

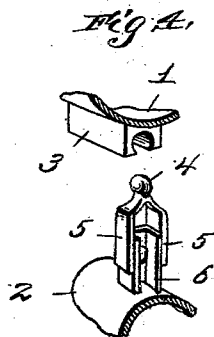
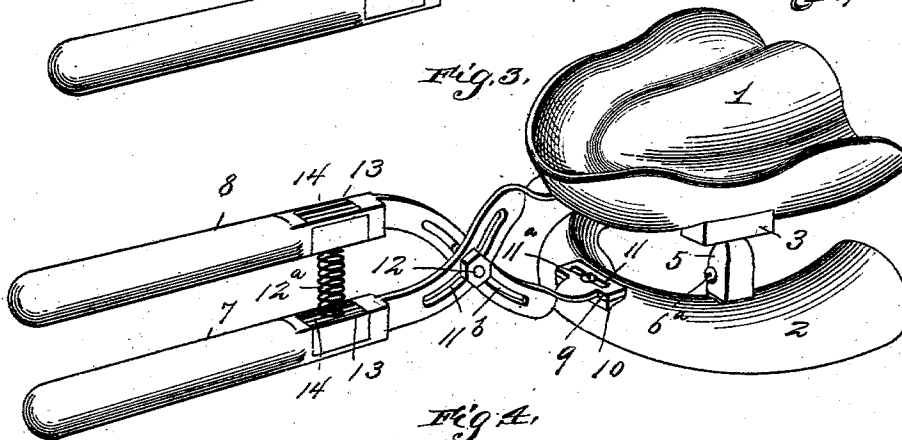
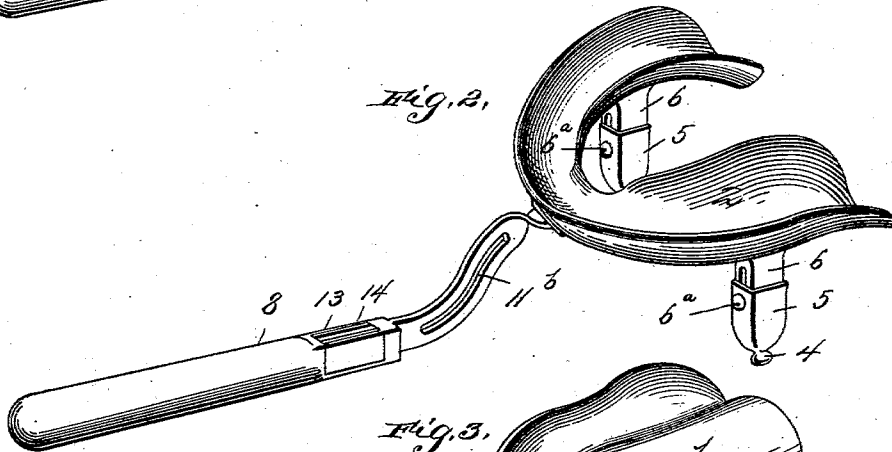
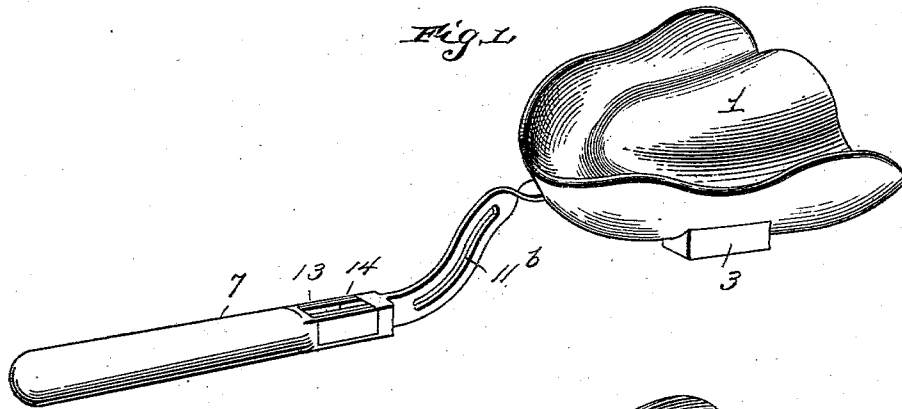
No. 716,781.

