Dec. 25, 1928. 1,696,422

E. A. THAYER

PROSTHETIC DENTISTRY

Filed Aug. 25, 1924

Fig. 1.

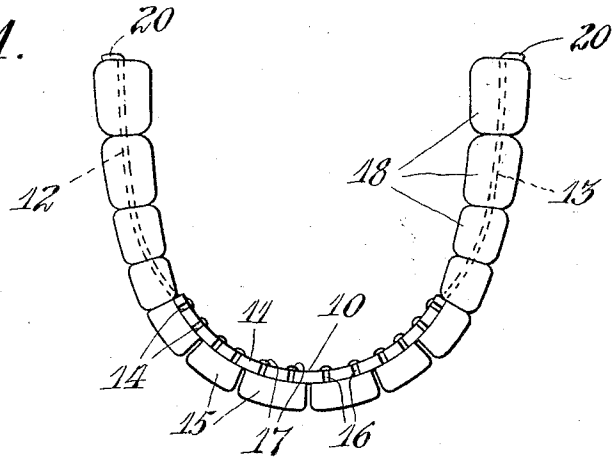


Fig. 2.

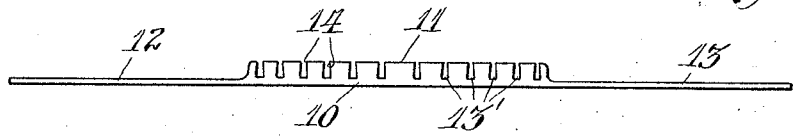


Fig. 4.

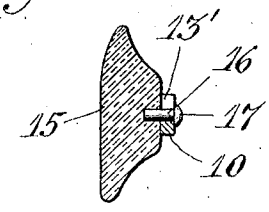


Fig. 3

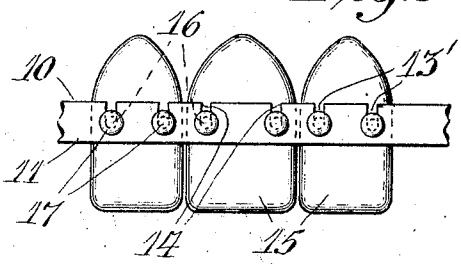
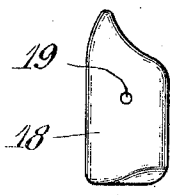


Fig. 5.



Inventor.
Eugene A. Thayer,
By Sprinkle & Smith
Attys.

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UNITED STATES PATENT OFFICE.

EUGENE A. THAYER, OF URBANA, ILLINOIS.

PROSTHETIC DENTISTRY.

Application filed August 25, 1924. Serial No. 733,867.

One of the objects of the present invention is the provision of an improved method of assembling full dentures or plates of false teeth for use by dentists to facilitate articulating the teeth in assembling a set as a unit.

A further object of the invention is to provide an article of manufacture of an improved holder that is adapted to receive and retain a full set of false teeth, which may be assembled by the maker or manufacturer and furnished to the dentists in laboratories to make false teeth for application to the mouth of patients, whereby the workmen making up the denture may apply the set of teeth on the holder to the permanent base plate of the denture as a unit.

Heretofore it has been the practice of prosthetic dentistry for the manufacturer of porcelain or other types of false teeth to furnish the teeth in assemblages, usually on flat strips of wax or analogous material. When a mouth is to be fitted with a denture or partial denture, it is a practice of the operator to mold the wax over the model or outline of the mouth and the gums to restore the original form of the gums, and to accomplish this result there is generally a ridge of wax built about the ridge of the jaw, whether it be the upper or lower jaw that is being provided with the denture. When this ridge of wax is formed restoring the original outline as well as possible of the jaw and gum, it has been the practice for the dentists or operators to take the teeth individually from the wax carrier and to insert them one at a time in the ridge of the wax. The process required infinite care in order to see that the teeth were properly articulated in the wax, each tooth was thus handled individually in order that the resulting formation of teeth would be, as nearly as possible, an exact replica of the normal teeth in the mouth of the individual as formed by nautre.

The present invention and method has to do with the process of prosthetic dentistry up to the point of thus insuring the correct placement of the false teeth on the wax mold of the mouth, and the resulting steps thenceforth in the formation of the plaster cast and the subsequent formation of a retaining plate of vulcanizable or similar material will be carried on, as henceforth known to those skilled in the art.

