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J. F. GIBSON

DISPLAY TRAY FOR ARTIFICIAL TEETH AND OTHER OBJECTS

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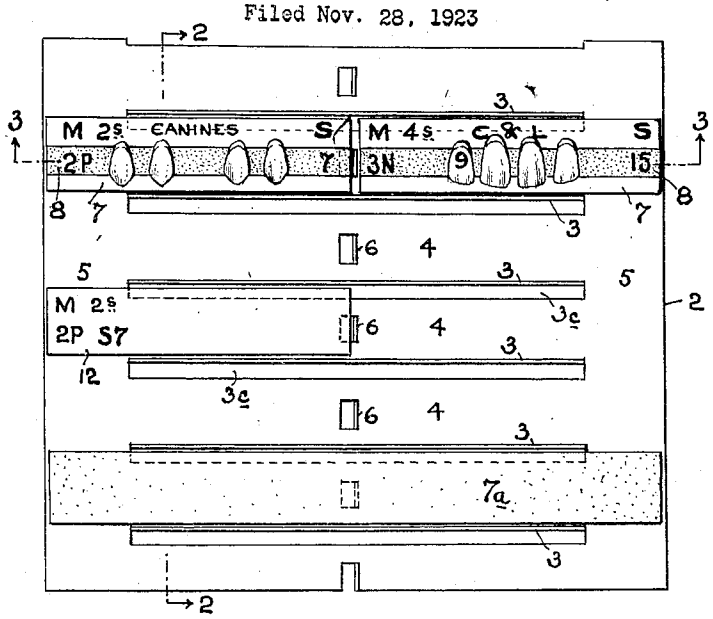

FIG. 1

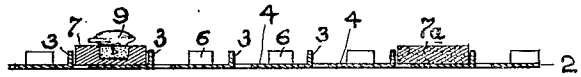

FIG. 2

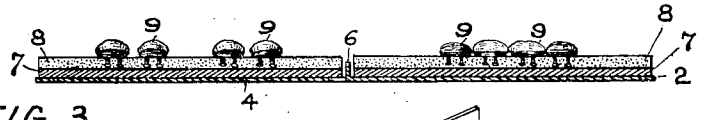

FIG. 3

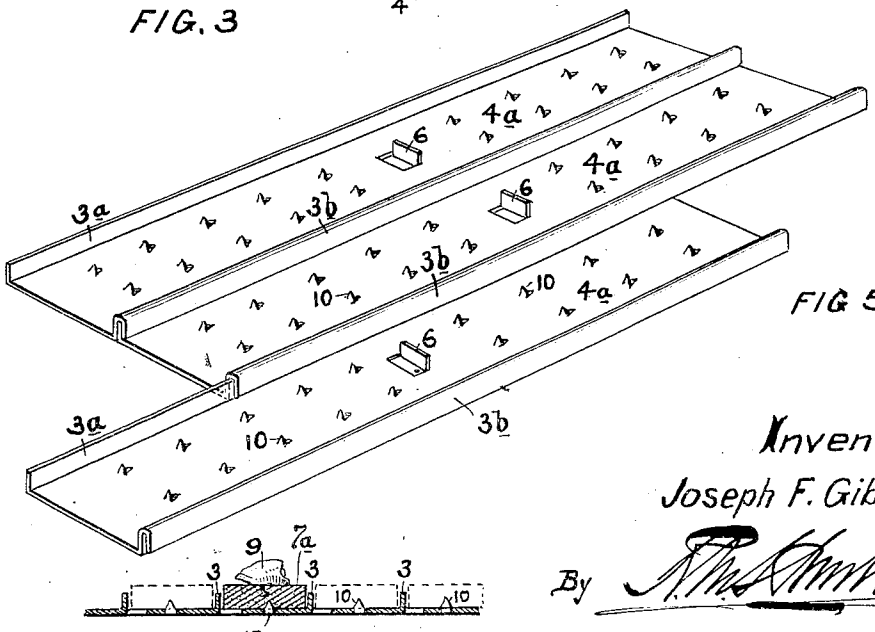

FIG 5

FIG. 4

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UNITED STATES PATENT OFFICE.

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DISPLAY TRAY FOR ARTIFICIAL TEETH AND OTHER OBJECTS.

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My invention has for its object the provision of simple and inexpensive means, more particularly for use by dentists, whereby their stock of artificial teeth may be suitably assembled for convenient examination and selection.

Ordinarily, artificial teeth, as sold by the manufacturers, are mounted upon wax bars, or bars formed of grooved wooden or metal strips having wax beds to which the teeth are immediately attached, the said bars each containing a number of teeth and also having indicia thereon for, among other things, designating the mold number adopted by the manufacturer as a means of identifying the type and general size of the teeth when renewing purchasing orders and for determining from prepared tables the dimensional characteristics of the teeth. While these bars are conveniently arranged for display of the teeth associated with such indicia, as for their type, size and shade, it is desirable to suitably support the bars whereby they normally retain their relative positions, are easily removed and replaced or substituted by new bars of teeth when the teeth they carry are removed, and which support may further constitute, if desired, a convenient tray for supporting a large number of such bars when carrying them from the cabinet to a place of better light for examination. My invention is, therefore, more specifically related to the construction of a tray or support suitable for this purpose and preferably embodying capacity of being readily changed as to length, whereby it may be adapted to cabinet drawers of different lengths.

