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J. H. MOYER ET AL

2,362,660

APPARATUS FOR CARDING ARTIFICIAL TEETH

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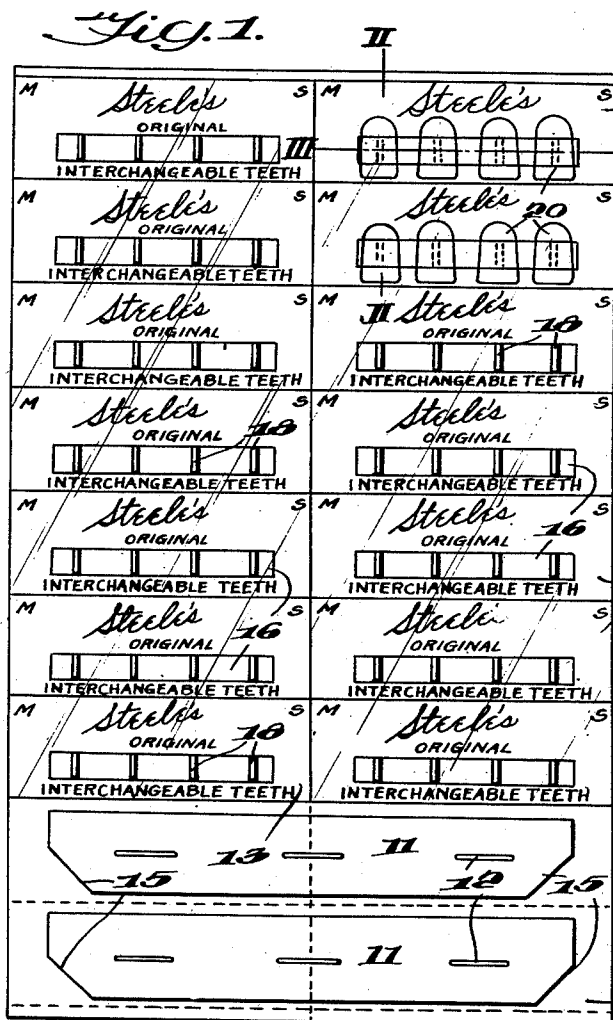


Fig. 2.

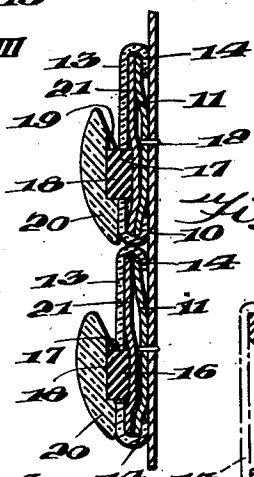


Fig. 5.

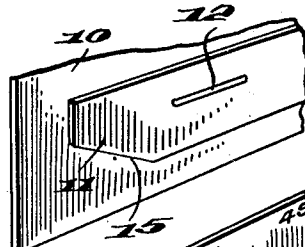


Fig. 6.

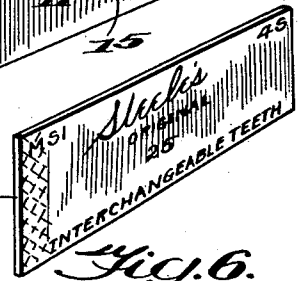


Fig. 3.

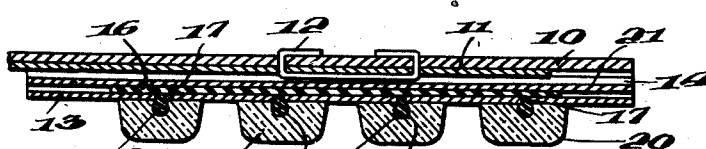
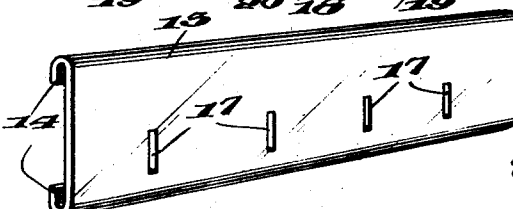


Fig. 4.



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APPARATUS FOR CARDING ARTIFICIAL
TEETH

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4 Claims. (Cl. 206—83)

This invention relates to apparatus for mounting, storing and displaying artificial teeth in an orderly, readily identified and compact manner.

