

Dec. 16, 1941.

H. SNELL  
DENTAL PLATE

2,266,478

Filed July 3, 1940

2 Sheets-Sheet 1

*Fig. 1.*

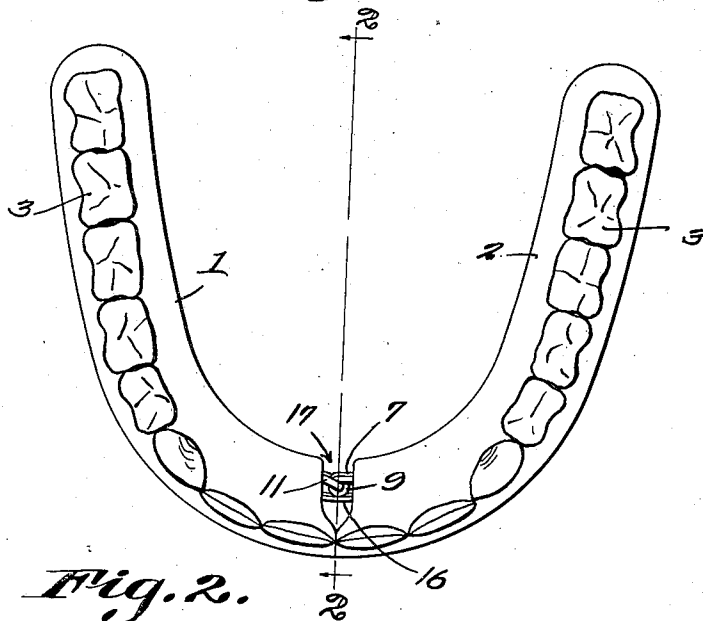


*Fig. 2.*

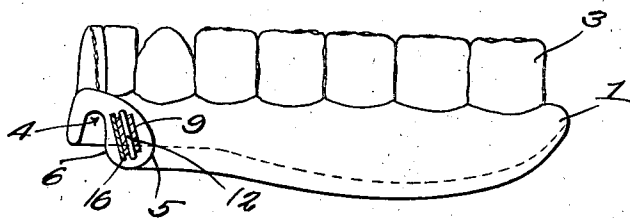
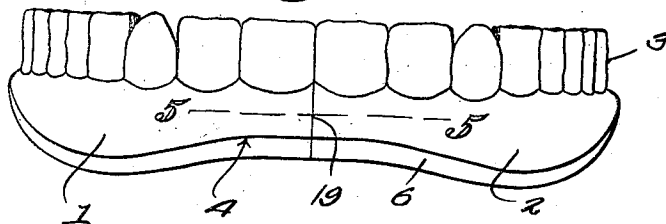


*Fig. 3.*



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*Fig. 4.*

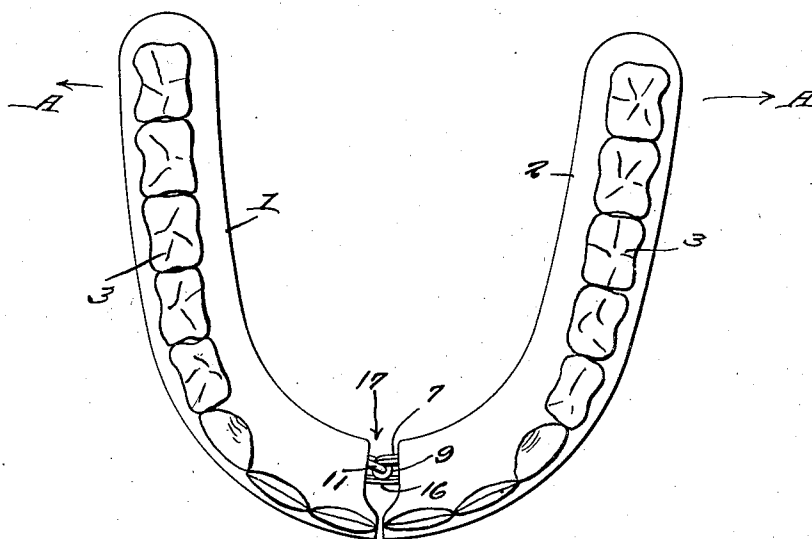


*Fig. 5.*

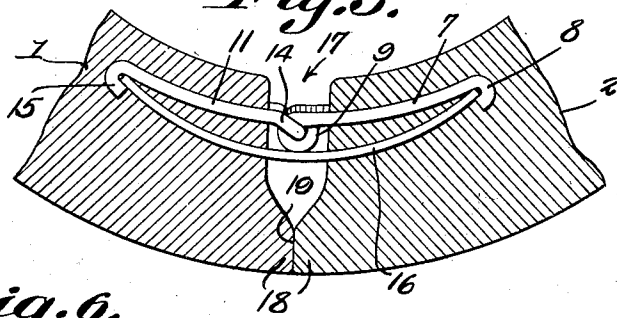


*Fig. 6.*

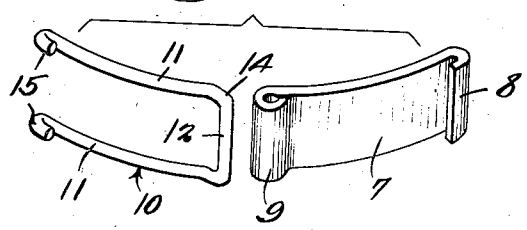
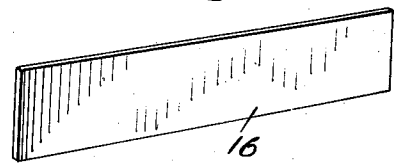


