

C. F. MONTAG.
ORTHODONTIA APPLIANCE.
APPLICATION FILED OCT. 23, 1913.

1,101,504.

Patented June 23, 1914.

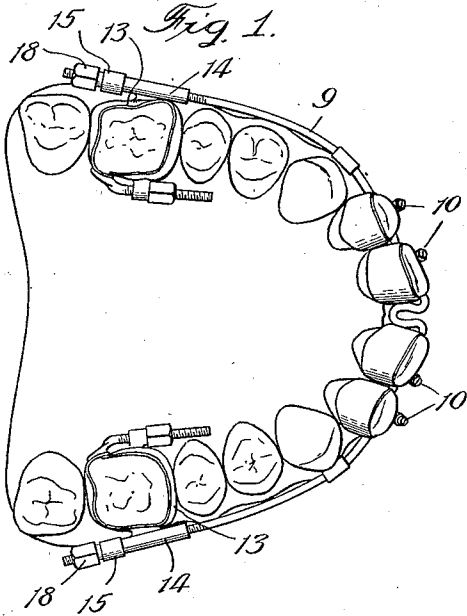
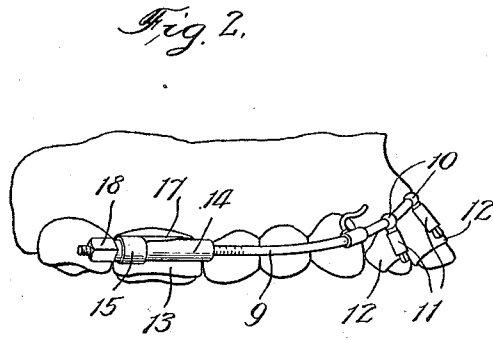
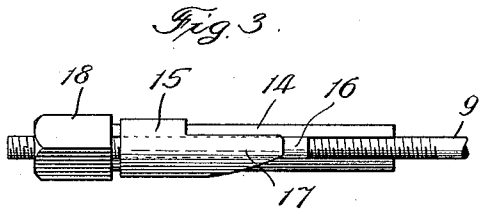
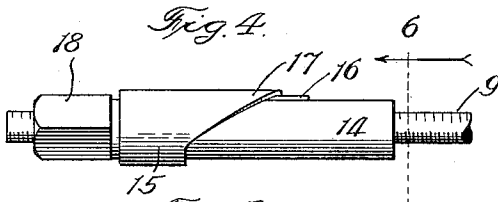
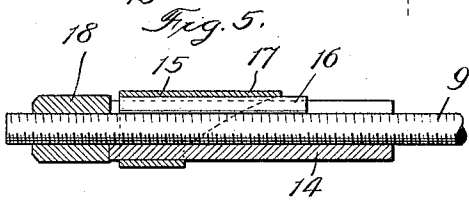


Fig. 6.

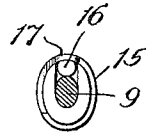


Fig. 7.

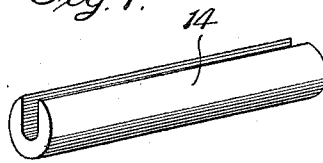
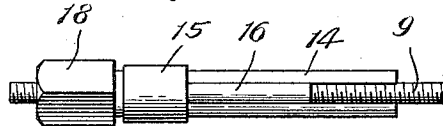


Fig. 8.



Witnesses:
E. E. Chylod,
Chas. H. Burrell.

Inventor:
Christoph F. Montag,
By Dyerford, Lee, Chaston & Wiles
Attys.

UNITED STATES PATENT OFFICE.

CHRISTOPH F. MONTAG, OF BLUE ISLAND, ILLINOIS.

ORTHODONTIA APPLIANCE.

1,101,504.

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Application filed October 23, 1913. Serial No. 796,951.

To all whom it may concern:

Be it known that I, CHRISTOPH F. MONTAG, a citizen of the United States, residing at Blue Island, in the county of Cook and State of Illinois, have invented a new and useful improvements in orthodontia appliances, of which the following is a specification.

