Jan. 13, 1942. M. MYERSON 2,269,780

CARD FOR ARTIFICIAL TEETH

Filed Jan. 14, 1939

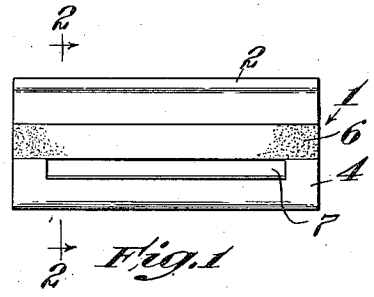


Fig. 1

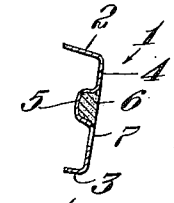


Fig. 2

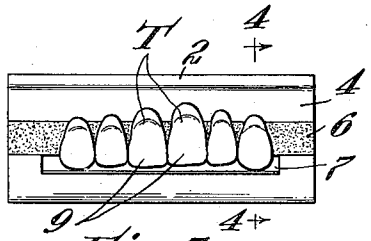


Fig. 3

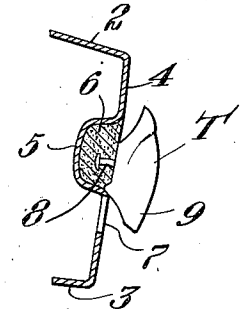


Fig. 4



Fig. 5

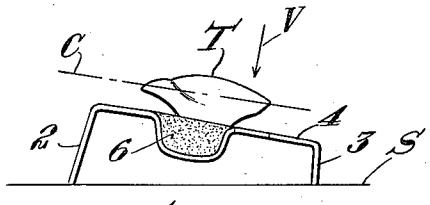


Fig. 7

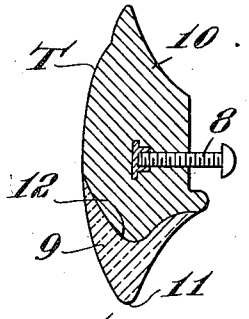


Fig. 6

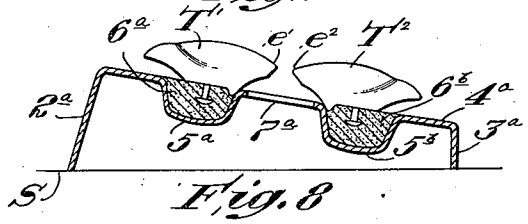


Fig. 8

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Patented Jan. 13, 1942 2,269,780

UNITED STATES PATENT OFFICE

2,269,780

CARD FOR ARTIFICIAL TEETH

Martin Myerson, Brookline, Mass.

Application January 14, 1939, Serial No. 250,881

5 Claims. (Cl. 206—83)

This invention pertains to cards for artificial teeth. While in its broader aspect the improved tooth card embodying the invention is useful for holding artificial teeth of any kind, it is of particular value and primarily intended for use in holding artificial teeth having translucent or transparent incisal portions, such as disclosed in the application for Letters Patent Serial No. 78,674, filed May 8, 1936, by Simon Myerson.

Customarily the manufacturer of artificial teeth mounts the teeth in properly matched sets upon supports or "cards" for transmission to the dental laboratory or dentist. These cards are usually of some stiff material, for example, sheet metal, having provision for holding a body of plastic material, for instance, wax, into which the projecting pins of the teeth are pressed, and which thus holds the teeth in proper relative position during transmission to the user, although permitting ready removal of the teeth from the card when desired.

In accordance with one usual practice, the card consists of a piece of sheet metal having downturned flanges of equal width at its front and rear edges which constitute supports. Between the supporting flanges the card has a depressed portion forming a recess or channel for the reception of the wax, the latter being smoothed off flush with the upper surface of the card proper. When the teeth are mounted on this type of card, the incisal portions of the teeth overlie the upper surface of the card proper, being located between the wax-receiving channel and one of the flanged edges of the body portion of the card. Since the supporting flanges are of equal height, the upper surface of the card is substantially horizontal.

As described in the aforesaid Myerson application, artificial teeth very nearly resembling natural teeth result from making the incisal portion of the tooth relatively transparent so that when the tooth is viewed against the dark background of the oral cavity such background acts to absorb light transmitted through the tooth and as a result the lower part of the artificial tooth appears relatively dark as compared with the upper portion, which is true of natural teeth. However, when such teeth are mounted upon a card of the usual type, the transparent incisal portion overlies the upper surface of the card and thus it is not easy for the dentist to gauge the degree of transparency or to determine the effect which will be produced when the tooth is actually in use.

