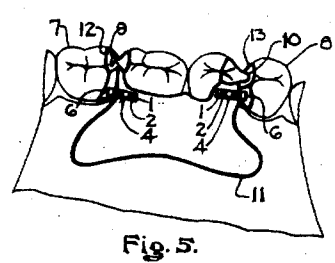
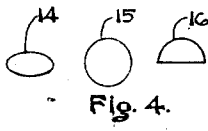
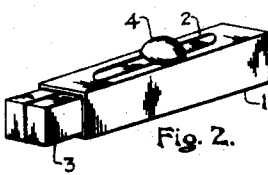
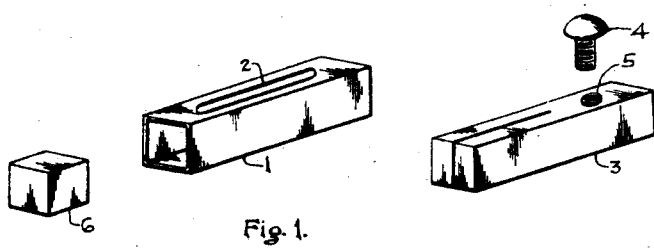


Feb. 19, 1929.

1,702,282

C. I. STOLOFF
REMOVABLE BRIDGE LOCKING DEVICE
Filed Oct. 25, 1926



INVENTOR.
CHARLES I. STOLOFF
BY *Robert I. Miller*
ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES I. STOLOFF, OF NEW YORK, N. Y.

REMOVABLE BRIDGE-LOCKING DEVICE.

Application filed October 25, 1926. Serial No. 144,100.

This invention relates to improvements in the prosthetic art of dentistry, and more particularly to a removable bridge locking device to be used in conjunction with removable bridge dentures, to prevent their unintentional dislodgment from position in the mouth.

In the various types of removable bridge-work employing any of the special attaching means for retaining the bridge denture in the mouth, it is the tendency of the denture to dislodge itself from its position between the abutment teeth in the mouth under the stress of the mastication forces, the more so after the bridge has been in use for a time. This condition prevails even where the attaching means is provided with tensioning adjustment, and, after adjustment is resorted to a few times the attaching means will often break. It is a purpose of the present invention to overcome the difficulties indicated above, by providing the bridge denture with a device which will lock the denture in its proper position between the abutment teeth in the mouth. A further purpose of my invention is to provide a device to be used in association with special attaching means for the bridge denture such as anchor-socket attachments, clasps, and the like, which will lock the denture in its proper position in the mouth, regardless of any tensioning provision that may be possessed by the attaching means.

Further advantages of my invention will appear in the description hereinafter and as indicated in the accompanying drawing, in which—

Figure 1 shows a perspective view of the various members of the device.

Fig. 2 shows a view of the assembled device in perspective.

Fig. 3 shows a sectional view of the device in elevation through the slide head member.

Fig. 4 shows various sectional views that the device may assume.

Fig. 5 shows a view in perspective of a removable bridge denture employing the device embodied in this invention.

There has been illustrated in the accompanying drawing an embodiment of my invention in a simple and readily comprehensive form. The device, referring to Figures 1 and 2, embodies a rectangular casing member 1 provided with the longitudinal slot 2 in the upper wall, and is open at one end, the left end.

The casing 1 embraces a slide member 3 shaped rectangular to correspond to the shape of the casing, and rides within the casing in a sliding fit. One extremity of the slide member, the left end, is capable of emerging from within the casing a predetermined distance, the movement of the slide 3 being manipulated by the slide head 4 in a lateral direction. The slide head 4 has been here shown, for convenience, in form of a screw with a knob head, adapted to ride within the slotted section of the casing 1. The slide member 3 has positioned upon the upper face a correspondingly threaded hole 5 to receive the threaded portion of the slide head 4. To take up wear, and to provide a facility for adjusting the ease of movement of the slide member within the casing, the slide member 3 is shown split vertically for a portion of its length.

There has been disclosed, reference being had to Fig. 1, a socket member 6, which may be found desirable as a means for providing a more positive seat for the emerging extremity of the slide member 3. This socket is in the form of a box, open at one end, and shaped to conform to the contour of the emerging extremity of the slide member.

