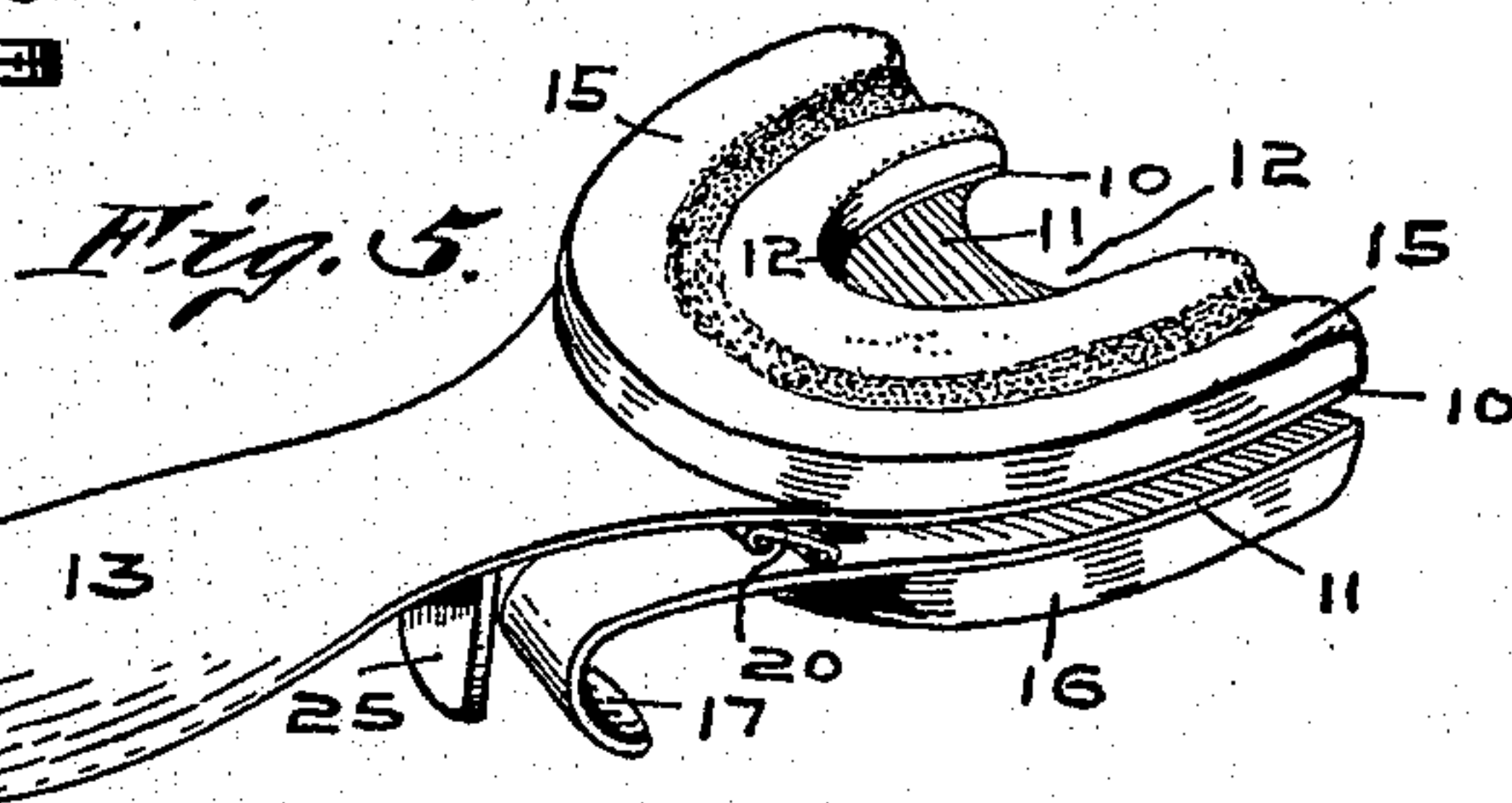
