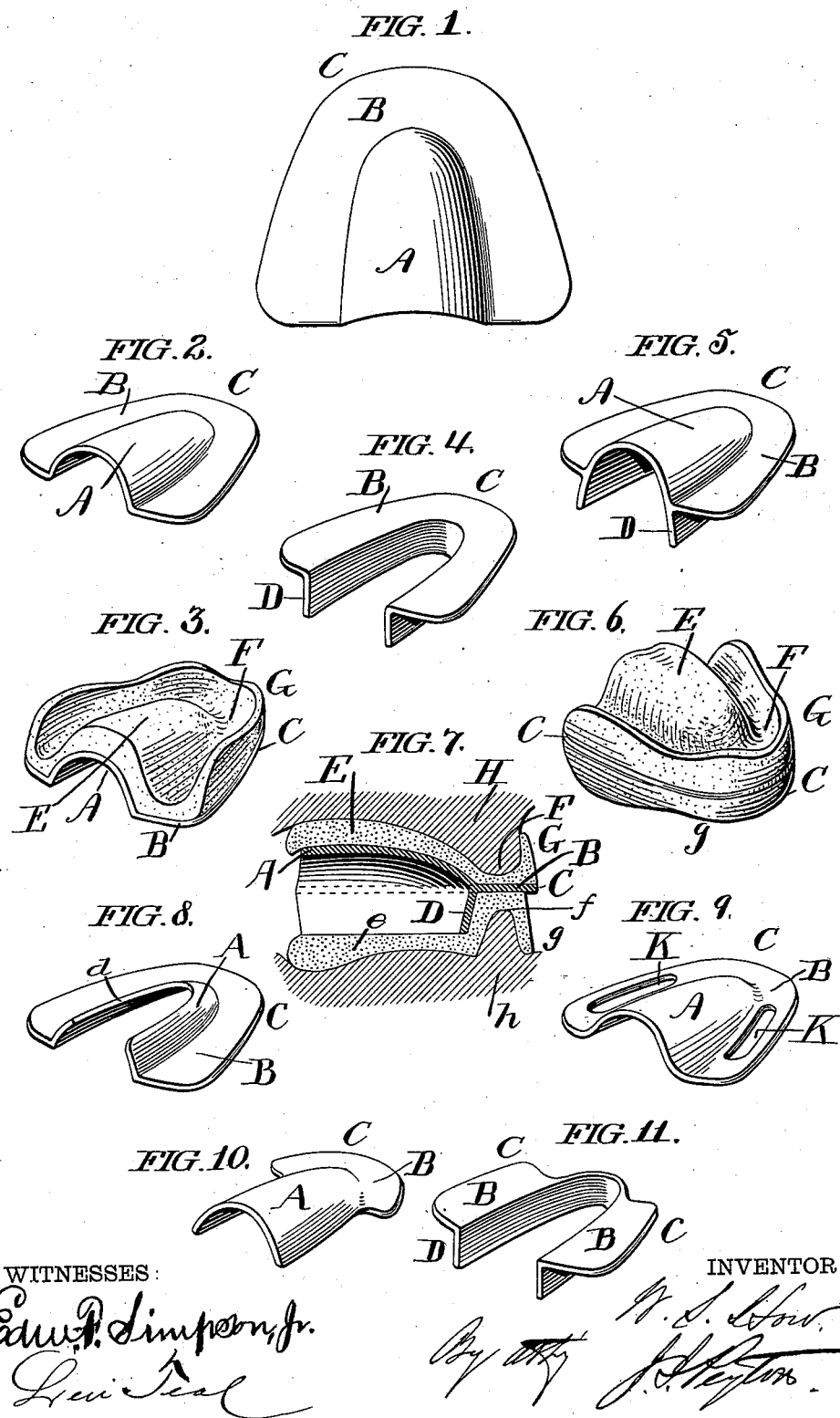


(No Model.)

W. S. HOW.
DENTAL BITE PLATE.

No. 522,212.

Patented July 3, 1894.



UNITED STATES PATENT OFFICE.

WOODBURY STORER HOW, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THE S. S. WHITE DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

DENTAL BITE-PLATE.

SPECIFICATION forming part of Letters Patent No. 522,212, dated July 3, 1894.

Application filed April 16, 1894. Serial No. 507,727. (No model.)

To all whom it may concern:

Be it known that I, WOODBURY STORER HOW, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Dental Bite-Plates; 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.

My invention relates to certain improvements, as hereinafter claimed, in means for "taking the bite," as it is technically termed, in the preparation of artificial dentures.

