

No Model.)

A. S. CONDIT.
DENTAL BRIDGE WORK.

No. 547,712.

Patented Oct. 8, 1895.

Fig. 1.

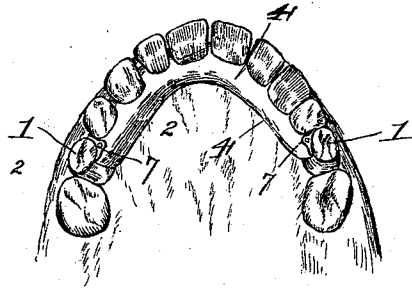


Fig. 2.

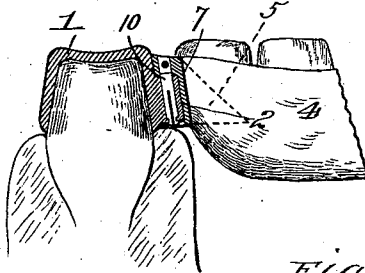


Fig. 3.

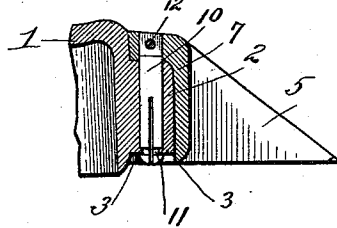


Fig. 4.

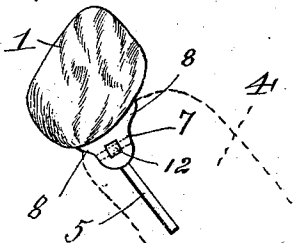


Fig. 5.

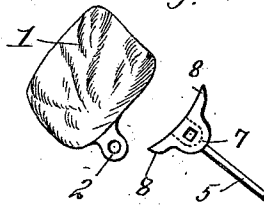


Fig. 6.

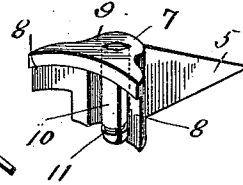


Fig. 7.

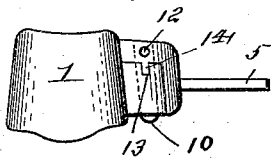


Fig. 8.

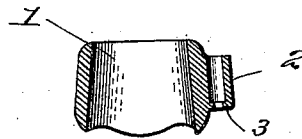
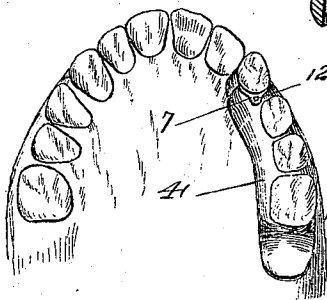


Fig. 9.



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UNITED STATES PATENT OFFICE.

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DENTAL BRIDGEWORK.

SPECIFICATION forming part of Letters Patent No. 547,712, dated October 8, 1895.

Application filed December 24, 1894. Serial No. 532,788. (No model.)

To all whom it may concern:

Be it known that I, ALONZO S. CONDIT, a citizen of the United States, residing at Findlay, in the county of Hancock and State of Ohio, have invented certain new and useful Improvements in Dental Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

In the drawings, Figure 1 is a view of a set of teeth, showing a portion of the teeth secured in place by two of my coupling devices; Fig. 2, a sectional view on line 2 2 of Fig. 1; Fig. 3, an enlarged sectional view of the coupling device; Fig. 4, a plan view of a tooth-crown and the coupling device in position thereon; Fig. 5, a similar view showing the coupling device detached; Fig. 6, a detail perspective view of the coupling device; Fig. 7, a side view of a slightly-modified form of coupling device; Fig. 8, a sectional view of a metal tooth-band; Fig. 9, a view of a set of teeth showing a portion of the set secured in position by means of only one coupling device.

The object of this invention is to provide improved means for removably securing partial sets of teeth in position without the use of full plates extending over the surface of the mouth, as more fully hereinafter set forth. To accomplish this a band or crown 1 is made to fit the natural tooth or root on each side of the space to be filled by the partial set, or, as shown in Fig. 9, where all the back teeth are out, and only one of said bands or crowns can be used. A cast of the mouth is then taken in plaster or other suitable material, with the bands or crowns in proper position upon the teeth or roots to which they are to be secured. The bands or crowns are then removed and placed in their positions on the cast or mold of the mouth, and the model of the mouth is then made in the usual way.