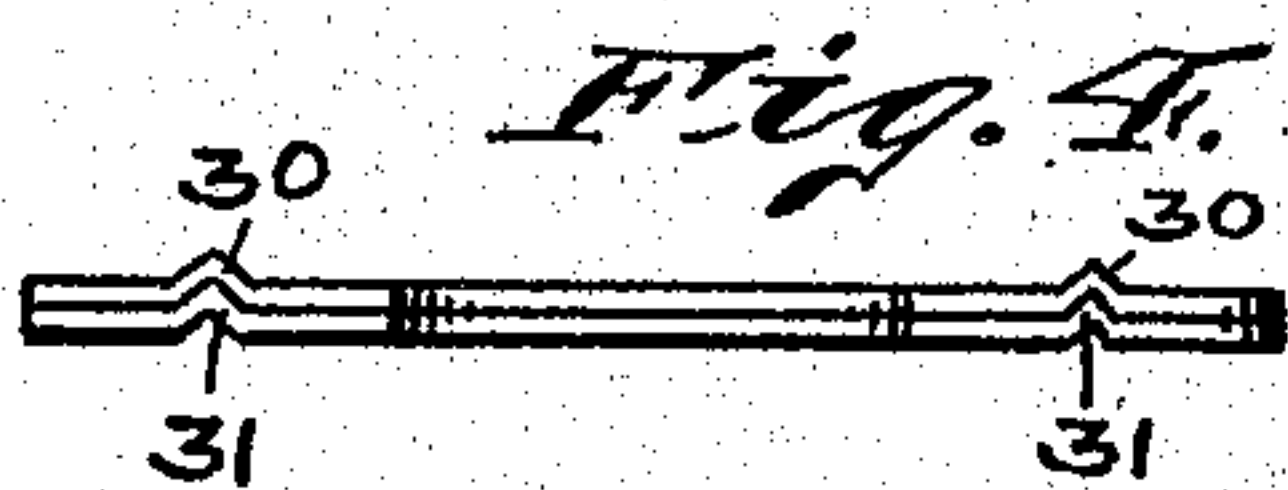
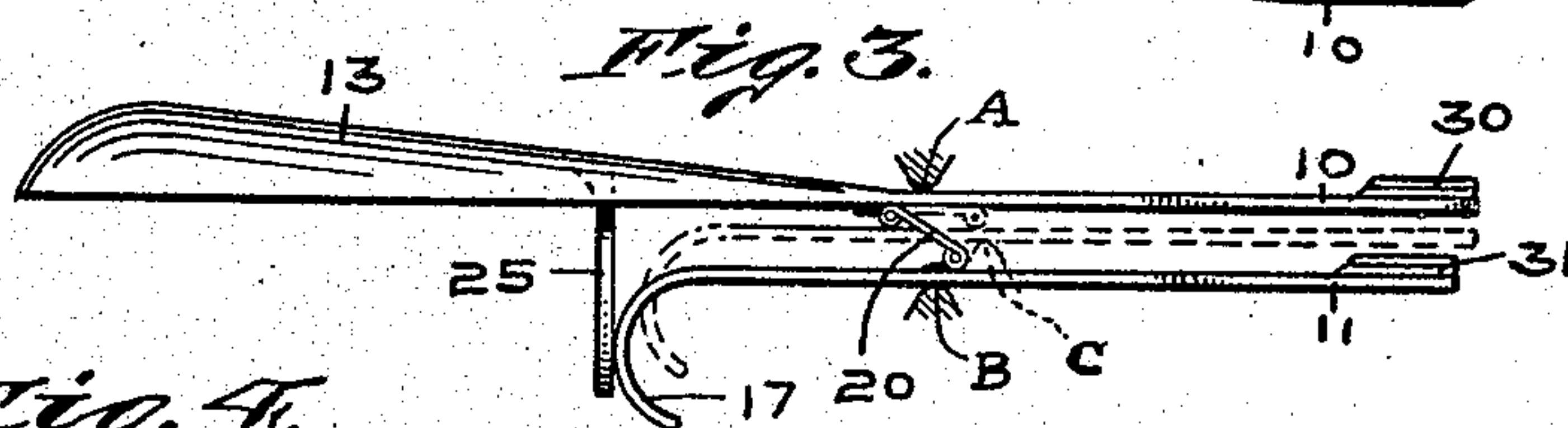
