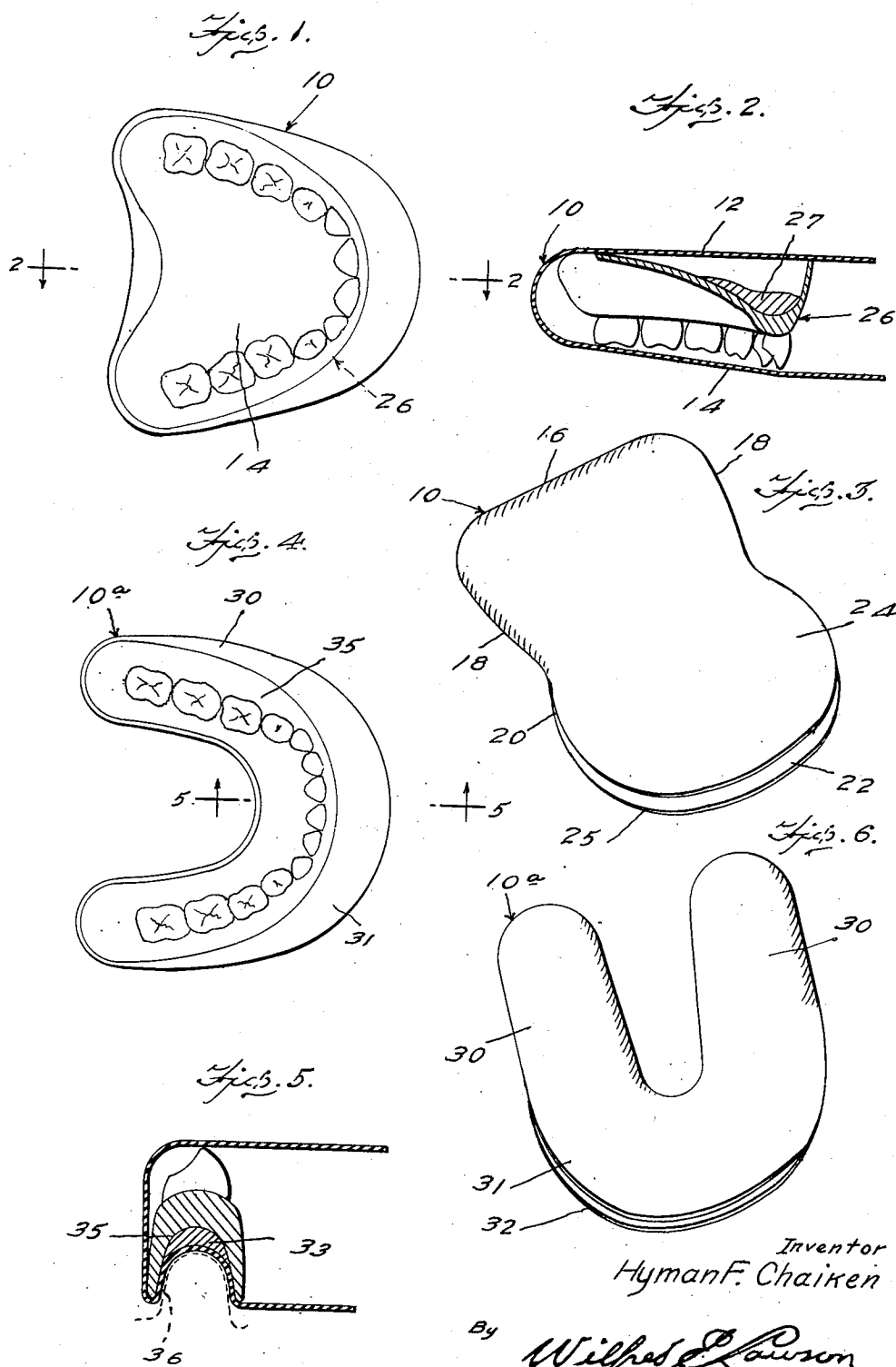


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H. F. CHAIKEN  
METHOD OF IMPROVING AND CORRECTING CONSTRUCTION  
OF DENTURES AND SHIELD THEREFOR  
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Inventor  
Hyman F. Chaiken

By *Wilfred Lawson*  
ATTY.