The method of application of my device in conjunction with a typical form of removable bridge denture is shown in Fig. 5. I have assumed here a two tooth removable bridge positioned between the second molar 7 and first bicuspid 8, as the abutment teeth in the mouth. The means of anchoring the bridge denture to the molar 7 has been here chosen as a T shaped anchor-socket attachment 9, while a simple lug or arm 10 has been indicated as the means of anchoring the bridge denture to the bicuspid 8. The casing, of the device to be locked into the restoration of the molar 7, would be seated, by soldering or in any other approved manner, within the saddle structure 11 of the denture, substantially mesio-distally or horizontally, with the slotted face of the casing in line with the surface of the saddle structure. This casing would moreover be positioned so that the open end would lie adjacent to that section of the molar 7 restoration into which the slide member is to lock. The slide member 3 is next inserted through the open end of the casing, and the slide head 4 is screwed into the threaded hole 5.

A seat is then cut into the body of the restoration of the molar 7, the restoration be-

ing assumed the inlay 12, in line with the slide member 3, so that, when the slide member is made to emerge from the casing it will lock into this seat. The socket 6 is now embedded, using solder or any other approved method, within the said seat, completing the assembling of the device. This socket member 6 is not a necessary part of the device, and may be dispensed with when a properly shaped seat can be cut into the restoration.

In the manner as outlined above, a second device has been shown secured in position, locking into the socket provided in the restoration on the bicuspid 8. The restoration in this instance has been assumed the inlay 13, referring to Fig. 5. With the slide members 3 of the devices now drawn entirely within their respective casings 1, the removable bridge denture is inserted into its proper position in the mouth, and when, with the fingers the slide heads 4 are moved so that the slides 3 lock into their respective sockets 6 in the abutment restorations, the bridge denture will be securely locked against unintentional dislodgment. It is readily evident that the lateral movement of the slide member 3 will be limited by the lateral movement of the slide head 4 within the casing slot 2, and the amount of slide movement desired will be determined by the length of the slot 2.

Although I have disclosed in Fig. 5 the removable bridge denture provided with a special type of attaching means, this example was arbitrarily chosen. It was the purpose here to establish how readily the device may be adapted for use in instances where bridge dentures have already been constructed and used in the mouth, but which do not function successfully due to the ease with which they are dislodged unintentionally. My device is applicable to lock removable bridge dentures in position in the mouth regardless of the type of attaching means with which the denture is provided, and can be used with either metal or rubber removable bridge dentures.

Moreover, I wish to specifically set forth that my device is just as advantageously employed for locking bridge dentures in position in the mouth, where no special attaching means is provided with the denture. In that case the device would be applied in the same manner as outlined hereinbefore, the device in itself acting as the attaching means.

The section of my device has been shown as square in Figures 1, 2, 3 and 5, merely for

convenience. In Fig. 4 are illustrated three other shapes, i. e., elliptical 14, circular 15, and semi-circular 16, in which the device may be formed. It would be preferable to manufacture this device of a type of dental gold alloy customarily used for precious metal removable bridgework.

There has been described and illustrated herein a particular embodiment of my invention, and I desire to have it understood that changes and modifications may be resorted to in the construction and arrangement of the parts as set forth, within the scope of the invention as defined in the appended claims.

What I claim is:

1. In combination with a removable bridge denture and an attaching means for anchoring the bridge in the mouth, a casing member for the removable bridge open at one end and provided with a longitudinally positioned slot in one wall, a slide member slidably movable within the casing adapted to partially emerge therefrom, a socket member permanently positioned on the fixed abutment tooth in the mouth adapted to receive the emerging extremity of the slide member, and a slide head member for manipulating the slide member removably secured thereto adapted to ride within the slotted area of the casing.

2. In combination with a removable bridge denture and an attaching means for anchoring the bridge in the mouth, a casing member permanently positioned mesio-distally on the bridge denture, a slide member slidably contained within the casing adapted to partially emerge to lock into a cooperatively positioned seat provided on the fixed abutment tooth, and a slide head member adapted to screw into the slide member and ride within a slot provided in the wall of the casing for manipulating the movement of the slide member.

3. In combination with a removable bridge denture and an attaching means for anchoring the bridge in the mouth, a casing member on the bridge denture, a slide member slidably movable within the casing adapted to partially emerge therefrom and lock into the fixed abutment tooth in the mouth, and a means for manipulating the movement of the slide member.

Signed at New York city in the county of New York and State of New York this 22nd day of October, A. D. 1926.

CHARLES I. STOLOFF.