Dec. 30, 1924. 1,520,753

J. W. IVORY

DENTAL CLAMP ATTACHMENT

Filed Aug. 18, 1923 2 Sheets-Sheet 1

Fig. 1.

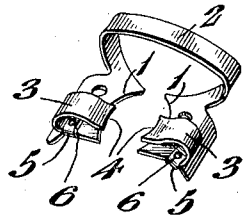


Fig. 2.

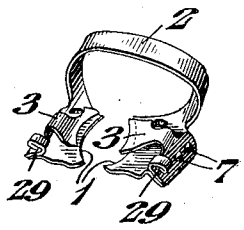


Fig. 3.

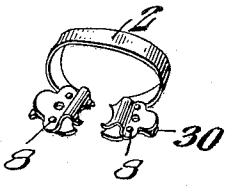


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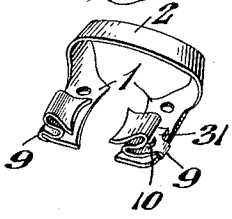


Fig. 5.

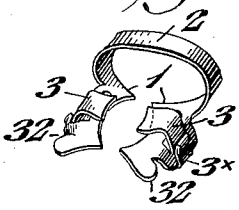


Fig. 6.

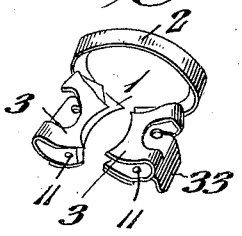


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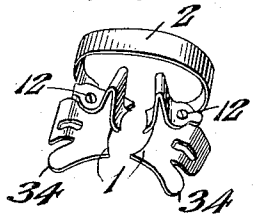


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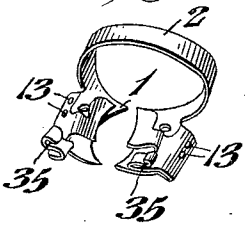


Fig. 9.

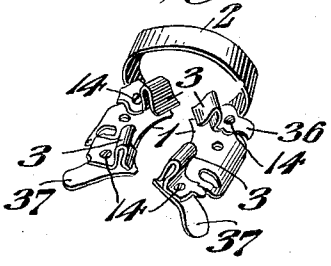


Fig. 10.

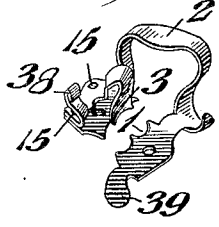
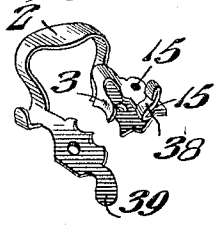


Fig. 11.



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Fig. 12.

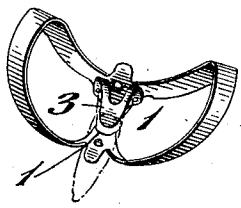


Fig. 13.

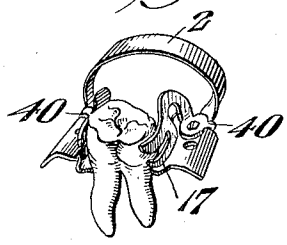


Fig. 14.

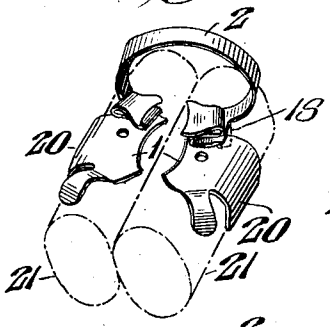


Fig. 15.

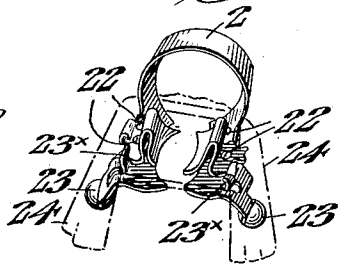


Fig. 16.