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## METHOD OF IMPROVING AND CORRECTING CONSTRUCTION OF DENTURES AND SHIELD THEREFOR

Hyman F. Chaiken, Wilkes-Barre, Pa.

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2 Claims. (Cl. 32—2)

This invention relates generally to the class of dentistry and has to do particularly with the fitting of dentures.

A particular object of the present invention is to provide an improved method and means of improving the construction of new dentures and correcting some of the shortcomings of badly fitting old dentures.

A more specific object of the invention is to provide an improved method and means of applying a rebase material to a denture to improve or restore the proper length and fit thereof without permitting the rebase material such as jel-like acrylic which is highly irritating to the tissues, to come into contact with the tissues when making the impression.

A further and more specific object of the invention is to provide a method of obtaining a perfect, smooth finish impression in a rebase dental material applied to a denture for the purpose of improving the fit of the denture, by introducing between the dental material and the tissues of the mouth which are to be pressed into the dental material to obtain the impression, a tissue thin shield, which permits the making of the desired impression and prevents the rebase material from contacting the tissues of the mouth.

It is a well established dental fact that all dentures after they have been processed require "grinding in" of the teeth to give the patient comfort and to give stability to the dentures, especially the lowers. The reason the teeth have to be ground is that, as the denture goes through the processing or curing period, there is expansion and then contraction of the denture. When the denture is inserted in the mouth the occlusion and the vertical dimension is changed. Instead of grinding the teeth, which lose their sharp cutting surfaces, making them less efficient to cut and masticate the food, the dentures, in accordance with the present method, are rebased and reset in the mouth under the patient's normal occlusion by using a thin shield to give the new base a smooth, silk like finish and also protect the tissues from contact with the soft jel-like substance used to make the plasticizer. This jel-like substance, which is called denture acrylic, is self curing at mouth temperature and after it is in the mouth three or four minutes, it sets and becomes hard and a perfect union is formed with the denture thus automatically correcting the occlusion and warpage that occurs during the processing in the laboratory. The rebasing, by the present improved method, gives the patient a perfect fitting denture because the new base is cured against the gum tissue in the mouth without discomfort to the patient.

A still further object of the invention is to provide an improved method and means of taking impressions with impression trays, in a more hygienic manner than in the present practice where the trays are used over and over again and in the majority of cases are merely washed clean but are not sterilized, by the employment of a tissue thin stretchable sack in which the impression tray with the impression or rebase material is placed so that

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the impression is taken against the soft stretchable tissue instead of having the tissues of the mouth pressed directly into the impression material, such tissue sacks being disposable after use.

Other objects and advantages of the present invention will become apparent as the description of the same proceeds and the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of the specification, with the understanding, however, that the invention is not to be limited to the exact details of construction shown and described since obvious modifications will occur to a person skilled in the art.

In the drawing:

Figure 1 is a view in plan of a thin transparent sack, or receptacle, constructed in accordance with the present invention for use in the process for taking impressions in rebasing an upper denture, which is shown in plan in the sack, or for use in association with an upper impression tray.

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a view in perspective of the sack, or receptacle shown in Figure 1.

Figure 4 is a view in top plan of a transparent thin sack, or receptacle, for use in association with a lower denture or with a lower impression tray.

Figure 5 is a sectional view taken substantially on the line 5—5 of Figure 4.

Figure 6 is a view in perspective of the sack, or receptacle shown in Figure 4.

Referring now more particularly to the drawing the numeral 10 generally designates the thin transparent sack of the present invention for use in carrying out the present method in the rebasing of an upper denture or in the taking of an impression in an impression tray for the making of an upper denture.

The sack 10 is, in plan, of approximately the same contour or outline as a full upper denture and is formed throughout of a stretchable and easily adaptable film in one piece, by a suitable dip process such as that used for the manufacture of thin latex articles. By forming the sack 10 by the dipping process commonly employed for making latex articles the walls of the sack are made very thin and of a thickness not greater than one thousandth of an inch so as to be entirely transparent and barely visible to the naked eye and also of the utmost flexibility. This serves to provide a sack having a wall thickness less than the thickness of the superficial mouth tissues.