It is an object of the invention to provide an improved tooth-mounting or carding means so constructed as to enable merchandisable stocks of such teeth to be mounted for individual removal on panels and wherein each panel, in turn, is removably carried by a single backing member, so that the teeth may be removed from the mounting individually or in small groups, by detaching one or more of the panels on which the teeth are carried from the associated backing member.

Another object of the present invention is to provide an improved tooth-carding device wherein the mounting panels, on which the artificial teeth are directly carried in sets or groups, have slidable supporting engagement with a backing member, the latter being provided with means for supporting a number of duplicative panels thereon and adapting such panels for individual removal from the backing member, the sliding connection between the panels and the backing member being such as to enable said panels to be grouped in relatively closely adjacent parallel order, thereby minimizing display space for a given number of teeth and yet affording ready and complete accessibility to each of the panel units and the teeth supported thereon for their convenient removal from the device.

Another object of the invention resides in the provision of a tooth-carding device of the character set forth wherein the backing member has its front surface provided with a plurality of closely positioned parallel guide devices, the latter being formed to support and slidably receive the tooth-mounting and retaining panels, so that said panels may be detachably mounted in closely grouped order on or in connection with said backing member.

A further object resides in the provision of an improved tooth-mounting panel for such tooth-carding devices, the panel being formed from transparent materials and having a substantially rectangular configuration, the upper and lower parallel edges of said panel being formed with internal flanges which are adapted for slidable attaching engagement with the corresponding edges of the guide devices carried by the backing member on which the panel is adapted to be positioned.

Still another object resides in the provision of a colored indicia-bearing card which is adapted

to be removably inserted in each of the transparent mounting panels, so that when the latter are arranged on a backing member in closely assembled order, said cards will impart to the entire carding device a distinctive coloration, whereby to impart a pleasing appearance to the device and, also, providing a key system of coloration by means of which those handling such carding devices may determine instantly and conveniently various facts pertaining to the teeth so mounted and displayed.

For a further understanding of the invention, reference is to be had to the following description and the accompanying drawing, wherein:

Fig. 1 is a front elevation of the improved tooth-carding device comprising the present invention;

Fig. 2 is a vertical transverse sectional view on an enlarged scale, the plane of the figure being indicated by the line II—II of Fig. 1;

Fig. 3 is a horizontal sectional view taken on the plane disclosed by the line III—III of Fig. 1;

Fig. 4 is a detail perspective view disclosing one of the tooth-mounting panels removed from the backing member;

Fig. 5 is a fragmentary perspective view of the backing member;

Fig. 6 is a similar view of one of the indicia cards;

Fig. 7 is a detail vertical sectional view taken through a modified form of backing member.

Referring more particularly to the drawing, the numeral 10 designates the backing member of our improved carding device. This member may be formed from a rectangular sheet of any suitable material possessing the desired rigidity and mechanical strength. In this connection, we have found cardboard to be entirely suitable, since it has the advantage of being economical and light in weight. However, other suitable materials may be employed. On the front or upper surface of the backing member, there is mounted a plurality of parallel guide strips 11. In the form of the invention illustrated, these guide strips are formed separately from the backing member and are firmly secured to the latter by means of metallic staples shown at 12. These staples are arranged in approximately the central portions of each of the strips so that the edges of the latter will not be directly connected with the backing member, enabling the edge portions of each of the strips to be flexed with respect to the backing member. In lieu of stapling the strips to said backing member, the same may be

stitched thereto or adhesively secured or, again, the strips may be an integral part of the backing member, as disclosed at 11a in Fig. 7.

The guide strips are employed to effect the support on said backing member of a plurality of tooth-mounting panels 13. These panels are each of rectangular configuration and are so connected with the strips 11 that the panels lie in close edge-abutting order, enabling a maximum number of said panels to be slidably mounted on a given backing. In our preferred construction, each of the panels 13 is formed from a transparent non-fracturing material such, for example, plastics of the cellulose acetate, cellulose nitrate, acrylate, phenol-formaldehyde types may be used. These plastics present smooth, transparent glazed bodies which do not readily break or fracture and add to the attractiveness of the carding device generally.