To the bands or crowns 1 are soldered, or formed integral therewith, the short open-ended tubes or sockets 2, formed of gold or silver. The inner ends of these tubes may be closed, if desired. The outer ends of these tubes terminate short of the cutting portion of the teeth, and an inwardly-extending angular flange 3 is formed in them at their inner

ends, as shown in Figs. 3 and 8 of the drawings.

Embedded in the ends of the plate portion 4 of the partial set to be inserted is the lip or wing 5 of the coupling device. This device consists of the shield 7, which closely fits and partially surrounds the tube 2, its extended sides 8 fitting closely against the adjacent parts of the crown or band 1, as shown clearly in Figs. 1 and 4 of the drawings, and preventing any lateral movement of the shield on the tube 2 and also preventing the plate 4 from coming into contact with the tube. The lip 5 extends outwardly from the outer side of this shield, as shown. A cap 9 is formed on the shield and covers the outer end of the tube 2 when the device is in position, its edge adjacent the crown fitting closely against the same, as shown. Extending inwardly from this cap is a metallic split-pin 10, which fits closely within the tube 2. The lower end of this pin is formed with an annular groove 11, within which fits the flange 3 of the tube when the pin is forced therein. The upper end of the pin 10 is square and is fitted in a square hole in the cap 9, a screw 12 being tapped through the cap and the end of the pin to securely hold it in place, or the pin 10 may be threaded, thus avoiding the use of a set pin.

In Fig. 1 is shown a partial set of teeth secured in position by means of two of the coupling devices, one being inserted in each end of the plate carrying the artificial teeth, the crowns 1 being secured to natural teeth at each end of the set. In Fig. 9 is shown a partial set secured in position by means of only one coupling device, the plate being formed to fit the alveolar ridge closely, one of said devices being sufficiently strong for this purpose.

In Fig. 7 is shown a slight modification of the shield 7. In this form the sides 8 are dispensed with, and a recess 13 is formed in the outer end of the tube 2, into which fits a lug 14, formed on the cap 9. By this means the shield is prevented from rotating on the tube, as is manifest.

The partial set containing the artificial teeth is formed in any suitable manner and the lip or wing 5 embedded therein, as described, and as many of the coupling devices

as are found necessary may be employed. The crowns or bands carrying the tubes 2 are secured permanently to the natural teeth in the usual way.

5 An important advantage of this device is that should the gums and alveolar ridge contract sufficiently to occasion a space between the plate and the gums, and thereby cause all the strain to come on the attachment, (which
10 is not desirable,) the space may be readily taken up and the plate permitted to rest upon the gums by simply cutting the tube off at its outer end and shortening the pin at its inner end, as is obvious.

15 When it is desired to remove the partial set from the mouth, a slight pull will detach the split-pins from the flanges 3, and the plate may then be removed for cleaning or other purposes. The set may be readily replaced by
20 placing the pins 10 in the tubes 2 and forcing them in until the grooves 11 snap over the flanges 3 of the tubes.

Having thus fully described my invention, what I claim is—

25 1. In a device for removably fastening an artificial plate to a natural tooth, the combination of two parts one being secured to the natural tooth and the other to the plate, one part carrying a tube and the other part a
30 spring pin which is adapted to enter and engage the tube, as and for the purposes set forth.

2. In a dental device, the combination of a part carried by the natural tooth and another
35 part carried by the plate, one of said parts carrying a tube and the other part carrying a

spring pin adapted to fit within and engage the tube, and also a cap piece or plate adapted to bear upon the outer end of said tube.

3. In a dental device, the combination of 40 two parts, one carried by the natural tooth and the other by the removable plate, an open ended tube carried by one of the parts and a spring pin carried by the other part and adapted to fit within the tube, said pin being 45 provided with a shoulder adapted to engage over the open end of the tube, substantially as and for the purpose described.

4. In a dental device the combination of two parts, one carried by the natural tooth 50 and the other by the removable plate, a tube carried by one of the parts, a pin carried by the other part and adapted to fit within said tube, means for removably securing it therein, and a shield carried by one of the parts 55 and fitting around the tube, substantially as described.

5. A device for the purpose described consisting of a socket carried by a natural tooth, an inwardly extending annular flange in the 60 lower end of said socket, a plate carrying the artificial teeth, a shield, as 7, carried by said plate said shield being formed with the sides 8 and cap 9, a split pin carried by said cap, a groove, as 11, being formed in said pin at its 65 lower end, substantially as described.

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

ALONZO S. CONDIT.

Witnesses:

H. WALTER DOTY,
I. S. SUNDAY.