Oct. 10, 1972 J. S. MARTINEZ 3,697,363

PANEL ASSEMBLY FOR FURNITURE CONSTRUCTION

Filed Nov. 2, 1970

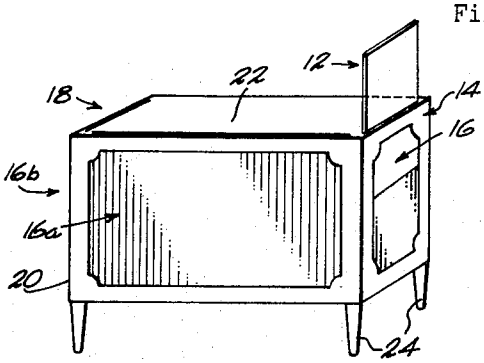


Fig. 1

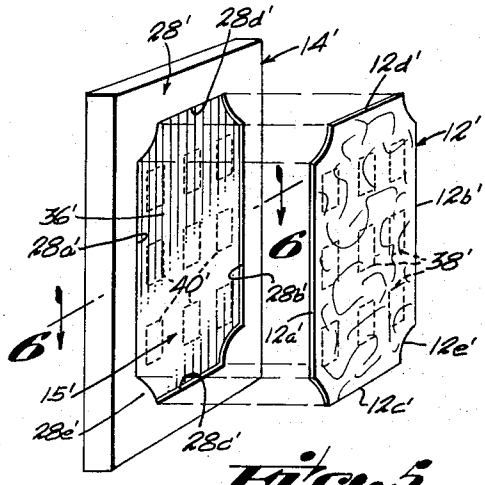


Fig. 5

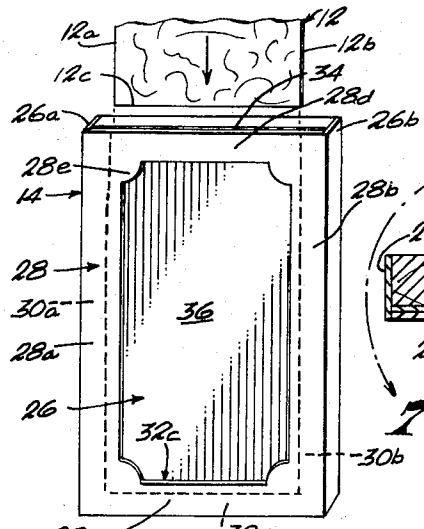


Fig. 2

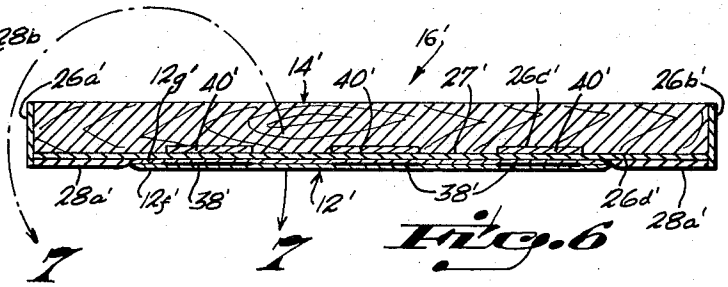


Fig. 6

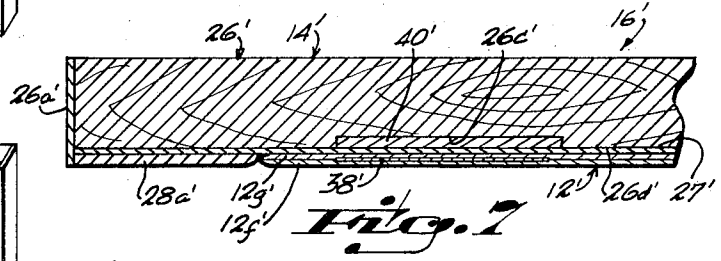


Fig. 7

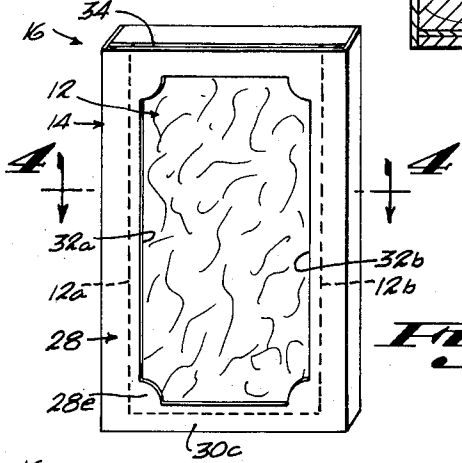


Fig. 3

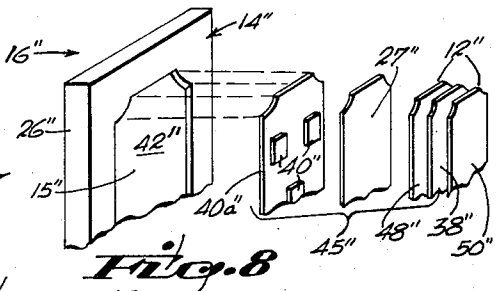
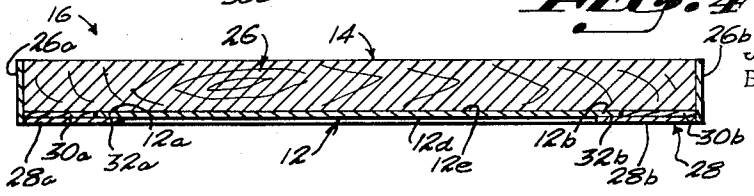


Fig. 8

Fig. 4



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PANEL ASSEMBLY FOR FURNITURE CONSTRUCTION

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ABSTRACT OF THE DISCLOSURE

A single panel assembly of the invention may be embodied in a furniture piece, a counter top or other planar wall or construction element. The panel assembly includes a base panel and at least one thin broad decorative display panel adapted for selective use with the base panel. The display panel is adapted for quick attachment and detachment flatwise over the base panel; sliding display panel means or magnetic attraction means are provided for ready removal and replacement of a display panel on a base panel for changing the color pattern of decorative design of a furniture piece, counter top fixture or the like.

BACKGROUND OF THE INVENTION

Field of the invention

The invention relates to ornamental or decorative panel means adapted for use in construction of furniture cabinets, counter tops or the like and particularly to such structure having selectively changeable decorative panel surfaces.

Description of the prior art

In the past, the furniture designer or home decorator has been limited generally to substantially only a single color combination or decorative pattern for a furniture piece or a suite of furniture. In marketing furniture, a potential customer may be interested in a suite of furniture or the like but may not be inclined to purchase because the color or embellishment features of the furniture may not compliment the existing decor or color scheme of a room that is intended to house the furniture. Also, in domestic or commercial room furnishings, and particularly in the furnishing of hotels or the like, there exists the problem in providing a pleasing variety of color schemes; this is particularly so in the furnishing of a hotel installation or the like having a number of rooms or accommodations of like floor plan and wall configuration. A similar problem exists in providing variety to stationary kitchen cabinet structure, countertop structure or the like.