A principal object of the present invention is to provide a tooth card for holding teeth having transparent incisal portions, whereby the dentist may readily test the degree of transparency, for example, by holding the card up to the light, or may determine the effect which the set of teeth will have in actual use by holding the card against a dark background, such as that actually afforded by the oral cavity.

A further object of the invention is to provide a tooth card designed to hold upper and lower teeth with their incisal edges juxtaposed as they are in use and so devised as when used to support teeth having transparent incisal portions; such portions of both the upper and lower teeth may simultaneously be examined by transmitted light.

A further object is to provide a card so constructed and arranged that when it is placed upon a support, for example, a table, workbench, or the like, the teeth carried by the card will be presented at such an angle to the normal line of vision as will best show their true characteristics and appearance.

Other and further advantages of the invention will be pointed out hereinafter by reference to the accompanying drawings, and in the further and more detailed description.

In the drawing,

Fig. 1 is a plan view of the improved tooth card embodying the present invention;

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

Fig. 3 is a view similar to Fig. 1 but showing a row of teeth mounted on the card;

Fig. 4 is a section on the line 4—4 of Fig. 3 but to larger scale;

Fig. 5 is an incisal view of an artificial tooth showing the attaching pins;

Fig. 6 is a vertical section, to large scale, illustrating a tooth having a transparent incisal portion;

Fig. 7 is a diagrammatic end elevation of the improved card showing it mounted upon a horizontal support and indicating the disposition of the teeth relatively to the normal line of vision; and

Fig. 8 is a section similar to that of Fig. 4, illustrating a modified form of card.

Referring to the drawing, the numeral 1 designates the improved card as a whole. This card is preferably made of some stiff sheet material, for example, sheet metal, such as brass, aluminum, or the like. Opposite margins of this piece of sheet material are bent so as to lie nearly at right angles to the body of the sheet to form the supporting flanges 2 and 3, whereby the

body portion 4 of the card is held elevated above the surface of a support S (Fig. 7) upon which the card may be placed. Intermediate its flanged edges the material of the card is depressed to form an elongate channel 5 extending substantially parallel to its flanged edges, this channel being designed to receive a body 6 of stiffly plastic material, for example, wax. This wax is leveled off so as to be flush with the upper surface of the body portion 4. Immediately below the lower or forward edge of the channel 5 the material of the body portion of the card is provided with an elongate recess or window 7. The teeth T are mounted upon the card by pressing their attaching pins 8 into the body of wax in the channel or recess 5, and when so disposed their gingival and incisal edges lie within the borders of the body portion of the card so that they are protected and not readily displaced, the incisal portions 9 overhanging the window 7.

The card herein described is primarily designed for use with teeth such as shown in Fig. 6. As shown in this figure, the incisal portion 9 of the tooth is of a transparent or translucent material, while the body portion 10 is of a relatively opaque material. The incisal portion terminates at the incisal edge 11, this edge being spaced a substantial distance, for example, one-sixth or more the entire depth of the tooth from the lower edge 12 of the opaque body portion.

When such a tooth is mounted upon the improved card herein described, with its incisal portion 9 overhanging the window 7, it is readily possible, by holding the card between the eye and a light source, to determine the exact degree of transparency of the incisal portion of the teeth without removing them from the card. On the other hand, if it be desired to determine the effect of the transparent incisal portions when in actual use, the card may be held against a dark background, for instance, it may actually be held against the background furnished by the oral cavity, and when so viewed the window 7 permits light to pass through the transparent incisal portions of the teeth to be absorbed by the dark background in substantially the same way as when the teeth are actually arranged within the mouth of the user.

As illustrated in Figs. 2 and 4, the flange 2 is substantially deeper than the flange 3, with the result that when the card is mounted upon a horizontal support S (Fig. 7) the body portion 4 of the card is inclined to the horizontal. The longitudinal axis C of a tooth mounted on the card is thus inclined to the horizontal, the relative heights of the flanges 2 and 3 being such that the longitudinal axis of the tooth so supported is approximately at right angles to the normal line of vision indicated by the arrow V of the observer who looks downwardly at the tooth card resting upon such support. The card thus devised normally presents the teeth mounted thereon in the best position for observation, so that the dentist at a glance and without guesswork may determine substantially the general effect of the teeth as they will appear when in use.