A still further object of the invention is to provide a flexible metal strip upon which the teeth are detachably mounted in such a manner that any of the teeth may be removed therefrom and others substituted therefor.

These and other objects are accomplished by providing a construction and an arrangement of the various parts in the manner hereinafter described, and particularly pointed out in the appended claims.

Referring to the drawings—

Figure 1 is a top plan view of my improved denture holder showing the manner in which the teeth are removably supported on the same;

Fig. 2 is a front elevational view of the flexible strip showing the same in its extended or straightened position;

Fig. 3 is an enlarged rear elevational view showing a portion of the front teeth in the manner in which the same are removably mounted on the strip;

Fig. 4 is a cross-sectional view of one of the front teeth showing the manner in which the teeth are detachably secured to the metal strip; and

Fig. 5 is a side elevational view of one of the rear or molar teeth showing an aperture therethrough by means of which these teeth are secured to the wire extremities of the metal strip.

In carrying out my invention I employ preferably a flexible metal strip 10, which comprises a flat or intermediate body portion 11 terminating in wire extremities or terminal portions 12 and 13 respectively. The central or flat body portion 11 is provided with a plurality of vertical slots 13′. These slots 13′ are slightly narrower at the top thereof, as shown at 14, for the purpose hereinafter set forth. The six front teeth 15 are provided with pins 16, which are preferably molded or secured in the teeth in the manner well known in the art. These pins 16 are provided with heads 17. The front teeth are secured to the metal strip 10 by having two of the pins 16 of each tooth engaged to adjacent slots 13′ in the metal strip.

In mounting these teeth on the strip the pins 16 are aligned with the apertures, and a slight pressure downward will force the pins into the slots 13′, and by reason of the construction of these slots the teeth will be retained on the strip unless a pressure upwardly is exerted to frictionally disengage

these pins from their respective slots. The rear or molar teeth 18 are removably mounted on the extremities of the metal strip in the following manner. The molar teeth 18 are provided with transversely extending apertures 19, which are adapted to slidingly receive the wire extensions or extremities 12 and 13, which are formed as an integral part of the metal strip 10. When the four molar teeth are adjusted to their proper position on the wire extensions 12 and 13 the extreme rear ends of the wire are bent slightly at an angle, as shown at 20, to prevent the displacement of these teeth from the metal strip, as clearly shown in Fig. 1.

With the teeth mounted in the manner above described, it will readily be seen that any of the front teeth may be readily removed by lateral movement with respect to the strip, and others substituted therefor, in the event that any of the teeth become damaged, and that also any of the rear or molar teeth may be removed by straightening the ends 20 of the wire extensions 12 and 13 in sliding these teeth longitudinally of the wire extensions.

From this construction it will be noted that I have provided a very simple and efficient denture holder, and one which may be used in making a plate without removing the same.

While in the above specification I have described one embodiment which my invention may assume in practice, it may be understood that the same is capable of modification, and that modification may be employed without departing from the spirit and scope of the invention as expressed in the following claims.

What I claim as my invention and desire to secure by Letters Patent is:

1. A denture holder for supporting a complete set of teeth comprising a strip of yieldable material having a center portion and end portions at the extremity of the center portion, the face of said center portion normally positioned vertical, and having tapered vertical slots formed therein for frictionally securing teeth thereto, and wires formed on the extremities of said strip for securing other teeth thereto.

2. A denture holder for supporting a complete set of teeth comprising a strip of yieldable material having a center portion and end portions at the extremities thereof, there being tapered vertical slots formed in said center portions for detachably securing teeth to said strip, and wires formed integrally with said center portion on both extremities thereof and co-operable with apertures formed in a plurality of other teeth for detachably securing said other teeth to said strip.

3. A denture holder comprising a strip of yieldable material having a flat center portion and wire end portions at the extremities thereof, there being outwardly tapered slots in the flat portion of said strip for frictionally securing teeth thereto, and means, including said wire end portions for securing other teeth to said strip by having said wires extend through said teeth.

In testimony whereof I have signed my name to this specification on this 12th day of November, A. D. 1923.

EUGENE A. THAYER.