The receptacle of Figure 1, as shown, comprises the top and bottom walls 12 and 14 respectively which are joined together along the rear transverse edge as indicated at 16 and along the side edges, from the edge 16, throughout approximately half the length of the side edges as indicated at 18 so that such side edges are open through the remaining halves of their lengths as indicated at 20 and the receptacle is also open at the side opposite the edge 16, forming the mouth 22. By this construction, that is by having the envelope joined along half the length of each of its side edges, there are formed the top and bottom flaps 24 and 25 which are separated to permit the insertion of the denture as will be readily apparent.

The numeral 26 generally designates an upper denture which is shown in Figure 2, in position in the flat receptacle, with a suitable quantity rebasing plastic material 27 therein ready to receive the impression of the gums of the person to wear the denture.

In Figures 4 to 6 there is shown a similar sack or receptacle which is generally designated 10a, which is de-

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signed to receive the lower denture or a lower impression tray.

This receptacle 10a is formed of the same material as the receptacle 10 but is bifurcated as illustrated and the two furcations 30 are closed through their lengths along the inner and outer sides as shown, the open side or end of the receptacle being defined by the separable flaps 31 and 32 which correspond to the flaps 24 and 25. These flaps are separate along their side edges down to the base or inner ends of the furcations and it will be readily apparent that in the use this receptacle the lower denture, or the lower impression tray, is inserted so that the two sides extend into the furcations 30 which closely embrace the sides, as well as the top and underside of the denture and thereby prevent the impression material from escaping to any material degree from the denture tray when the impression is taken.

In Figure 5 the plastic rebasing material is shown in the lower denture and is designated 33 and as is illustrated in this figure, when the denture is placed in the mouth and the mouth is closed so that the gum is forced up into the denture tray which is designated 35, it will be seen that the gum, which is shown in outline and designated 36, will press the thin flexible receptacle material against the material 33 and force the impression material firmly into the denture tray or pan and at the same time a perfect impression of the gum will be left in the impression material.

The sacks, or receptacles, in which the upper or lower dentures are placed substantially conform to the shape or outline of the denture, as before stated, the free edges of the mouth flaps being rounded, as shown, therefore, the impression material will be held in place when the lower denture is placed in the mouth, even though such material will be on the underneath side of the denture, and there is no excess of the receptacle material to make an uncomfortable bulk in the patient's mouth.

In the carrying out of the present method the thin shield material which is interposed between the gums and the impression or rebasing material, is of such a soft quality and so thin that a perfect reproduction of the contours of the gum will be had in the impression material and the surface of the latter material will have silk like finish. At the same time the mouth tissues will be prevented from coming into contact with the impres-

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sion or rebasing material and thus protected against the irritating action which such material has upon the gum tissues. Also the patient is protected from the unpleasant taste which the material has.

I claim:

1. The method of rebasing dentures to correct improper fit comprising filling a denture with a suitable quantity of soft pliable rebasing material, said material being self-curing at mouth temperature, providing an open-mouth receptacle in the form of an envelope of tissue-thin elastic flexible material having a wall thickness not greater than one thousandth of an inch, inserting said denture in said envelope, disposing said denture and envelope in proper position in the mouth of a patient, fully closing the jaw of the patient into engagement with the surface of said envelope to form an impression in said material exactly complementary to the surfaces of the jaw and mouth normally in contact therewith, retaining the jaw in firm engagement with the surface of said envelope during complete curing of said material to set and bond the same to said denture, and removing said denture from the mouth and said envelope and polishing the same to provide a denture having a substantially perfect fit, while retaining said rebasing material out of direct contact with the mouth tissues during the rebasing operation.

2. For use in rebasing dentures and for preventing contact between the rebasing material and the mouth tissues, a receptacle in the form of an open-mouth envelope of tissue-thin elastic flexible material having a wall thickness not greater than one thousandth of an inch for enclosing said denture and rebasing material during the rebasing operation and with the wall of the receptacle interposed between the rebasing material and the mouth tissues, said receptacle being of a size and contour substantially conforming to the size and contour of the denture to be received therein during the rebasing operation.

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