In Fig. 8 a modified construction is illustrated designed to support upper and lower teeth at the same time. In this arrangement the body portion 4^a of the card has the rear supporting flange 2^a and the front supporting flange 3^a. Between the flanged edges the body portion 4^a has a pair of elongate depressions 5^a and 5^b constituting parallel channels or recesses for the reception of bodies 6^a and 6^b, respectively, of a plastic tooth-retaining material. The upper teeth T^1 are anchored in the material 6^a, while the lower teeth T^2 are anchored in the material 6^b, the incisal edges e^1 and e^2 of the upper and lower teeth being juxtaposed. The depressions 5^a and 6^a are spaced apart a distance which should be at least equal to the sum of the depths of the incisal portions of the upper and lower teeth, and between these depressions the body portion 4^a is apertured as indicated at 7^a to form a window or windows over which the incisal portions of the upper and lower teeth project. With this arrangement the incisal portions of the teeth of both the upper and lower sets may be inspected against any desired background, either bright or dark, so that their shapes and degree of transparency may readily be observed.

While certain desirable embodiments of the invention have been illustrated by way of example, it is to be understood that the invention is not necessarily limited to these precise embodiments but is to be regarded as broadly inclusive of any and all equivalents and modifications such as fall within the terms of the appended claims.

I claim:

1. A card for artificial teeth which are designed to be used in a denture, said card comprising a body portion provided intermediate its upper and lower edges with a horizontally elongate body of plastic material operative detachably to secure a row of artificial teeth to the card and normally to hold them in relatively fixed position, said body of plastic material being so located and arranged that when the teeth are thus secured to the card the incisal edge portion of each tooth is spaced inwardly from the edge of the card with the incisal edge portions of the teeth extending beyond the body of plastic material and lying relatively close to the plane of the surface of the card, characterized in that the body portion of the card has an elongate light transmitting window within its borders and underlying the incisal portions of all of the teeth of the row, said window being uninterrupted from end to end and being of such character and so devised as to permit the passage of light therethrough for observing the incisal edge portions of teeth and thereby determining their translucency without disturbing the relative arrangement of the teeth or removing them from the card.

2. A card for artificial teeth comprising a body portion provided with supporting means adjacent to its front and rear edges and having a pair of substantially parallel recesses disposed inwardly of said respective edges, each recess being substantially filled with a tooth-retaining material operative removably to hold a row of teeth stationary relatively to the card and to each other, the retaining material in the two recesses being designed to support upper and lower teeth with their incisal edges disposed in juxtaposition, the recesses being spaced apart a distance substantially equalling the sum of the depths of the incisal portions of the upper and lower teeth, the body portion of the card being apertured between said recesses whereby the incisal portions of both upper and lower teeth may be viewed against any desired background.

3. A card designed for the shipment of matched artificial teeth intended for use in dentures, each such tooth having a rearwardly projecting anchoring element, said card having a horizontally elongate channel in its front face for the

reception of a body of tooth retaining substance designed to receive the anchoring elements of the teeth and thereby removably to attach the teeth to the card with their incisal edge portions located between the channel and an edge of the card and overlying the front face of the latter, the card having an elongate window substantially unobstructed from end to end and so located as to underlie the incisal edge portions of teeth mounted on the card, thereby permitting light to pass through the card whereby the incisal edge portions of the teeth may be observed to determine their transparency without removing the teeth from the card.

4. A card for artificial teeth which are intended for use in dentures and each of which is provided with a rearwardly directed attaching pin, said card being of the kind in which a piece of stiff sheet material has flanges at opposite edges constituting supports for a body portion, the latter having an elongate recess intermediate its flanged edges for the reception of a tooth-retaining substance designed removably to hold a row of teeth stationary relative to each other and to the support by engagement with their attaching pins, characterized in that the body portion of the card has an elongate window substantially parallel to and so located relative to the recess that the incisal portions of teeth mounted on the card overhang said window and may be viewed by transmitted light passing through the substance of the card.

5. A card for artificial teeth which are designed to be set into a denture and each of which has an attaching pin or pins projecting rearwardly therefrom, said card being of the kind in which a piece of stiff sheet material has flanges at opposite edges constituting supports for a body portion, the latter having an elongate recess intermediate its flanged edges for the reception of a substance operative removably to hold a row of teeth stationary relative to each other and to the card by engagement with said attaching pins, characterized in that one of the flanges is deeper than the other, whereby, when the card is disposed upon a horizontal support, the body portion is inclined to the horizontal thereby to present the teeth mounted thereon with their axes substantially perpendicular to the normal line of vision of the beholder, the card having a light-transmitting area so located as to lie immediately behind the incisal portions of teeth mounted upon the card, whereby the transparency of the incisal edge portions of the teeth may be observed against any desired background.

MARTIN MYERSON.