Patented Dec. 23, 1902.

C. L. STOCKS.
DENTAL OCCLUSOR.

(Application filed June 10, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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DENTAL OCCLUSOR.

SPECIFICATION forming part of Letters Patent No. 716,781, dated December 23, 1902.

Application filed June 10, 1901. Serial No. 64,031. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE L. STOCKS, a citizen of the United States, residing at Greenville, in the county of Hunt and State of Texas, have invented certain new and useful Improvements in Dental Occlusors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to dental instruments, and has for its object to produce a new and improved device for finding the proper "shut" or "bite" of the jaws when all the teeth are out as the shut or bite originally was with the teeth in, thereby facilitating the restoration of the function of mastication and the normal and esthetic contour of the face in the application of false teeth.

Further objects of the invention are to provide the device with means to enable the reproduction of the anatomical movements of the lower jaw, the stationary position of the upper jaw, and to offer resistance similar to that of the muscles in occlusion during mastication.

A further object of the invention is to provide means for locking the several features of the device in the position they have assumed when the shut or bite has been determined.

The invention consists of the details of construction, combination, and arrangement of parts, to be hereinafter fully described and claimed.

In the drawings, Figure 1 is a detail perspective view of the upper member of the articulator. Fig. 2 is a similar view of the lower member of the articulator. Fig. 3 is a perspective view of an articulator constructed in accordance with the invention. Fig. 4 is a detail perspective view of the means for connecting the two plates, whereby the lower one may follow the lower jaw in its anatomical movements.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

1 and 2 designate the upper and lower trays of the articulator, being in contour substantially like upper and lower impression-

trays and having a depth sufficient for the reception of the upper and lower gums. These plates are so connected that when they are properly placed the lower tray will follow the lower jaw in its anatomical movements, while the upper tray will be forcibly held in contact with the upper gums, whereby a resistance is offered to the muscles similar to that offered in occlusion during mastication.

3 3 designate recessed shoulders secured upon the under side of the tray 1 for the reception of heads 4, slidably secured to the tray 2 and adapted to ride back and forth in the slot and also provide a universal connection between the trays, whereby the lower tray may follow the lower jaw in its anatomical movements. The heads 4 have depending therefrom sleeves 5, slidably mounted upon studs 6, having slots for the reception of adjusting-screws 6^a, carried by the sleeves, whereby the sleeves have a limited vertical movement upon the studs to permit the trays to move from and approach each other under pressure of a spring and the jaws, respectively.

7 and 8 designate handles secured to the trays 1 and 2, respectively, and have their inner ends horizontally disposed to permit the lips to occupy their normal closed position. The horizontally-disposed portion of the handles 8 terminates in an enlarged head 9, adapted to rest upon a shoulder 10, and is provided with a slot 11 for the reception of a set-screw 11^a, carried by the shoulder 10. It will be perceived that the above manner of connecting the handle 8 and the lower tray will not when the screw is loosened, so as not to bind the head 9 upon the shoulder 10, interfere with the freedom of the lower tray to follow the lower jaw in its anatomical movements and also to permit the lower tray to be adjusted to overcome any abnormal conditions of the lower jaw.

The handles are curved intermediate their ends, placing their rearwardly-extending portions one above the other, whereby when pressure is brought to bear thereon the trays will be caused to approach each other, and the curved portions thereof are provided with slots 11^b for the reception of a set-screw 12 to leave the handles free to follow the movement of the trays in determining the shut

or bite. A spring 12^a is secured to sliding plates 13, mounted in recesses 14 in the handles, and serves to force the trays away from each other, holding them in contact with the gums, and also offer resistance to the muscles similar to that offered in occlusion during mastication. The plates 13 slide back and forth in the recesses 14 to compensate for the movement of the handles to permit the spring to occupy a vertical plane, whereby all liability of the spring interfering with the longitudinal movement of the handles to accommodate themselves to the movement of the trays 1 and 2 is obviated.