Each of these panels has its upper and lower longitudinal edges formed with inwardly turned flanges 14 which constitute guides for the reception of the flexible edges of the guide strips 11. These strips are approximately the same width as the guides formed by the flanges 14 so that the operating positions of the panels on the backing member are retained by the friction between the slidable parts and are held against removal except by positive sliding movement of the panels in a plane parallel with that of the backing member. Preferably, the strips 11 are chamfered at each end, as indicated at 15, so that convenience is obtained in the matter of inserting the panels over the guide strips so as to cause the flanges 14 to embrace the edges of the guide strips. The panels are inserted on the guide strips by a sliding movement, the chamfered edges of the strip being inserted in the open ends of the guides formed by the flanges 14 and the panels then moved inwardly and longitudinally along the guide strips until desired operating or display positions have been reached. Similar facility is obtained in the removing of any one or more of the panels from their operating positions.

To mount artificial teeth in connection with the panels, each panel has its inner or back face provided preferably with a ribbon 16 composed of a relatively soft compressible non-metallic material such as soft rubber, fiber or the like, such materials having been disclosed in the prior patents of David E. Evans, one of the joint applicants herein, Nos. 1,857,713 and 2,111,095, granted respectively May 10, 1932, and March 15, 1938. However, rigid lugs of the type disclosed in the J. H. Moyer patent, No. 1,721,526 of July 23, 1929, may be used. Each panel has the wall thereof provided with a plurality of longitudinally spaced vertical slots 17 and adapted to pass through and project beyond these slots are tooth-mounting lugs 18 which comprise integral portions of the ribbon or ribbons 16.

In cross section, the lugs 18 are so formed as to slightly exceed the diameter of slots 19 provided in the artificial teeth indicated at 20, so that when the teeth are slidably inserted on the lugs, the latter are somewhat compressed and frictionally engage the walls of the slots 19 to firmly and positively hold the teeth in their applied positions on the lugs. Each tooth may be individually removed whenever desired from any one of said lugs, or the teeth may be removed in sets by withdrawing the panel or panels on which they are mounted from engagement with the backing member.

It will be noted that the front walls or sur-

faces of the panel units are smooth and uninterrupted, all parts thereof lying in the same plane, so that the teeth may be readily advanced without obstruction over the glaze-like surfaces of the panels into engagement with the compressible lugs. Since the ribbons 16 are mounted on the under sides of the mounting panels, it will be observed that the only projections provided by our improved carding device are those formed by the lugs 18. Otherwise, the other surfaces of the carding device are smooth, flat and unbroken.

To impart an improved appearance to our carding device and to produce a colored background desirably contrasting with the natural coloration of the teeth mounted on the device in addition to providing a key system of tooth identification, each of the mounting panels is formed to receive a removable card 21 of selected coloration, for instance, red, blue, green or the like. Each card is of approximately the same size as the panel unit in which it is inserted, so that its edges will be positioned in the guides formed by the flanges 14. Since the mounting panels are formed of a transparent material, the color of the cards is readily viewable there-through.

An important use for this system of key coloration is that of indicating the different grades or lines of teeth offered by a particular manufacturer. Another use of the color system is that of permitting ready identification of quantities of the teeth arranged in various assortments, particularly when the price of one assortment differs from that of other assortments.

Heretofore, the dealer has stored such teeth in tiers of drawers wherein certain groups of drawers contained one brand of teeth and another group of drawers contained another brand or line of teeth. Color distinction did not enter into the differentiation of these different brands or lines, and it was common to find the same color of card mount used throughout all brands. Of course, such drawers usually carried labels of some kind to indicate the brands of teeth they contained and yet confusion in filing was quite common. The color-key system herein provided offers valuable assistance to a tooth-counter clerk in quickly identifying the grades when the drawers are removed from their cabinets and in promiscuous arrangement on the tooth-counter. A matching color guide may be attached to the interior of the respective drawers, enabling their contents to be identified without the necessity of reading outside labels. Also, in displaying teeth to a customer, the set or group card mount is frequently removed from the drawer, as distinguished from removing the drawer from the cabinet. Our color key system would greatly facilitate the proper return of unpurchased teeth to stock.

Another use for our color key system has to do with the number of teeth of a specific grade that are arranged in an assortment and sell for a different standard price. For example, assortments may be arranged that sell for \$50.00, \$100.00, \$250.00, etc. The selection of the teeth in the assortment would include molds and shades that have been selected from experience based on sales and would represent the most usable and popular arrangement for the consumer. In the main, such assortments would be standardized as to number, molds and shades of teeth, and as to price. The color-key selected for each assortment would indicate at a glance all of the above information.

In carrying this color scheme into practice, the color red could be used to indicate the "New hue brand of facings." In assortments, the color red can be used as the basic background and stripes or borders of increasing number or width may be employed to identify the particular value of the assortment.