*Fig. 7.*



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## UNITED STATES PATENT OFFICE

2,266,478

## DENTAL PLATE

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Application July 3, 1940, Serial No. 343,874

4 Claims. (Cl. 32-2)

This invention aims to provide a novel lower dental plate, so constructed that the rear ends of its parts may be pressed together to facilitate introduction and removal of the plate, the construction being such that the plate will have a firm hold on the lower jaw, without discomfort to the wearer.

The invention aims, particularly, to improve the hinge and spring construction and to improve the parts of the denture which are adjacent thereto.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:

Fig. 1 shows in top plan, a lower denture constructed in accordance with the invention;

Fig. 2 is a section on the line 2-2 of Fig. 1;

Fig. 3 is a front elevation;

Fig. 4 is a top plan showing the denture compressed and opened at the front;

Fig. 5 is a section taken approximately on the line 5-5 of Fig. 3;

Fig. 6 is a composite perspective view disclosing the hinge members;

Fig. 7 is a perspective view showing the spring plate which cooperates with the hinge.

The lower denture forming the subject matter of this application comprises members 1 and 2 which, together, conform to the shape of the lower dental arch. The teeth are shown at 3.

The numeral 4 marks the gum receiving recess of the denture, the recess being defined, at one side, by an inner flange 5, which has a downward and inward slant. The outer surface 6 of the flange 5 conforms closely to the gum or lower jaw bone of the wearer.

A hinge is provided, and is shown best in Figs. 5 and 6. The hinge preferably is made of metal, and includes a hinge plate 7, provided at one end with a hook-shaped seat 8, and supplied at its opposite end with a socket 9. The hinge plate 7 is partially embedded in the denture member 2.

A U-shape hinge piece 10 is supplied and in-

cludes side arms 11 connected by a pivot bar 12 received in the socket 9 of the hinge plate 7. The side arms 11 include forwardly inclined portions 14, setting the pivot bar 12 slightly forward, for cooperation with the socket 9, an observation which will be understood readily when Fig. 5 is noted. At the end remote from the pivot bar 12, the side arms have hook-shaped seats 15. The hinge piece 10 is partially embedded in the denture member 1.

A spring plate 16, preferably made of metal, is provided. In its free condition, the spring plate 16 normally is straight, as shown in Fig. 7, but it may be bent into a forwardly presented bow, the ends of the spring plate being received in the seat 8 of the hinge member 7, and in the seats 15 of the hinge piece 10. The plate 16 is partially embedded in the members 1 and 2.

The denture members 1 and 2 are cut away at their forward ends, to form a recess 17, opening backwardly with respect to the denture, the recess defining lugs 18 in the denture members 1 and 2, the lugs being in abutment, along a line 19, under the impulse of the spring plate 16.

The intermediate portion of the spring plate 16 extends across the recess 17, and the pivotally or hingedly associated parts 12 and 9 of the hinge are disposed in the recess.

The spring plate 16 tends to swing the rear ends of the denture members 1 and 2 outwardly, in the direction of the arrows A in Fig. 4, and, thus, the outer surface 6 of the inner flange 5 acquires a good suction hold on the jaw of the wearer, without causing discomfort. A pinching together of the rear ends of the denture members 1 and 2, and the release of them, facilitates the mounting and removal of the denture.

It is to be observed that the hinge axis, represented by the pivot bar 12 and the opening in the socket 9, has a downward and backward inclination, as brought out in Figs. 2 and 5. The advantages of this feature are many. It tends to cause an upward movement of the denture when the rear ends of the members 1 and 2 are pressed together, and a downward movement of the denture when the rear ends of the members 1 and 2 are released.

The device forming the subject matter of this application is simple in construction, but it represents an important advance in the art, so far as ease in mounting and removal are concerned, and proper denture anchorage when the article is in place.

An adjustment of the denture may be effected

by springing it open at the front, and dressing off the abutting surfaces of the lugs 18.

Having thus described the invention, what is claimed is:

1. A lower plate comprising denture members, and a hinge forming a connection between the forward portions of the denture members, the axis of the hinge having such a downward and backward inclination that the denture will rise when the rear ends of the denture members are pressed together, and move downwardly when the rear ends of the denture members are released.

2. A lower plate comprising denture members, there being a recess between the forward portions of the denture members, hinge pieces partly embedded in the forward portions of the denture members and including cooperating hinge

elements located in the recess, and a resilient spreading strip held bowed by the denture members and extended across the recess.

3. A lower plate comprising denture members, there being a recess between the forward portions of the denture members, hinge pieces partly embedded in the forward portions of the denture members and including cooperating hinge elements located in the recess, remote portions of the hinge pieces being provided with seats, and a forwardly bowed spring having its ends received in the seats, and extended across the recess.

4. A lower plate constructed as set forth in claim 3, and wherein the intermediate portion of the spring bears against one of the hinge elements, within the recess.

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