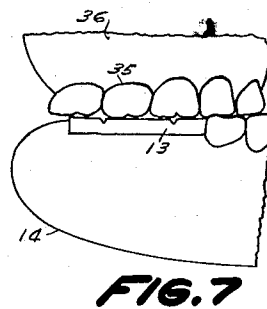
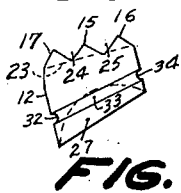
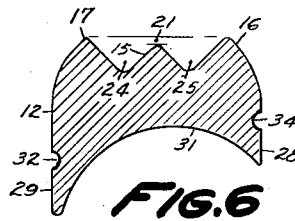
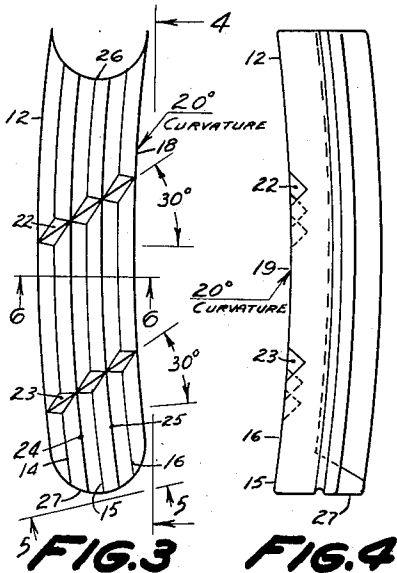
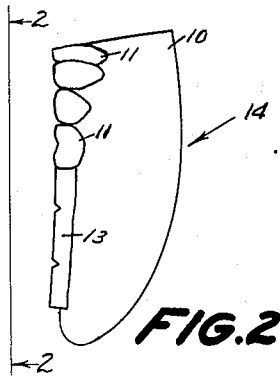
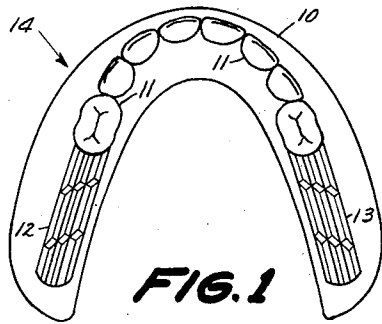


Oct. 27, 1959

F. R. SALAVA
ARTIFICIAL DENTURE

2,909,836

Filed Aug. 15, 1958



INVENTOR.

FRANK R. SALAVA
BY

S. E. Sinish
ATTORNEY

1

2,909,836

ARTIFICIAL DENTURE

Frank R. Salava, Wrightstown, Wis.

Application August 15, 1958, Serial No. 755,226

5 Claims. (Cl. 32-2)

This invention relates generally to improvements in false teeth as used in artificial dentures, either upper, lower, or partial in form, or bridgework, and more particularly to an occlusal bar insert having occlusal surfaces, bladed or ribbed, to provide a plurality of spaced cutting edges extending mesio-distally.

It has been found that artificial back teeth, as used in artificial dentures, made to conform to the shape of natural teeth, carry out a crushing effect only, with the result that considerable effort and forceful jaw movements are required. Consequently, the high mastication pressure required for the comminution of solid food has an extremely detrimental effect upon the tender underlying tissue.

An important purpose of this invention is to eliminate gum tissue irritation and soreness caused by the pressure of denture plates bearing on the gums. By requiring less bearing pressure and furnishing more freedom for mastication, there results an elimination of many sore spots on the gum ridges, and also an elimination of absorption of said gum ridges.

An object of this invention is the provision of a unique occlusal surface to improve the cutting and grinding efficiency of artificial dentures.

Another object is to provide an ingenious substitute, for some of the regularly used porcelain teeth in a denture, which substitute takes the form of a specially designed metallic bar insert.

Still another object of this invention is the provision of an occlusal bar insert, usually in a lower denture, having a lateral concave construction that cradles and otherwise retains food during the chewing operation, thereby aiding in the mastication of the more solid foods during lateral movement of the lower jaw.