SUMMARY OF THE INVENTION

The instant invention provides a panel assembly of mechanically simple design and an assembly which may readily be incorporated in the construction of furniture, cabinet structure or the like. The color or color pattern of the furniture or cabinet structure may be quickly and easily changed by changing a series of display panels in the furniture or the like and in presenting a different decorative surface for viewing. The changeable display panel structure of the invention is particularly useful in providing variety in furnishing a series of hotel rooms or the like and in providing color or decoration complementing the existing color scheme or decoration of a room. The invention is of particular significance in promoting furniture sales; the decorative color or appearance of a suite of furniture may be quickly changed to provide a prospective purchaser with several color schemes or decorations to consider. The decorative display panels of a furniture piece or the like may be quickly and easily changed without the use of hand tools or the like. The panel assembly construction of the instant invention is of substantially simple design admitting of economical manufacture and marketing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of one form of the panel assembly of the instant invention, illustrated in the embodiment of a cabinet-like furniture piece;

FIG. 2 is a perspective view of a panel assembly of the invention, taken as from the right of FIG. 1, illustrating the assembly removed from the cabinet structure and with the display panel and base panel being in disassembled relation;

FIG. 3 is a view similar to FIG. 2 but illustrating the display panel and base panel in an assembled in-use disposition;

FIG. 4 is a sectional view taken as on the line **4—4** of FIG. 3;

FIG. 5 is a perspective view, illustrating another embodiment of the panel assembly of the invention, illustrating the display panel in a disposition displaced from the base panel of the assembly;

FIG. 6 is a sectional view taken as on the line **6—6** of FIG. 5 but illustrating the display panel and base panel means of the invention in assembled relation;

FIG. 7 is an enlarged sectional view of the area demarcated by line **7—7** of FIG. 6; and

FIG. 8 is a perspective exploded view of a second alternative embodiment of the invention, as is explained more fully hereinafter.

DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. 1–4 illustrate an embodiment of the invention including a display panel **12** slidably received in a base panel **14**. The panel assembly is indicated generally by numeral **16** and is adapted to be incorporated in the construction of a piece of furniture, a countertop or the like. By way of example, the panel assembly of the invention is illustrated in FIG. 1 embodied in a cabinet construction **18**; the cabinet construction includes enclosure structure **20** including panel assemblies **16**, **16*a***, **16*b*** and top structure **22**, and leg means **24** elevatingly supporting the cabinet enclosure structure. Since each of the assemblies **16**, **16*a***, **16*b*** are of like construction, the following description of panel assembly **16** will suffice also as description of panel assemblies **16*a*** and **16*b***, and as description of the panel assembly embodiments of FIGS. 1–4.

The base panel **14** of the assembly **16** includes a broad thick rectangular body **26** of panelboard configuration and a thin rectangular border **28** laminatingly secured on the outer face surface of the panelboard body **26** (see FIGS. 2 and 4). The border preferably includes rectangular border face structure **28*a***, **28*b***, **28*c***, **28*d*** integrally formed, and includes generally U-configured thin spacer strip structure **30*a***, **30*b***, **30*c*** interposedly laminatingly secured between respectively the thin border portions **28*a***, **28*b***, **28*c*** and the panelboard body **26**. The thin spacer structure **30*a***, **30*b***, **30*c*** is narrower respectively than the border face areas **28*a***, **28*b***, **28*c*** and the combined border structure defines parallel extending opposingly arranged grooveways **32*a***, **32*b*** adapted to guidingly engage respectively the opposite edge margins **12*a*** and **12*b*** of the display panel.

The upper horizontal portion **28*d*** of the thin rectangular border face structure is spaced from the upper face surface of the panelboard body **26** and defines an access slot **34** for receiving the display panel **12** (see FIGS. 2 and 3). The display panel is adapted to be inserted

through the access slot 34 (FIG. 2) and to a disposition covering the field area 36 of the panelboard body 26 of the base panel. The field area 36 is formed substantially by the major portion of the panelboard body and within the rectangular edge margin defined by the border face portions 28*a*, 28*b*, 28*c*, 28*d*. The lower horizontal portion 28*c* of the border face structure, in conjunction with the lower horizontal portion 30*c* of the thin U-configured spacer strip structure 30*a*, 30*b*, 30*c*, defines an abutment slot 32*c* adapted to abuttingly receive the leading edge margin 12*c* of the display panel as it is inserted through the access slot 34 and to a disposition superposed over the base panel field area 36. As a decorative feature, corner fillet portions 28*e* preferably are formed at the intersections respectively of the thin border face structure 28*a*, 28*b*, 28*c*, 28*d*; also, thin veneer strips 26*a'* and 26*b'* secured parallel and on opposite edge margins of the panelboard body 26 for enhancing the appearance of the panel assembly.

The opposite face surfaces 12*d* and 12*e* of the display panel preferably are surfaced with a color or decorative pattern of different appearance. A user of the panel assembly 16 may thus assemble the display panel and base panel with a selected surface 12*d* or 12*e* of the display panel facing outwardly for viewing. A user has only to select a face surface 12*d* or 12*e* of the display panel and insert the panel through the access slot 34 with the selected face surface facing outwardly of the base panel, arranging the face surface at a disposition covering the field area 36 of the base panel structure.

It may be desirable in certain embodiments of the invention to provide several display panels for a single base panel, for providing a larger selection of display face surfaces (12*d* and 12*e*) for the panel assembly of the cabinet construction. Also, it may be desirable in certain uses of the panel assembly to utilize only the base panel 14 without the display panel 12. If desired, the front face of the field area 36 of the base panel 14 may be polished or finished with a color or coating. The surfaced or finished field area 36 of the base panel may then provide a base color scheme or pattern configuration for a furniture piece, cabinet construction or the like.

A second embodiment of the panel assembly, designated 16', is shown in FIGS. 5–7, and includes a display panel insert 12' adapted to be removably fitted in a broad recess 15' formed in the base panel 14'. The base panel preferably includes a panelboard body 26', covered on its front face with a veneer layer 27', and veneer strips 26*a'* and 26*b'*, secured parellel and an opposite edge margins of the panelboard body structure. A thin flat rectangular border 28' is flatwise superposed over the panelboard body 26' and is preferably secured to the face surface of the veneer layer 27' of the base panel structure.