With the above and other objects in view, the nature of which will be more fully understood from the description hereinafter, the invention consists in the novel construction of display tray for artificial teeth and other objects, as hereafter more fully described and defined in the claims.

Referring to the drawings: Fig. 1 is a plan view of a cabinet tray for artificial teeth showing some of the teeth supporting bars in position; Fig. 2 is a transverse section of the same taken on line 2—2; Fig. 3 is also a transverse section of the same on line 3—3; Fig. 4 is a sectional view corresponding to a portion of Fig. 2, but showing a modification of my invention; and Fig. 5 is a perspective view of a tray embodying the essential features of my invention, but having a sectional construction by way of modification.

Referring to my preferred construction, as embodied in Figs. 1, 2 and 3, the tray is formed of a sheet 2 of aluminum or other suitable material of general rectangular form and having its length divided into a plurality of channel like parts 4 by stamping up or otherwise forming parallel ribs or flanges 3, preferably at right angles to the plane of the sheet. These ribs being pressed up from the sheet itself will leave slotted openings 3^c therein, but these are narrow and do not impair the floor area 4 for receiving and supporting the teeth carrying bars 7. The length of the ribs 3 is less than the width of the sheet 2, so as to provide continuous side portions 5, 5, lengthwise of the sheet and at right angles to the portions 3 and 4. It is preferable that the tray shall have a width sufficient to support two of the short bars 7 in alinement or one of the long bars 7^a; and for definitely positioning the bars from shifting in the direction of the length of the ribs 3 and floors 4, I stamp up from the floor portions at the middle thereof other ribs or flanges 6, but these are at right angles to the flanges 3 and instead of being parallel, have their lengths in alinement so as to take up very little space in the width of the sheet. These ribs 6 are preferably of the same height as the ribs 3 and constitute abutments against which the teeth carrying bars 7 abut when in position, as shown in Figs. 1 and 3. The more important function of the abutments in connection with the bars 7 is to prevent the block at one side of the abutment being accidentally shifted along the channel to a position at the other side of the abutment, because in the use of this tray, it is usual to employ a card, such as 12 (Fig. 1), under each of the blocks and upon which is noted the mold and shade indicia, quantity of teeth of this kind sold between certain dates, also dates of renewal of orders for similar teeth, and should the block become thus shifted, it is possible that the clerk in ordering renewals might be confused into ordering the wrong teeth. The abutments, there-

fore, not only prevent shifting of the blocks unintentionally, but also avoid accidental shifting of the cards.

The transverse channel like portions 4 have a width between the ribs 3, 3, slightly larger than the width of the blocks 7, so as to snugly receive them; and the height of the ribs is preferably somewhat less than the thickness of the blocks, so as to form no projections above them and further to reduce the slotted openings 3^c to a minimum. It is manifest that the rib like portions 3 may be divided so as to leave an additional continuous part, corresponding with the side portions 5, at the middle, it being only necessary to have these ribs long enough to act as guides for the bars 7 and I do not limit myself in this respect.

The teeth carrying blocks 7 are usually of wood with a longitudinal groove along one face, said groove being filled with wax 8 and into which the pins of the teeth are embedded when attaching them to the block. The block is also marked with the indicia hereinbefore mentioned, usually printed thereon, and may be of any characters or markings desired. As shown, by way of example, the symbols M, 2P, at one end of the block, mean the type and size of the teeth; the symbol S7, at the other end of the block, means the shade of the teeth, and the remaining symbol 2^s: means that the block contains one or more sets of twos, that is right and left canines, for example. These symbols or indicia will vary to suit the different types, sizes and shades of the teeth carried by the blocks, two examples of which are shown, one for canines and the other for centrals and laterals. In place of the wooden blocks, they may be of sheet metal filled with wax or may be wholly of wax, as shown at 7^a, in Figs. 1 and 4. The blocks may be of the full width of the tray, as indicated at 7^a in Fig. 1, and where the bar is of wax, it may be pressed down upon the upwardly extending flange 6 and, in this manner, secure attachment against accidental displacement. This attachment may be increased by having points 10 struck from the floor 4, upon which the wax may be pressed as shown in Fig. 4. The teeth have been omitted from the wax block 7^a in Fig. 1, as is also the indicia.