Yet another object is to provide an occlusal tooth bar which diminishes the pressure required for the use of dentures, characterized by a cutting or blade like construction.

A further object of this invention is the provision of an occlusal bar substituting for an individual or any desired group of posterior teeth in a denture.

Still a further object is to provide an occlusal bar that will always retain its original occlusal surface, thus eliminating the possibility of tooth cusp interference.

Other specific objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings in which like reference numerals designate like parts throughout the figures thereof and wherein:

Fig. 1 is a plan view of a lower denture embodying the occlusal bar invention;

Fig. 2 is a side view of the denture of Fig. 1, taken along line 2-2 of Fig. 1 looking in the direction of the arrows;

Fig. 3 is an enlarged plan view of the occlusal bar shown in Fig. 1;

Fig. 4 is a side view of the occlusal bar of Fig. 3, taken

2

along line 4-4 of Fig. 3 looking in the direction of the arrows;

Fig. 5 is an end view of the occlusal bar of Fig. 3, taken along line 5-5 of Fig. 3 looking in the direction of the arrows;

Fig. 6 is a cross-section view of the occlusal bar taken along line 6-6 of Fig. 3 looking in the direction of the arrows; and

Fig. 7 illustrates a fragmentary view of posterior portions of one side of the upper and lower dentures, from the buccal side with the dentures in occlusive relationship.

Referring now to the drawings, wherein like reference characters designate like or corresponding parts throughout the several views, there is shown a lower dental shell or plate 10, having mounted thereon some conventional frontal porcelain teeth such as indicated by the numeral 11 and metallic occlusal bars 12 and 13 substituting for a plurality of the usual posterior teeth on each side, respectively.

By way of introduction to the detailed description it is to be repeated that the invention is susceptible of being incorporated in either the upper denture, the lower denture, a partial denture, or bridgework, or the like. So far as the present disclosure is concerned it is simpler to assume that we are primarily concerned here with a lower complete denture, generally indicated at 14 as shown in Figs. 1 and 2, in conjunction with a standard opposed and complemental unaltered upper denture fragmentarily shown in Fig. 7.

The occlusal bars 12 and 13 are preferred to be constructed of a metal possessing strength, toughness, and inertness to mouth fluids. Some of such metals are commonly known as "stainless steels" and usually contain substantial proportions of chromium, nickel and/or cobalt, or the like. However, the invention is not limited to any particular metal or composition of metals, and additionally contemplates any non-metallic material suitable for the intended purpose and possessing the above characteristics.

The invention contemplates an occlusal bar sufficiently extensive to substitute for preferably a group of two, three or four posterior teeth in an artificial upper or lower denture, or the like. However, the invention is not limited to any such particular group, and may be used as a substitute for a single porcelain tooth if desired.

The occlusal bar 12 is provided with a plurality of adjacent inverted V-shaped blades 15, 16 and 17, extending longitudinally of said bar or mesio-distally. Said blades are laterally or buccolingually space related to each other.

Said occlusal bar 12 is longitudinally curved to conform to the curvature of an individual jaw. In many instances a longitudinal curvature of 20°, as indicated at 18, is adequate. Consequently said V-shaped blades follow the curvature of the occlusal bar 12. See Fig. 3.

The occlusal bar 12 is also concavely curved to provide a curved occlusal surface to conform to the curved plane established by the jaw of each individual. In many instances such curve of Spee having a measure of 20°, as indicated at 19, is adequate. Consequently said V-shaped blades follow said concave curvature of said occlusal bar 12.

The outer V-blades 14 and 16 are substantially of the same height, but the inner or intermediate blade 15 is lower or less in height, as indicated at 21, thereby forming a cradled or recessed occlusive surface to retain food therein during a food chewing operation.