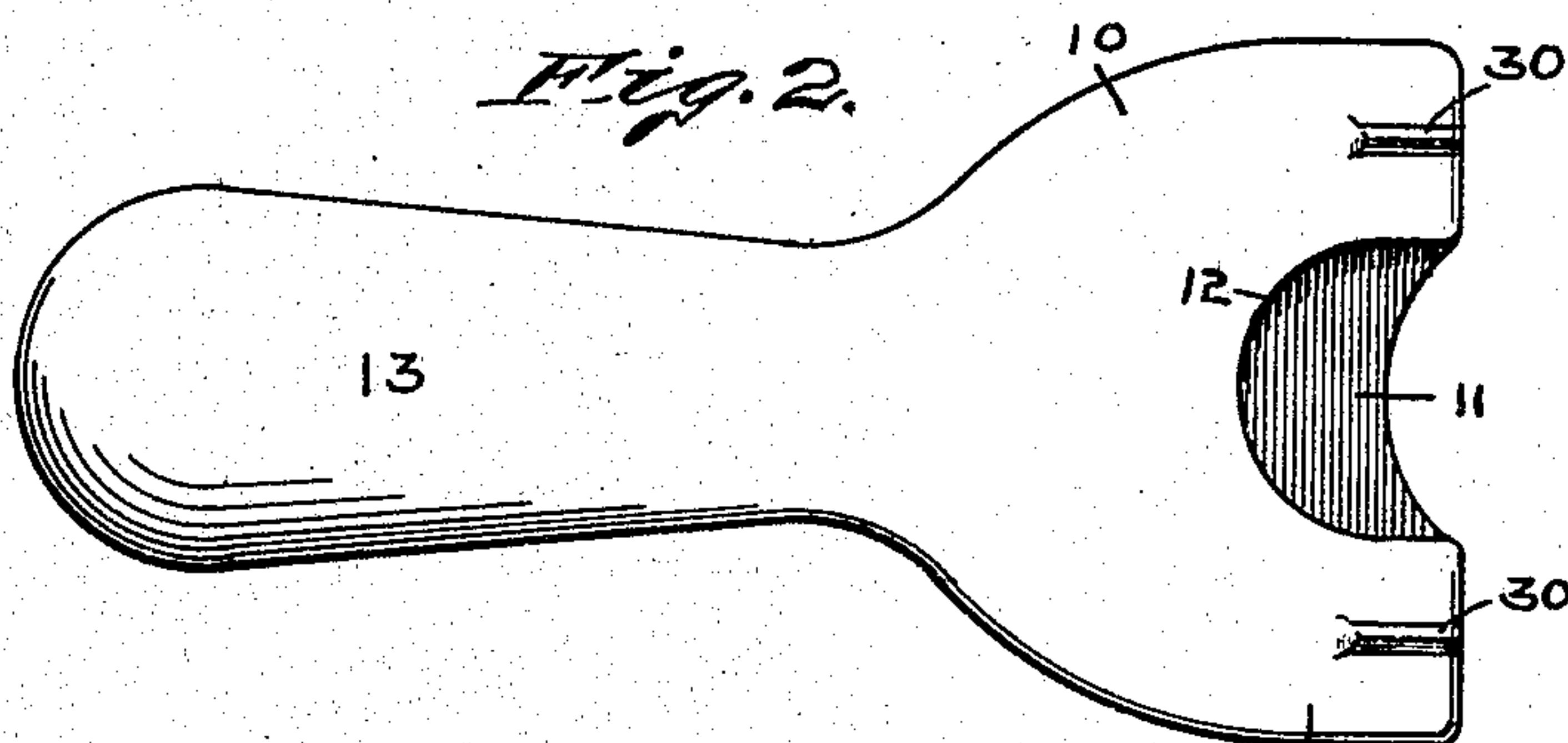