In the manufacture of my improved tray, the same is made in long lengths by passing the sheet between suitable dies and thereafter the long sheet is cut transversely into the shorter lengths desired. These shorter sheets may be further shortened by the dentist to fit it to the cabinet drawer. This is conveniently done by cutting through the continuous side portions 5 by a pair of scissors, the severance being made into the slotted portions 3^c, as indicated at top of Fig. 1. The severance may, however, be at any place desired, as I do not restrict myself in this respect. By making the sheet thin and of a ductile metal, it may be trimmed or cut with an ordinary pair of scissors.

In place of punching the ribs out of slotted portions 3^c, it is evident that ribs may be forced upward out of the metal of the sheet without making any perforation, following the well known drawing processes which stretches the metal without rupturing it. Furthermore, the tray may be made of celluloid or other pyroxylin compound, or of any other sheet material capable of being formed in the tray structure embodying my improvements.

It will be understood that where it is desired to employ long teeth holding bars, as indicated at 7^a, the abutment flange 6 may be bent down flat with the floor portion 4 so as to permit the insertion of the block, especially where the block is of wood. In the case where the long block is of wax, the abutment flange may be bent down or not, as preferred.

In place of making the tray of one integral sheet, as in Fig. 1, it may be made of interengaging sections, as in Fig. 5. In this case, each of the sections is a long strip 4^a having one edge flanged upward as at 3^a and the other edge formed with a grooved flange 3^b with the groove opening downward or toward the back, the flange 3^a of one section engaging the groove in the flange 3^b of the next adjacent section. In Fig. 5, two sections are shown properly connected and a third section is being adjusted into position. These sections are also provided with the abutment flanges 6 and may, if desired, also have upwardly extending projecting points 10, as in Fig. 4, which may be employed to hold bars of wax to the sections. If wooden bars are used, these points 10 may be flattened down. I have shown many of such points, but it would suffice to have only one point near each end, if the flange 6 is embedded in the wax bar. I, however, do not restrict myself in these details.

By employing the sectional construction shown in Fig. 5, the tray may be made of any length desired by the mere addition of sections; and while the interlocking flanges permits simultaneous disengagement along the whole length, these flanges may be of any known construction which require a longitudinal sliding movement to insure interengagement, in which case they cannot become accidentally disconnected.

As the teeth, per se, form no part of my invention but may be considered as the objects to be displayed, it is to be understood that when I refer to artificial teeth either in the specification or claims, I include all other objects which may be similarly displayed by use of my invention, and hence

refer to artificial teeth by way of example and not as a restriction.

It will now be apparent that I have devised a novel and useful construction which embodies the features of advantage enumerated as desirable, and while I have in the present instance shown and described the preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that I do not restrict myself to the details, as the same are susceptible of modification in various particulars without departing from the spirit or scope of the invention.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A display tray for artificial teeth, consisting of a sheet of metal having a general rectangular surface made with a plurality of narrow transverse parallel ribs stamped upwardly on edge from the surface of the sheet and having a vertical height of less than one-half the width of the space between adjacent ribs and a length less than the width of the tray to provide continuous surfaces thereon beyond the ribs, and whereby shallow channels are provided with wide bottoms and in which said bottoms are provided centrally of their length with upwardly extending abutments stamped from the metal of the bottom of the channels and each having a width considerably less than the width of the bottom from which it is stamped, combined with detachable blocks of a width and length to fit between the adjacent ribs and extend from the central abutment to approximately the side of the tray beyond the ribs, said blocks having means for detachably supporting artificial teeth.

2. The invention according to claim 1, wherein further, the abutments arranged in the channels and stamped from the sheet being pliable to provide flanges whose lengths are in alinement but at right angles to and independent of the parallel ribs, and adapted to be bent down when it is desired to support a block for carrying teeth which is of greater length than one half the width of the tray.

3. A display tray for artificial teeth, formed of sheet metal of general rectangular shape provided with a plurality of parallel shallow ribs extending upwardly from the surface of the sheet to form a plurality of transversely associated shallow channels open at their ends, and upwardly projecting abutments extending from the bottom of the channels midway of their length, and wherein further, the bottom of each of the channel portions is also provided with shallow upwardly extending pointed projections, part of which are arranged at each side of the abutment projection.

4. A display tray for artificial teeth, consisting of a sheet structure having a general rectangular surface, provided with a plurality of continuous parallel surfaces arranged lengthwise of the tray from top to bottom and separated by a plurality of interposed transversely arranged parallel ribs forming shallow channels at right angles to said continuous surfaces and open at their ends, and a plurality of teeth carrying blocks detachably arranged in the channels and extending over the continuous surfaces.

5. A display device for artificial teeth consisting of a thin sheet metal structure having parallel ribs forming between them a shallow channel open at the ends, the bottom of which is provided with upwardly projecting parts of less height than the parallel ribs, combined with artificial teeth carrying means having a wax body into which the pins of the teeth are embedded, said teeth carrying means detachably positioned within the channel and in contact with the upward projecting parts thereof.

In testimony of which invention, I hereunto set my hand.

JOSEPH F. GIBSON.