screws 20 hereinbefore referred to.

The operation of the device will be readily understood. The plier-like structure having the crown adjusting members 19 mounted in place therein, and the crown being placed over the tooth, the narrow curved working surfaces 22 of the crown adjusting members are brought in contact with the crown at successive places at or near the cervical margin thereof, and by compression of the handles the crown will thereby be compressed and formed around the neck of the tooth, thus insuring a tightly fitted crown and reducing to a minimum the likelihood of the entrance of food particles and other deleterious substances under the crown, which would cause decay or result in loosening of the crown from any other cause. The conformation of the crown adjusting members will ordinarily permit the same to be brought in contact with all portions of the crown as may be required, and the angular arrangement of the projecting ends of the operating jaws will greatly facilitate the operation. Furthermore, by the provision of the interchangeable crown slitting members, the tool will be adaptable as well for removing old crowns from the teeth when necessary.

Having thus described the nature and

characteristic features of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A dental tool comprising a plier-like structure composed of two members pivoted together, each of said pivoted members having an operating jaw provided with an integral portion extending angularly downward and forward from the point of pivotal connection, the ends of said jaws diverging with respect to each other, and crown adjusting members carried at the ends of said projecting portions of the operating jaws, said crown adjusting members each having a relatively narrow curved working surface.

2. A dental tool comprising a plier-like structure composed of two members pivoted together, each of said pivoted members having an operating jaw provided with an integral portion extending angularly downward and forward, the ends of said jaws diverging with respect to each other, crown adjusting members carried at the ends of said projecting portions of the operating jaws, and means for removably securing said crown adjusting members in said projecting portions of said operating jaws, said crown adjusting members each having a relatively narrow curved working surface and each having its ends projecting to the front and rear of the projecting portions of the operating jaw in which it is secured.

3. A dental tool comprising a plier-like structure composed of two members pivoted together, each of said pivoted members having an operating jaw provided with an integral portion extending angularly downward and forward, the ends of said jaws diverging with respect to each other, crown adjusting members carried at the ends of said projecting portions of the operating jaws, means for removably securing said crown adjusting members in said projecting portions of said operating jaws, and crown slitting members adapted to be alternatively mounted and secured in the ends of said projecting portions of the operating jaws in place of said crown adjusting members.

4. A dental tool comprising a plier-like structure composed of two members pivoted together, each of said pivoted members having an operating jaw provided with an integral portion extending angularly downward and forward, the ends of said jaws diverging with respect to each other, crown adjusting members carried at the ends of said projecting portions of the operating jaws, means for removably securing said crown adjusting members in said projecting portions of said operating jaws, said crown adjusting members each having a relatively narrow curved working surface and each having its ends projecting to the front and rear of the projecting portions of the operating jaw in

which it is secured, and crown slitting members adapted to be alternatively mounted and secured in the ends of said projecting portions of the operating jaws in place of said crown adjusting members.

5 5. A dental tool comprising a plier-like structure composed of two members pivoted together, each of said pivoted members having an operating jaw provided with a portion extending angularly downward, forward and outward, crown adjusting members carried at the ends of said projecting portions of the operating jaws, means for removably securing said crown adjusting members in said projecting portions of said operating jaws, said crown adjusting members each having a relatively narrow curved working surface and each having its ends projecting to the front and rear of the projecting portions of the operating jaw in which it is secured, and crown slitting members adapted to be alternatively mounted and secured in the ends of said projecting portions of the operating jaws in place of said crown adjusting members, said crown slitting members comprising a member having a roughened surface adapted to engage the top portion of the crown and a member having a sharpened edge terminating in a point adapted to slit the crown.

6. A dental tool comprising a plier-like

structure composed of two members pivoted together and having handle portions, spring members carried by said handle portions adapted to normally maintain the pivoted members in open position, each of said pivoted members having an operating jaw provided with a portion extending angularly downward, forward and outward, crown adjusting members carried at the ends of said projecting portions of the operating jaws, means for removably securing said crown adjusting members in said projecting portions of said operating jaws, said crown adjusting members each having a relatively narrow curved working surface and each having its ends projecting to the front and rear of the projecting portions of the operating jaw in which it is secured, and crown slitting members adapted to be alternatively mounted and secured in the ends of said projecting portions of the operating jaws in place of said crown adjusting members, said crown slitting members comprising a member having a roughened surface adapted to engage the top portion of the crown and a member having a sharpened edge terminating in a point adapted to slit the crown.

In testimony whereof, I have hereunto signed my name.

JACOB GOLDBERG.