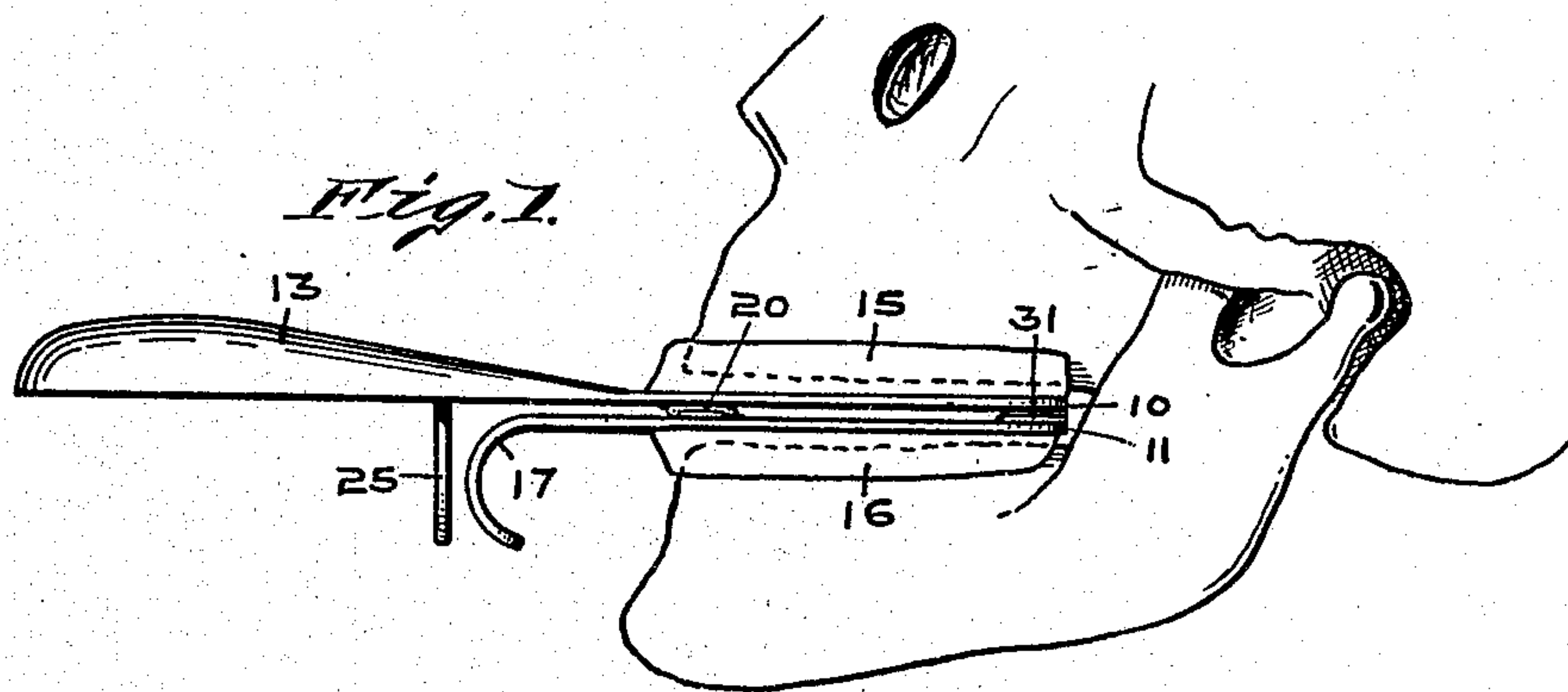


