(No Model.)

J. W. MOFFITT.

DENTAL ARTICULATOR.

No. 431,849. Patented July 8, 1890.

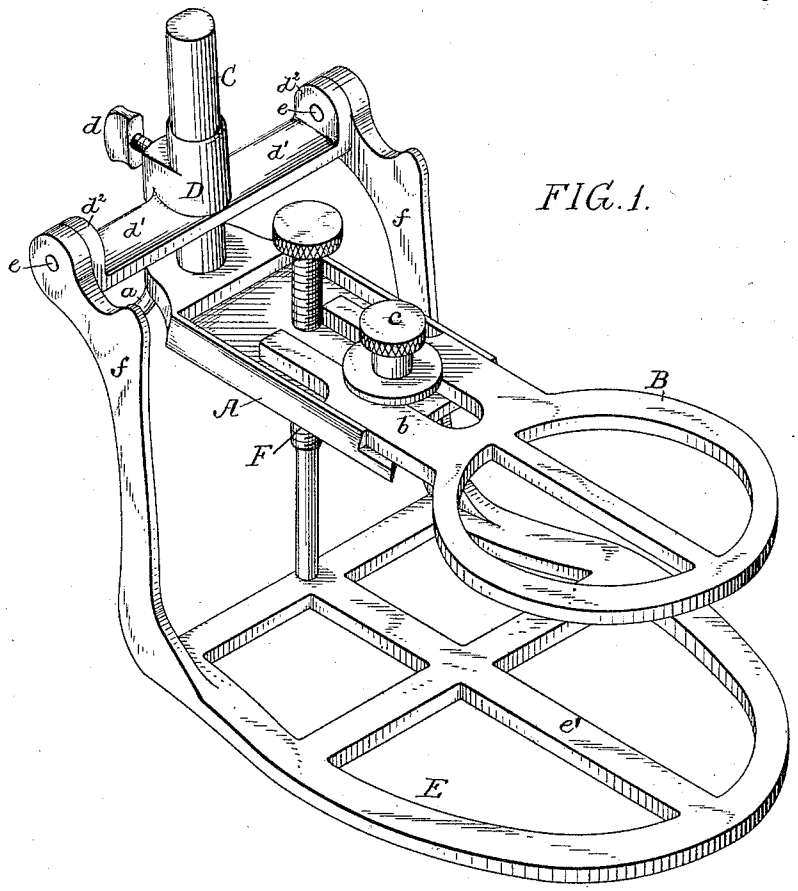


FIG. 1.

FIG. 2.

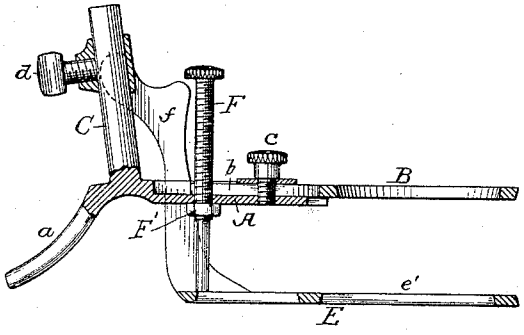
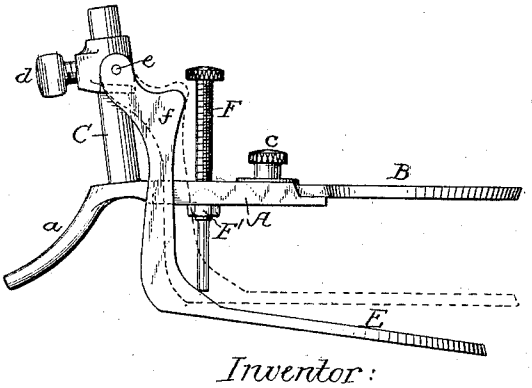


FIG. 3.



Witnesses:
Hamilton D. Turner.
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Inventor:
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by his Attorneys
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN W. MOFFITT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE WILMINGTON DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

DENTAL ARTICULATOR.

SPECIFICATION forming part of Letters Patent No. 431,849, dated July 8, 1890.

Application filed November 11, 1889. Serial No. 329,886. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. MOFFITT, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Dental Articulators, of which the following is a specification.