In the accompanying drawings, showing a number of "bite plates" constructed in accordance with my improvements, Figure 1 is a plan view, on a larger scale than the other views, of an upper jaw bite-plate; Fig. 2, a view in perspective thereof; and Fig. 3 a view in perspective of such plate with the wax bite impression thereon. Fig. 4 shows a lower jaw bite-plate in perspective. Fig. 5 is a similar view of a combined upper and lower jaw bite-plate made in one piece; and Fig. 6 a view in perspective of such plate with the wax bite impression for the upper and lower jaws. Fig. 7 is a vertical central section designed to show the manner of taking the bite of the upper and lower jaws. Figs. 8, 9 and 10 show in perspective modifications of the upper jaw bite-plate; and Fig. 11 a view of a modification of the lower jaw bite-plate in perspective.

The bite-plates may be made of any suitable material, such as rubber, celluloid, &c.; but I prefer to employ metal, or proper metallic alloy thin enough to adapt the plate to be bent to alter its configuration somewhat as may be desired.

The upper bite-plate shown in Figs. 1, 2 and 3 consists of the curved palatal portion or arch A, and the flat flange B projecting therefrom at substantially right angles with a vertical plane intersecting the palatal arch centrally and longitudinally thereof. This substantially horizontal flat flange B is, preferably, of uniform thickness throughout, and is formed without wall or shoulder at its outer edge or border C which is of suitable contour (narrow-

est at front and gradually widening toward the rear) to adapt it to be properly adjusted by the dentist in the mouth of a patient.

In operation, warmed wax is applied to the upper surface of the plate and the plate adjusted in the mouth of a patient whose jaws are then closed upon the plate and applied wax which is caused to conform to the palatal and alveolar ridge parts of the upper jaw, and may be readily modeled to a suitable labial and buccal contour along its edge or border.

As will be seen by reference to Fig. 3, E indicates the palatal, F the ridge, and G the labial portions of the molded and modeled wax on the upper jaw bite-plate. The plate with the wax impression having been removed from the mouth and the wax having stiffened or set, plastic wax is then put on the under side of the flange B, and the plate is properly replaced in the mouth and the patient caused to bite upon the plastic wax until the proper closure of the jaws is attained. The entire structure thus obtained is transferred as usual to the impression model and articulator and well known operations in preparing artificial dentures are proceeded with.

Fig. 4 shows a lower jaw bite-plate with the flat flange B extending at substantially right angles with the lingual portion or flange D which adapts the plate for conforming to the jaw and for non-interference with the tongue of a patient. The manner of using this lower bite-plate is rendered obvious by the explanation of the operations given above.

The manner of using the duplex bite-plate shown by Fig. 5 will readily be understood from inspection of Figs. 6 and 7 in connection with the before-given description of the manner of using the upper jaw bite-plate, bearing in mind that plastic wax is applied to the plate both above and below before adjusting it to the patient's mouth. The labial portion of the lower bite impression is shown at g, and e and f represent, respectively, the lingual and ridge portions of the bite impression of the lower jaw. The upper and lower jaws H and h are partially indicated in Fig. 7.

When a patient's palatal arch is high and narrow, it is desirable to permit of the use of a finger of the dentist to press up the wax, and

this is provided for by cutting away or providing a slot *d* in the arch A of the plate, as shown in Fig. 8.

For the more secure retention of the wax upon the flanges of the bite-plate the flange may be perforated or provided with slots as at K K with the walls of the slots undercut or inclined. See Fig. 9.

Bite-plates for an upper partial denture, and for a lower partial denture, respectively, are shown by Figs. 10 and 11, portions of the flanges of the plates being omitted or cut away at points where the natural teeth in the jaw to be provided with the artificial denture would come in contact with the flange, if entire. Plates constructed with uninterrupted flanges may obviously have their flanges cut away at any desired portions so as to prevent contact with the plate of the natural teeth of the jaw to be provided with a partial denture.

It will be seen that by constructing a bite-plate as described with the flat flange, with-

out wall or shoulder at its outer edge or border, the plate may be freely adjusted so as to secure desirable labial and buccal contour and lip alignment in taking the bite, and that the labial and buccal portions of the wax impression are exposed and readily accessible to admit of modeling.

I claim as my invention—

1. A dental bite-plate having the wax receiving flat flange without wall or shoulder at its outer edge or border, substantially as set forth.

2. A dental bite-plate having the palatal arch, the flat flange without wall or shoulder at its outer edge or border, and the lingual flange, substantially as set forth.

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

WOODBURY STORER HOW.

Witnesses:

EDW. F. SIMPSON, Jr.,

WM. H. POWELL.