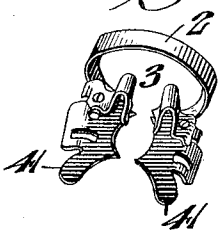


Fig. 17.

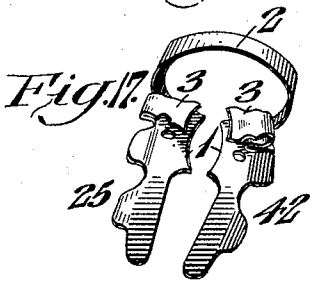


Fig. 18.

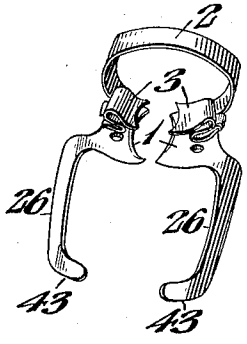
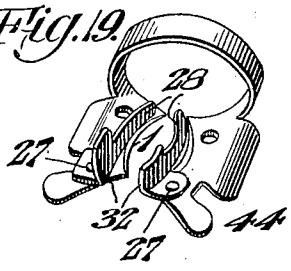


Fig. 19.



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Patented Dec. 30, 1924. 1,520,753

UNITED STATES PATENT OFFICE.

JAMES W. IVORY, OF PHILADELPHIA, PENNSYLVANIA.

DENTAL CLAMP ATTACHMENT.

Application filed August 18, 1923. Serial No. 658,018.

To all whom it may concern:

Be it known that I, JAMES W. IVORY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Dental Clamp Attachment, of which the following is a specification.

My invention relates to a dental clamp attachment, and consists of auxiliary jaws forming resilient braces or supports of less power than the bow of the clamp attached to the jaws of the clamp without preventing the regular jaws of a clamp from embracing a tooth and serving to equalize the pressure of the jaws of the clamp on a tooth and impart a stiffer and firmer grip of the clamp to the tooth whereby the clamp may remain where it is placed on the tooth without change of position.

It consists also in providing the attachment with means for controlling a rubber dam from slipping around the anterior part of the clamp in the adjustment of the latter to the tooth.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific details shown and described, as long as they are within the scope of the claims.

Figure 1 represents a perspective view of a dental clamp embodying my invention.

Figures 2 to 19 inclusive represent perspective views of various modified embodiments of the invention.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings.

1 designates the jaws of a dental clamp to which my invention appertains, and 2 designates the connecting bow thereof which bow and the jaw proper of the clamp, excepting the features of my invention applied thereto are well known in the art.

3 designates auxiliary jaws which extend over the jaws 1 and face each other and have their inner edges 4 in a measure curved to conform to the usual curved edges of the jaws 1.

The auxiliary jaws 3 are resilient in their nature and are adapted to engage a tooth in addition to the engagement by the latter of the jaw proper of the clamp, thus providing spring braces or supports on the clamp of less power than the bow of the clamp and equalizing the pressure of the jaws on the tooth and providing at the same time a stiffer and firmer grip of the clamp on the tooth whereby the clamp may remain on the tooth in the position to which it has been adjusted without liability to change the same.

The auxiliary jaws 3 are constructed of pieces of suitable metal bent into shape of the same variously formed and some made separate from the jaws 1 and secured thereto, others being integral with the bodies of the auxiliary jaws 3.

In Figure 1, the auxiliary jaws 3 are secured to the bodies of the jaws by the clips 5 and secured thereto by the rivets 6.

In Figure 2, the auxiliary jaws 3 are integral with the bodies of the jaws 1 and turned up therefrom and further secured thereto by the rivets 7.

In Figure 3, the auxiliary jaws 3 are somewhat differently shaped from those in Figure 2, but are separate therefrom and secured thereto by the rivets 8.

In Figure 4, the auxiliary jaws 3 are provided with lips 9 which embrace the edges of the adjacent portions of the bodies of the jaws 1 and are secured thereto by the rivets 10.