The object of my invention is to so construct a dental articulator that the movements of the natural human jaw will be closely imitated and the articulator so adjusted that the teeth can be set to accurately fit the mouth whether the jaws are directly above each other or whether the upper jaw overlaps the under jaw or the under jaw extends beyond the upper jaw, the device being so constructed that the bite upon the teeth is perfectly imitated, so that when the teeth are set in the mouth they fit accurately or require very little adjustment. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my articulator. Fig. 2 is a sectional view showing the jaws closed, and Fig. 3 is a side view showing the jaws partly open, illustrating the biting effect.

A is the carrier for the fixed upper jaw B, corresponding to the upper jaw of the mouth, this carrier being recessed and the recess receiving the shank *b* of the jaw B, which is slotted, as shown. Passing through this slot and tapped into the carrier A is a set-screw *c*, so that on loosening this set-screw the jaw can be adjusted horizontally to accommodate different forms of mouths. Projecting from the rear of the carrier A is a suitable handle *a*. Projecting upward from the carrier A is a post C, flattened at the rear, as shown in Fig. 1, and adjustably secured to this post is a yoke D, having a set-screw *d*, which bears against the post, so that by unscrewing the set-screw the yoke can be raised or lowered on the post to accommodate high or low mouths. This yoke has two arms *d'*, having lugs d^2 at their outer ends, and passing through these lugs are pivot-pins *e*, carrying the arms *f* of the lower jaw E, which, as shown, is of a shape similar to that of the natural human jaw.

I have found by a series of experiments that there is but a trifling variation in the shape and dimensions of the lower jaws of grown persons, so that by taking the measurement of an ordinary jaw and constructing the articulator in accordance with such measurement the articulator will be adapted for any ordinary range of work.

By pivoting the lower jaw E at *e*, which is the pivot-point of a human jaw, accuracy of bite is insured. The portion *e'* of the lower jaw is parallel with the upper jaw B, and after the upper jaw has been set the required distance from the lower jaw by means of the post C and set-screw *d* a set-screw F, which passes through the carrier A and rests against one of the cross-pieces of the portion *e'* of the lower jaw, sets the upper jaw in a line parallel with the portion *e'* of the lower jaw. A jam-nut F is provided on the set-screw F for retaining the set-screw in the position in which it is set. The portion *e'* of the lower jaw E, as will be seen in the perspective view, is of a shape corresponding with the shape of the mouth, so that the teeth can be readily set upon the upper and lower jaws for adjustment and regulation. By loosening the set-screw *d* the upper jaw can be swiveled transversely in respect to the lower jaw to imitate the side movement of the jaw, and at the same time the biting movement can also be imitated without losing the vertical adjustment of the jaws in respect to each other, which is very important in the setting of teeth.

It will be understood that variations in different human jaws are variations in the relative position of the jaws and not in the shape of either jaw, and all of these changes in the relative position of the natural jaw are provided for in my improved articulator.

I claim as my invention—

1. The combination, in an articulator, of the upper-jaw plate and its carrier, a yoke mounted upon said carrier, and a lower-jaw plate having upwardly-projecting arms pivoted to said yoke above the level of the upper-jaw plate, whereby the arcs in which the plates swing will approximate those of the natural human jaw, substantially as specified.

2. The combination, in an articulator, of

the carrier, the upper-jaw plate adjustably mounted thereon, a post on said carrier, a yoke adapted to slide vertically upon said post, and a lower jaw pivoted to said yoke and of a size conforming to the natural human jaw, substantially as described.

3. The combination of the carrier A, an upper-jaw plate thereon, a vertical post on said carrier, a yoke adapted to slide and turn on said post, a set-screw on said carrier adapted to bind upon said post, a lower jaw of the form substantially as described pivoted to said yoke, and a set-screw on the carrier adapted to rest upon the lower jaw so as to adjust the upper jaw and its carrier in respect to the lower jaw, substantially as described.

4. The combination, in an articulator, of the upper-jaw plate, with a lower-jaw plate having upwardly-projecting arms pivoted above the level of the upper-jaw plate, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. MOFFITT.

Witnesses:
R. SCHLEICHER,
HARRY SMITH.