E. E. HOLMES.
DENTAL APPLIANCE.
APPLICATION FILED NOV. 2, 1907.

900,541.

Patented Oct. 6, 1908.



WITNESSES:

L. B. Warner.

Wm. Hurte

INVENTOR

ERWIN EUGENE HOLMES.

By Minton & Hoerner,

ATT'YS.

UNITED STATES PATENT OFFICE.

ERWIN EUGENE HOLMES, OF INDIANAPOLIS, INDIANA.

DENTAL APPLIANCE.

No. 900,541.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed November 2, 1907. Serial No. 400,387.

To all whom it may concern:

Be it known that I, ERWIN EUGENE HOLMES, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Dental Appliances, of which the following is a specification.

This invention relates to a dental appliance for holding the "wax biscuits" when taking the impression of the gums in order that the plates can be made for retaining artificial teeth; and the object of the appliance, primarily, is to control the movement of the lower jaw, so that it will be forced to pursue a normal course when taking wax impressions of the gums, and thereby insure accurate impressions taken and the ultimate production of perfect plates.

A further object consists in providing a dental appliance of the above character which will compel the lower jaw to evenly close.

A further object consists in providing a dental appliance of the above character wherein a forward movement of the lower jaw, when making the bite, is prevented; the jaw being forced back and held in natural or normal position when taking the impression of the gums.

I accomplish the objects of my invention by means of the appliance illustrated in the accompanying drawings, forming a part hereof, in which—

Figure 1 is a side elevation of my dental appliance in operating position, and at a time when the gums of both jaws have been buried or driven into the wax biscuits. Fig. 2 is a top or plan view of the appliance, in which the wax biscuits have been omitted. Fig. 3 is a side elevation of the appliance in which the plates are shown as occupying their farthest separated position. Fig. 4 is an end elevation of the front edge of the appliance. Fig. 5 is a perspective view of the appliance, showing the wax biscuits in operating position, and having an imprint of the gums therein.

It will be readily understood that an adult reaching a period where artificial teeth become imperative, has had past trouble with bad teeth and gums, so that the dentist finds that the patient has acquired an unnatural

articulation of the lower jaw and consequently an improper occlusion of the teeth.

Under the present method of using the "wax biscuit" for taking the impressions of the gums, the patient allows the lower jaw to move in its acquired unnatural course, the most prevalent being a side or lateral movement; also, where the jaw droops at one side, the jaw will not close evenly, and another consists in permitting the lower jaw to move forward. There is nothing to prevent the jaw from moving in its unnatural path, acquired through habit, by the present wax biscuit method, and the patient does not realize it for the practice has been slowly acquired, and the adverse movement may only be of slight degree. The plates when made from such an impression will, when placed into the patient's mouth, apprise him that there is something wrong. He says "they don't fit". The trouble is that a proper occlusion of the teeth is lacking.

To prevent the patient from biting in a manner in which the jaw inclines and to force it to move only in a normal path, is the chief object of this invention.

The appliance consists of a primary plate 10 and a secondary plate 11. The upper or primary plate 10 is provided with a throat-notch 12, to permit the patient to breathe freely while the impression of the gums is being taken. The plate 10 terminates in a handle 13 whereby the appliance is both easily handled and manipulated. The plate 10 forms a base for mounting the wax biscuit 15 to receive the impression of the upper gums. The lower plate 11 is formed similarly at its front end to the plate 10, and forms a base for the wax biscuit 16, which receives the impression of the lower gums. The lower or secondary plate 11 is shorter than the upper plates and terminates in a curved handle 17, to receive the fore-finger of the manipulating-hand so that the position of the lower plate, with relation to the upper plate, may be changed to suit the operator. The plates 10 and 11 are hinged together by means of the hinge 20 which is arranged so as to pivot at each end to the plates to permit the latter to be separated, as shown in Fig. 3 of the drawings. The relative position of the plates is changed by

the fore-finger engaging the curved handle 17, heretofore mentioned. To prevent the hinge 20 from moving backward too far and also to limit the back movement of the lower plate 11, I provide the stop 25 which is secured to the underside of the handle 13. Thus, when the lower plate 11 occupies its farthestmost position from the upper plate, as shown in Fig. 3, its only direction of movement is forward and toward the plate 10. The advance movement of the lower plate 11 not only prevents a forward movement of the jaw, when taking the impression of the gums, but it forces the jaw back until the balls formed on the rear ends of the jaw, by which the latter is hung, into their respective sockets and holds them there during the time the jaw closes.