As a modification, the red colored indicia cards may be imprinted with a number to indicate the price of the assortment. For instance, the indicia cards used in a \$25.00 assortment could be imprinted with the number "25." Similar numbers could be used for assortments of other values.

When it is considered that the average tooth dealer carries a number of lines or grades of different artificial teeth, selling in various combinations and for various prices, the quick and ready identification of any one of such brands or lines as afforded by our improved color-key system will be readily appreciated. Such assortments of teeth are commonly sold to the dentist or to the dental laboratory by the dealer or, in some instances, by the manufacturer. The color-key, as applied to assortments, not only has certain advantages in identifying the particular assortment for the initial sale but it has additional advantages to the salesman when making subsequent sales. Under such conditions, the salesman could readily identify the particular assortment the customer had previously purchased.

It will be understood that the basic color combination of the indicia cards and/or the panels may be carried out in respect to the backing member.

While similar results may be obtained by forming the panels from a colored plastic material and printing data thereon, we have found the latter method not to be as satisfactory, economical and convenient. Therefore, in the present invention, we use, preferably, transparent materials in the fabrication of the panels and in combination therewith the colored indicia-bearing cards.

The lightweight materials from which the backing member may be formed enables the latter to be readily removed with the teeth carried thereby from the tooth stock drawer. Heretofore, aluminum backing members have been employed, and it has been the common practice to attach them to the drawer by some means, such as small brads. With this practice, it was impossible to remove the backing members carrying the plurality of panels. In the present invention, the entire drawer may be removed from its cabinet, if desired, or one may remove the backing members carrying the plurality of panels, leaving the drawer in the cabinet. Also, it is possible to remove one or more of the individual panels from a given backing member.

While we have described certain preferred forms of our present invention, nevertheless it will be understood that the same are subject to further variation and modification without departing necessarily from the scope and spirit of the following claims.

What we claim is:

1. A device for carding interchangeable artificial teeth comprising a backing member, guide strips positioned in spaced parallel order on the front surface of said backing member, said strips having longitudinal edges adapted to be spaced

from the front surface of said backing member, a plurality of substantially rectangular mounting panels formed from a substantially transparent material, each of said panels having its longitudinal edges formed with rearwardly and inwardly directed flanges forming channels which are slidably receivable on the longitudinal edges of the guide strips, a ribbon of a soft yieldable material extending longitudinally of each of said panels in engagement with the under surface thereof, said ribbon having a plurality of lugs integrally formed therewith, said lugs projecting through and beyond vertical slots formed in each of said panels to provide supports for the removable reception of artificial teeth, and a colored indicia-bearing card having its edges slidably and removably positioned in the channels of each of said panels, said card being disposed in front of said guide strips and to the rear of said ribbon.

2. A device for carding artificial teeth comprising a rectangular backing member, parallel, longitudinally extending, panel-guiding and supporting strips applied to the front face of said backing member, a plurality of transparent tooth mounting panels supported on each strip in end-to-end abutting relation, the upper and lower edges of each of said panels being formed with in-turned flanges adapted for sliding engagement with the longitudinal edges of said strips, the spacing of said strips being such as to maintain the panels positioned thereon in relatively close edge to edge order, spaced tooth supports projecting from the front face of each of said panels, and a colored indicia bearing card slidably and removably positioned in each of said panels, said card conforming to the full length and width dimensions of the panel in which it is inserted.

3. Apparatus for carding artificial teeth comprising a backing member, a plurality of parallel guide strips having free longitudinal edges disposed at spaced intervals on said backing member, a plurality of transparent tooth-receiving panels having their longitudinal edges formed with inturned ribs adapted for sliding engagement with the edges of said strips, tooth supports projecting outwardly in a longitudinal row from the front face of each of said panels for the detachable reception of artificial teeth, and an indicia card removably positioned in engagement with the inner surface of each of said panels to substantially completely cover the full area of the engaged surface.

4. Means for carding artificial teeth comprising a plurality of backing members, a series of parallel guide strips provided on each backing member, a series of rectangular, tooth-mounting panels formed of transparent material and having at their side edges inturned flanges adapted for sliding engagement with the edges of said strips, lug means projecting outwardly from the front face of said panels for the detachable reception of artificial teeth, and a colored indicia card removably positioned in engagement with the under surface of each of said panels, the color of the cards on different backing members being different, and serving to identify the character of the teeth mounted on each backing member.

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