In Figure 5, the auxiliary jaws 3 are secured to the jaws 1 by the clips 3^x. In Figure 6, the auxiliary jaws 3 are widened and secured to the jaws 3 by the rivets 1.

In Figure 7, the auxiliary jaws 3 are secured to the jaws 1 close to the base of the bow 2 and are secured to said jaws 1 by the screws 12, although rivets may be substituted therefor.

In Figure 8 the auxiliary jaws 3 are secured to the jaws 1 by the rivets 13.

In Figure 9, the auxiliary jaws 3 are duplicated on each jaw 1 forming a plurality thereof for each of the latter, the jaws 3 being secured to the jaws 1 by the screws 14 or in lieu thereof suitable rivets.

In each of Figures 10 and 11 only one auxiliary jaw 1 is provided with a jaw 3, the same being secured thereto by the rivets or screws 15.

In Figure 12, the bow is of double arched form, the crowns of each having thereon jaws 1, and one of them has thereon an auxiliary jaw 3.

In Figure 13, the auxiliary jaws 3 are

secured to the jaws 1 by the screws or rivets 16 and are longitudinally bifurcated as at 17 to increase the resiliency thereof.

In Figure 14, the auxiliary jaws 3 are separate from the jaws and formed with clips 18 which embrace said jaws adjacent to the bow 2 and are secured thereto by the screws or rivets 19.

In the construction shown in said Figure 14, the jaws 1 are adapted as at 20 for connection of the rolls 21 therewith.

In Figure 15, the auxiliary jaws 3 are separate from the jaws 1 and are secured thereto by the screws or rivets 22 and are adapted as at 23 for engagement with a bent roll or folded napkin 24, shown in dotted lines.

In Figure 16, the auxiliary jaws 3 are located adjacent to the bow 2 and secured to the jaws 1 by the screws or rivets.

In Figure 17, the auxiliary jaws 1 have extensions forming the arms 25.

In Figure 18, the auxiliary jaws 1 have extensions forming the arms 26. In Figure 19, the auxiliary jaws 3 are secured to the jaws 1 by the rivets 27, and they present broad curved surfaces 28 to a tooth, but are resilient in their nature as in the previous figures.

In some of the figures, I show means for controlling a rubber dam from slipping around the anterior part of the clamp in the adjustment of the latter to a tooth. There may be lips 29 on the jaws 3, Figure 2, lips 30 on the jaws 1 and 3 as Figure 3, portions 31 of the jaws 3, Figure 4, lips 32 of the jaws 3, Figure 5, lips 33 of the jaws 1, Figure 6, lips 34 on the jaws 3, Figure 7, lips 35 on the jaws 3, Figure 8, lips 36 and 37 on the jaws 3 Figure 9, on the jaws 3 Figures 10 and 11, lips 40 on the jaws 3 Figure 13, lips 23× on the jaws 1 Figure 15, lips 41 on the jaws 1, Figure 16, lips 42 on the arms 25 of the jaws 1, Figure 17, lips 43 on the arms 26 of the jaws 1, Figure 18, or lips 44 on the jaws 1, Figure 19.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. A dental clamp comprising a pair of jaws each provided with a substantially broad supporting surface, a bow secured to and connecting said supporting portions and an auxiliary jaw separate from and secured upon said supporting surface said auxiliary jaw comprising a spring-like support of less power than said bow, whereby the pressure of said jaws on the tooth is equalized and a stiffer and firmer grip of the clamp on the tooth is provided.

2. A dental clamp comprising a pair of jaws each jaw having a substantially broad supporting surface, a bow secured to and connecting said jaws, an auxiliary jaw separate from and secured upon each of the first mentioned jaws in opposed relation the said auxiliary jaws comprising resilient spring-like members of less power than said bow whereby the pressure of said jaws upon a tooth is equalized and a firmer grip of the clamp secured upon a tooth, and means upon said clamp for connecting therewith a rubber dam, roll, napkin or the like.

JAMES W. IVORY.

Witnesses:
JOHN A. WIEDERSHEIM,
N. BUSSINGER.