

E. H. ANGLE.  
 ORTHODONTIC APPLIANCE.  
 APPLICATION FILED NOV. 28, 1916.

1,280,628.

Patented Oct. 8, 1918.

FIG. 1.

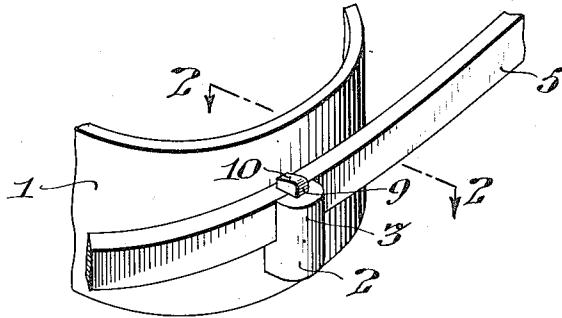


FIG. 2.

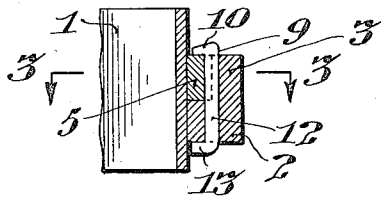


FIG. 3.

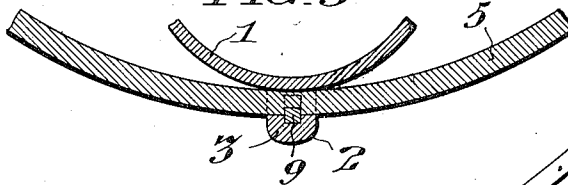


FIG. 6.

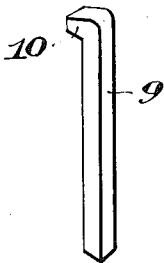


FIG. 4.

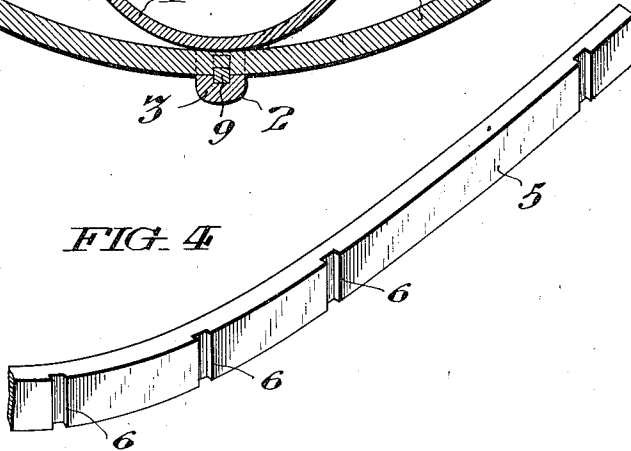
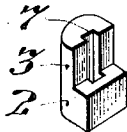


FIG. 5.



Inventor

Edward H. Angle,

Witness

*William P. Russell*

By

*Clifton C. Hallows*  
 Attorney

# UNITED STATES PATENT OFFICE.

EDWARD H. ANGLE, OF PASADENA, CALIFORNIA.

ORTHODONTIC APPLIANCE.

1,280,628.

Specification of Letters Patent.

Patented Oct. 8, 1918.

Application filed November 28, 1916. Serial No. 133,855.

To all whom it may concern:

Be it known that I, EDWARD H. ANGLE, a citizen of the United States, and a resident of Pasadena, in the county of Los Angeles, State of California, have invented certain new and useful Improvements in Orthodontic Appliances, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to devices employed in the art of orthodontia, particularly to that class of devices which include an arch-bow arranged to force the teeth of the dental arch into proper alinement, and is especially directed to the means for detachably connecting selected mal-disposed teeth of the dental arch to the arch-bar.

The principal objects of my invention are, to provide such a rigid connection between the tooth-band and arch-bar, that the teeth upon which such tooth-bands have been engaged may not only be forced lingually, labially and buccally, or tipped transversely to their longitudinal axes, but may as readily be forced in the direction of the length of said arch-bar.

Other objects of my invention are, to provide means to maintain the attaching member of the tooth-band and the arch-bar in true relative alinement, and to insure that their engagement be effected at a predetermined position with respect to the terminal anchorages.

Specifically stated, my invention comprehends an arch-bar provided with terminal means for attachment with its anchorage abutments, and having keyways intermediate of its terminals arranged to register with complementary keyways in suitable tooth engaging devices, by which said arch-bar may be attached with the mal-disposed teeth of the dental arch.

My invention also includes all of the various novel features of construction and arrangement as hereinafter more definitely specified.

In the accompanying drawings, Figure 1 is a fragmentary perspective view of a tooth-band and arch-bar attached in accordance with my invention; Fig. 2 is a vertical transverse sectional view of the structure shown in Fig. 1, taken on the line 2—2 in said figure; Fig. 3 is a horizontal sectional view taken on the line 3—3 in Fig. 2; Fig. 4 is a fragmentary perspective view of the arch-bar; Fig. 5 is a perspective view of the

tooth-band bracket; and Fig. 6 is a perspective view of the locking key.

In said figures, the tooth-band 1 is provided with a bracket 2 extending therefrom and having a projection 3 extending toward one edge of said tooth-band between which the arch-bar 5 is arranged to extend, as best shown in Fig. 1.

As best shown in Fig. 4, the arch-bar 5 is provided with suitably spaced transversely disposed slots 6, providing keyways which are respectively arranged to register with a complementary keyway extending through the bracket 2 and comprising a slot 7 in the inner wall of the projection 3.

The arch-bar 5 is arranged to be locked in the bracket 2 by the key 9 which resembles, in miniature form, an ordinary railway spike, having the head 10 and shank 12 which may be thrust through the keyway formed by the registry of the complementary slots 6 and 7 in the arch-bar and bracket respectively, as shown in Figs. 1, 2 and 3.

As shown in Fig. 2, the key 9 may have its free end 13 bent over to retain it in the keyway, while its head 10 overhanging the arch-bar 5 prevents the lateral displacement of said bar, and its shank 12 maintains the slots in registry, thus preventing the longitudinal movement of said arch-bar with respect to said bracket. It will be readily seen that by thus rigidly locking the tooth-band and arch-bar together, any desired movement of the tooth may be attained by properly twisting or bending the arch-bar to produce tension or thrust in the direction suitable to produce the desired result.

I do not desire to limit my invention to the precise details of construction and arrangement herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the appended claims.

Having thus described my invention, I claim:

1. An orthodontic appliance comprising a tooth-band provided with a bracket having a vertically slotted projection, an arch-bar removably extended between said projection and said band, and having a vertical slot arranged to register with the slot in said projection and complementary to form a keyway, and a key extended through said keyway arranged to prevent the longitudinal movement of said bar in said bracket,

and to prevent the lateral displacement of said bar from said bracket.

2. An orthodontic appliance comprising a tooth engaging member having a slotted projection, and an arch-bar provided with vertical slots registerable with the slots in said projection and affording means for engaging it with said projection.

3. An orthodontic appliance comprising an arch-bar having terminal slots adjacent to its opposite ends for engagement with teeth affording terminal anchorages, and in-

termediately disposed slots suitably spaced along said arch-bar at predetermined distances from said terminal slots, and affording means of attachment with the intermediate teeth of the dental arch. 15

In witness whereof, I have hereunto set my hand this 20th day of November, A. D., 1916.

EDWARD H. ANGLE.

Witnesses:

M. FAY,

V. M. MORGAN.