The position of the gums before and after the bite is best shown in Fig. 3 in which A illustrates the position of the upper gums and B the position of the lower gums when the mouth is open, while the dotted position of the lower gums, after the mouth is closed, is shown at C.

The plates 10 and 11 are each provided with the shoulders 30 and 31, respectively, which register when the plates are nested, (see Fig. 4) and will prevent lateral movement in case of an involuntary and excessive muscular contraction of the jaw.

The operation of the appliance is as follows: The wax biscuits 15 and 16 are first heated to render them pliable and adhesive so that they may be readily placed into their respective positions upon the plates 10 and 11. During this operation the temperature of the wax may so decrease that a re-heating is required before taking the impression of the gums. The wax biscuit 15 on the upper plate 10 is first re-heated and the appliance is then inserted into the patient's mouth and up against the roof. The operator presses the appliance upward and firmly against the upper gums and, by proper manipulation, forces the gums into the wax until a perfect impression of the gums is secured. The appliance is then removed from the mouth and placed into cold water so as to chill and set the wax, and thus reduce the liability of the impression being impaired while being handled. When the operation thus far is completed, the wax biscuit 16 is re-heated and the appliance is again inserted into the patient's mouth and adjusted until the upper gums snugly fit or match the impression in the wax 15, previously taken. The upper gums thus planted into the impression in the wax biscuit 15 forms a base which is rigid with the upper jaw so long as the operator keeps the appliance firmly engaged with the gums so that lateral movement of the appliance is prevented. The operator has his

fore-finger on the curved handle 17 and thus holds the plates 10 and 11 apart, as shown in Fig. 3, and then requests the patient to close the mouth so that the imprint of the lower gums can be secured. The lower jaw moves upward while the gums engage the wax biscuit 16 and, as the mouth is firmly closed, the gums are driven into the wax biscuit 16. The lower plate 11 also has a forward movement while moving toward the upper plate 10, as the mouth is closed. The advance movement of the plate 11 is readily observed when examining Fig. 3, in which the full lines show the plate in its rear position while the dotted lines show it in its advanced position. This forward movement of the plate 11, as has heretofore been pointed out, forces the lower jaw back into its natural position, when making the bite, so that a perfect impression of the gums when in natural repose can be secured, and thereby insure the finished plates to correctly fit the gums and a perfect occlusion of the teeth.

No claim is made in this application to pivot the plates at a distance from their ends as this feature forms the subject-matter of a copending application filed by me on August 9th, 1907, Serial Number 388,307, but

What I do claim and desire to secure by Letters Patent, is—

1. A dental appliance for taking wax impressions or bites consisting of a primary and a secondary plate, means on said plates adapted to force the secondary plate to travel longitudinally when moved toward the primary plate and to limit said longitudinal travel, and a lug on said primary plate to limit the longitudinal travel of said secondary plate in the direction to open the appliance.

2. A dental appliance for taking wax impressions or bites consisting of a primary and a secondary plate, and a bar pivoted at each end to the plates and adapted to permit said plates to be tilted and to force the secondary plate to travel longitudinally when moved toward the primary plate and to limit said longitudinal travel, in the direction to close the appliance.

3. A dental appliance for taking wax impressions or bites consisting of a primary and a secondary plate, means connecting the plates to permit one of said plates to tilt vertically and to travel longitudinally of the other, and means arranged on the plates to intermesh to prevent lateral play between the plates when the latter are in contact.

4. A dental appliance for taking wax impressions or bites consisting of two plates, and a connection permitting each plate to move from and toward the other in a parallel plane.

5. A dental appliance for taking wax im-
pressions or bites consisting of two plates, a
connection permitting the plates to be sepa-
rated in a parallel plane, and a stop means
5 adapted to prevent said connection being
moved into a right angle position relative
to said plates.

In witness whereof, I, have hereunto set

my hand and seal at Indianapolis, Indiana,
this, 26th day of October, A. D. one thou- 10
sand nine hundred and seven.

ERWIN EUGENE HOLMES. [L. s.]

Witnesses:

F. W. WOERNER,
L. B. WOERNER.