Diagonal V-shaped grooves or sluices 22 and 23 are provided across the blade occluded surface of the bar 12 to provide for escape of food and juice during the masticating stroke. Said groove is preferred to be disposed at a skew angle of 30°, right hand forward, to

the longitudinal axis of the occlusal bar 12, though not limited thereto. Said grooves communicate with the channels 24 and 25 between the adjacent blades.

The forward end of the occlusal bar 12 is recessed as at 26 to receive an abutting tooth therein and there-against.

The rearward end of said occlusal bar is curved and closed by a skirt 27 to prevent food particles from lodging under said bar 12. Obviously, if the occlusal bar is to be inserted between two spaced porcelain teeth, then skirt 27 is to be omitted and this rearward end is to be recessed as provided above for the forward end as indicated at 26.

The lingual side of the bar 12 is provided with a depending skirt 28, and the buccal side with a relatively longer skirt 29. The under side of said bar, between said skirts, is hollow or recessed as at 31.

A groove 32 runs along the lower portion of buccal skirt 29, and continues across the rearward end skirt 27 as at 33, and thence along the lower portion of lingual skirt 28 as at 34. Said grooves function to anchor the occlusal bar 12 in the plate as by embedment therein.

The companion or right side occlusal bar 13 is similarly constructed, except that it is adapted for the right side jaw physical characteristics such as of longitudinal curvature, of interchangeable buccal and lingual skirt requirements, and of sluice groove angularity.

Obviously, occlusal bars 12 and 13 are cross-wise interchangeable if used in an upper denture, except for Spee curvature.

Fig. 7 illustrates a fragmentary view of posterior portions of one side of the upper and lower dentures, from the buccal side, with the dentures in occlusive relationship. It is to be noted that occlusal bar 13 coacts with the posterior teeth, such as indicated at 35, in the upper complementary denture 36.

Some characteristic features of this invention are the provision of an occlusive surface having a plurality of parallel and spaced longitudinal blades; an occlusive surface having a plurality of transversely spaced longitudinal blades, the central or intermediate blades being lower than the outside blades whereby to provide a recessed occlusive surface to cradle and retain food for a grating thereof during lateral movement of the lower jaw, and the provision of an occlusal surface having a plurality of spaced longitudinal blades coacting with conventional teeth in a complementary upper denture.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood, that within the scope of the appended claims, the invention may be practised otherwise than as specifically described.

What is claimed and desired to be protected by Letters Patent of the United States is:

1. An occlusal bar having an occlusal surface provided with at least three transversely spaced blade means extending longitudinally, the intermediate blade means being lower than the outer blade means whereby to cradle and retain food during a chewing operation.

2. An occlusal bar having an occlusal surface provided with a plurality of transversely spaced blade means extending longitudinally, the intermediate blade means being lower than the outer blade means to provide a recess being concave in cross-section to cradle and return food during a chewing operation.

3. A lower artificial denture having an occlusal tooth bar on the posterior portion thereof, said occlusal tooth bar provided with at least three transversely spaced blade means extending mesio-distally, the intermediate blade means being lower than the outer blade means whereby to cradle and retain food during a chewing operation.

4. The combination of a lower denture and an upper complementary denture, said lower denture having an occlusal tooth bar on the posterior portion thereof coactable with an opposed conventional tooth on said upper denture, said occlusal tooth bar provided with at least three bucco-lingually spaced blade means extending mesio-distally, the intermediate blade means being lower than the outer blade means whereby to cradle and retain food during a chewing operation.

5. In a denture, the combination of an artificial occlusal tooth bar coactable with an opposed conventional tooth, said occlusal tooth bar provided with a plurality of bucco-lingually spaced blade means extending mesio-distally, the intermediate blade means being lower than the outer blade means to provide a recess transversely concave in a buccal-lingual direction to cradle and retain food during a chewing operation.

References Cited in the file of this patent

UNITED STATES PATENTS

2,375,509	Wiechert	May 8, 1945
2,741,845	Appenrodt et al.	Apr. 17, 1956