My invention relates to certain new and useful improvements in orthodontia appliances, and is fully described and explained in the specification and shown in the accompanying drawings, in which—

Figure 1 is a bottom plan view showing my device in place; Fig. 2 is a side elevation; Fig. 3 is a top plan of the portion of the device in which the novelty inheres; Fig. 4 is a side elevation; Fig. 5 is a longitudinal section, and Fig. 6, a transverse section on the line 6 of Fig. 4, all showing the parts illustrated in Fig. 3. Fig. 7 is a perspective view of the adjustable member, and Fig. 8 is a view similar to Fig. 3 of a modified form of the device.

Referring to the drawings, 9 is an arch to which are attached pins 10 adapted to enter tubes 11 mounted upon bands 12 on the teeth to be moved. The arch, itself, is, in the preferred form of construction, non-circular in cross-section so that the pins 10 are non-rotatable thereon.

In devices of this character it is manifest that means must be provided for securing the arch to the anchor-teeth without threading it through the usual tube carried thereby. According to common practice, where the band is attached to the teeth to be moved by ligatures, or the like, which can be placed in position after the arch is adjusted to the anchor teeth, no such provision is necessary, but with the present relation of the arch to the teeth to be moved, it is manifestly almost, if not quite, essential that this relation shall first be established before the relation of the arch to the anchor teeth is established. At any rate it is a matter of the utmost convenience to be able to adjust the arch to the anchor teeth, after adjusting it to the teeth to be moved. To this end the anchor teeth are provided with the usual bands 13, each of which carries, in lieu of the buccal tube, a member 14 grooved on one side to receive the arch and to conform therewith. Preferably, this groove fits only the smaller diameter of the oval arch, so as to render the same non-ro-

tatable to secure the usual desirable results inherent in preventing rotation of the arch about its own axis, with reference to the line of the anchor teeth. The member 14 is preferably attached to the anchor-band so that the groove opens toward the gingival margin of the anchor-teeth. Thus, on the upper jaw the arch is inserted into the member 14 from above, while in the lower jaw, it is inserted from below.

In order to hold the arch in position, there is slipped over the member 14 a sleeve 15 having projecting from it, toward the opposite end of the member 14, a finger 16, which lies in and fills the remainder of the groove so as tightly to hold the arch in place. In the preferred form of construction, the end of the finger 16 is reinforced by carrying the sleeve out toward its end in the form of an extension 17, but in the modified form of construction shown in Fig. 8, this extension is omitted and the sleeve simply conforms to the member 14 and has the finger 16 in the form of a pin unsupported at its free end. For purposes of securing a tight fit, the member 14 may be slightly tapered so that the sleeve engages tightly therewith. The usual adjusting nut, shown at 18, operates against the grooved member 14 exactly as against an ordinary buccal tube and may be on either side of the same, according to the direction of movement desired. So too, the sleeve would ordinarily be at that end of the member 14 against which the adjusting nut operates, so that if it is desired to push the teeth forward and the adjusting nut is therefore placed on the mesial end of the member 14, the sleeve will be turned around.

I realize that considerable variation is possible in the details of the present construction without departing from the spirit thereof, and I do not intend therefore to limit myself thereto, except as pointed out in the following claims, in which my intention is to claim all the novelty inherent in the construction as broadly as the state of the art will permit.

I claim as new and desire to secure by Letters Patent,—

1. In an orthodontia appliance an anchor-band, an open grooved member attached thereto, an arch band lying in the groove, and a sleeve surrounding the grooved member and having a portion lying in the groove and fitting against the arch.

2. In combination, an anchor-band, an arch band or non-circular cross-section, an open grooved member on the anchor-band receiving the arch and fitting the same whereby rotation is prevented, and a sleeve fitted over the member and having a part lying in the groove thereof to engage the arch.

3. In combination, an anchor-band, an arch band oval in cross-section, a member attached to the anchor-band and provided

with a groove fitting the smaller diameter of the arch, and a sleeve slipped over the member and having a part lying in the groove to engage the arch.

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In testimony whereof I have hereunto set my hand.

CHRISTOPH F. MONTAG.

In presence of—

A. C. FISCHER,

O. C. AVISTUS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."