The operation of the articulator may be explained as follows: The parts being assembled as illustrated in Fig. 3 and the several parts left free to have their individual movements, the instrument is inserted into the patient's mouth and the trays are held in contact with the gums through the medium of the spring. The upper and lower trays conform closely to the corresponding alveolar ridge, and by means of the resistance offered by the spring the patient will voluntarily or involuntarily find the original position of the jaws, when the operator will observe the correct or former normal bite, shut, or occlusion. He locks the handles to hold the instrument in the position it has thus assumed. The posterior portions of the trays may be then forced against the alveolar ridges and held in such position through the medium of the set-screws 6^a, securing the sleeves 5 and studs 6 together, leaving the lower plate free to have a transverse movement with relation to the upper tray to permit the operator to overcome certain abnormal conditions, if such exist, and if not the set-screw 11 may be tightened to lock the lower plate in its assumed position. The instrument is then removed from the mouth in a firmly-set condition to receive a layer of wax in each of its trays and is then replaced to impress in the wax the exact bite, from which impression the operator may proceed as usual.

Having thus fully described the invention, what is claimed as new is—

1. An articulator comprising upper and lower trays, studs secured to the lower trays, and sleeves secured to the upper tray and slidably mounted upon the studs whereby the trays are permitted to have a vertical movement with relation to each other.

2. An articulator comprising an upper tray provided with recesses, a lower tray, and sleeves having a slidable connection with the lower tray and provided with heads adapted to fit in the recesses.

3. An articulator comprising an upper tray provided with recesses, a lower tray, studs secured to the lower tray, and sleeves slidably

mounted upon the studs, and provided with heads adapted to fit in the recesses.

4. An articulator comprising an upper tray provided with recesses, a lower tray, studs secured to the lower tray, sleeves slidably mounted upon the studs and provided with heads adapted to fit in the recesses, means for rigidly connecting the sleeves to the studs, handles secured to the trays, and means carried by the handles whereby the trays offer a resistance to the muscles similar to that offered by occlusion during mastication.

5. An articulator comprising upper and lower trays, shoulders having recesses and secured to one of the trays, studs secured to the other tray, sleeves slidably mounted upon the studs and provided with heads to fit in the recesses whereby the trays are connected to permit the lower tray to follow the lower jaw in its movements similar to those during mastication, and means for rigidly connecting the sleeves to the studs.

6. An articulator comprising upper and lower trays, means for connecting the trays whereby the lower tray may follow the lower jaw in its movements similar to those during mastication, handles secured to the trays, and means carried by the handles whereby the trays offer a resistance to the muscles similar to that offered by occlusion during mastication.

7. An articulator comprising upper and lower trays, means for connecting the trays whereby the lower tray may follow the lower jaw in its movements similar to those during mastication, handles secured to the trays and having slots, means carried by the slots to permit the handles to follow the movements of the trays and to lock them in a determined position, and means carried by the handles whereby the trays offer a resistance to the muscles similar to that offered by occlusion during mastication.

8. An articulator comprising upper and lower trays, means for connecting the trays whereby the lower tray may follow the lower jaw in its movements similar to those during mastication, handles secured to the trays to permit the lower tray to move independently of its handle, means for rigidly connecting the lower tray to its handle, means for connecting the handles to permit them to follow the movements of the trays and to lock them in a determined position, plates slidably mounted on the handles, and a spring secured to the plates.

In testimony whereof I affix my signature in the presence of two witnesses.

CLARENCE L. STOCKS.

Witnesses:

J. M. TISDAL,

ALBERT S. ROLLINS.