The circumferential external edge configuration of the display panel 12' is of proportion corresponding to the internal edge configuration of the border structure 28' of the base panel; the external edge margins 12*a'*, 12*b'*, 12*c'*, 12*d'* are arranged respectively in close continuity to the internal edge margins 28*a'*, 28*b'*, 28*c'*, 28*d'* of the base panel border structure when the display panel insert is received in the broad recess 15' of the base panel structure. Scallop surfaces 12*e'* at the respective corner portions of the display panel 12' and corner fillet portions 28*e'* of the base panel border structure preferably are provided for enhancing the appearance of the panel assembly when the base and display panels are in flatwise engaged assembled relation.

Magnetic attraction means preferably is provided for detachably securing the display panel insert 12' in assembled relation with the base panel 14'. A plurality of magnetic sheet elements 38' preferably are embedded in the display panel structure and coact with corresponding magnetic sheet elements 40' supported on the base panel structure. The magnetic sheet elements 38' are of like design and are preferably laminatingly secured between an obverse sheet 12*f'* and a reverse sheet 12*g'* of the display panel 12'. The obverse and reverse sheets 12*f'* and 12*g'* are of nonmagnetic character and may optionally be formed of wood, plastic or other non-magnetic sheet stock material. The plurality of magnetic sheet elements 38' are laminatingly concealed between the obverse and reverse sheet portions 12*f'* and 12*g'* and are formed respectively of metal material attractive to magnetic attraction forces of the magnetic sheet means 40' of the base panel structure.

The plurality of magnetic sheet elements 40' are of permanent magnet character and preferably are received in recesses 26*c'* formed respectively in the forward surface 26*d'* of the base panel body structure 26'. The veneer layer 27' of the panelboard body 26' preferably is flatwise disposed respectively over the plurality of magnetic sheet elements 40'; the veneer layer 27' provides two-fold function, namely, in providing a decorative field area 36' within the border structure 28' of the display panel and provides retainer means laminatingly securing the plurality of sheet elements 40' in the base panel body structure 26'.

The magnetic sheet elements 38' and 40' are correspondingly arranged respectively in the display panel and base panel structure and define a plurality of corresponding pairs of elements 38' and 40'; magnetic forces of attraction from a respective sheet element 40' pass through the veneer 27' of the base panel and the reverse sheet 12*g'* of the display panel and flatwise attract a corresponding sheet element 38' of the display panel. The plurality of sheet elements 38' and the plurality of sheet elements 40' provide magnetic attraction means for removably securing the display panel in flatwise engagement with the field area 36' of the base panel structure.

The outer face surfaces respectively of the obverse and reverse sheet structure 12*f'* and 12*g'* of the display panel 12' are coated or surfaced for providing a desired decorative color or texture, or a desired decorative pattern form. The opposite face surfaces of the display panel 12' preferably are of different color pattern or decorative design configuration; the display panel 12' may optionally be magnetically supported over the field area 36' of the base panel structure with a selected decorative face surface facing outwardly of the base panel for viewing. A user of the panel assembly 16' has only to remove the display panel 12' from the base panel structure, turn the display panel 12' around, and replace the panel 12' in the base panel 14', for changing the pattern or decorative color scheme of an article of furniture or the like. If desired, a plurality of display panels 12', having face surfaces of different decorative color or form, may be provided for use with a single base panel 14'. In this manner, a user of the panel assembly 16' is afforded a wider selection of decorative surfaces, affording a broader range of decorative surfaces for an article of furniture or the like. In certain instances it may be desirable to use the base panel 14' without the display panel 12'. The field area 36' of the base panel body structure 26' preferably is surfaced with a decorative color or pattern configuration; in absence of the display panel 12', the field area 36' of the base panel structure provides a basic color or decorative pattern design. A user simply places a display panel 12' over the the field area 36' of the base panel structure for obtaining a decorative appearance different from the appearance of the field area.

Referring now to the second alternative embodiment shown in FIG. 8, the panel assembly generally is designated by the numeral 16''. It is seen to be composed of a base panel 14'' and a display panel insert 12''. The base panel 14'' includes a panel board body 226'' with a display panel nest or recess 15'' sized to receive the edges of the display panel insert 12''. Magnetic attraction means are provided to hold the display panel insert 12'' within

the nest 15" in covering relation of the outwardly facing decorative layer of the nest 15'. In this embodiment magnetic sheet elements 40" in the form of a plurality of small magnets, all oriented in a common podal attitude, are mounted in spaced relation on a conductive backing plate 40*a*" of metallic material which is permanently secured as by adhesive means to the floor 42" of the recess or nest. The backing sheet and magnets are covered by the decorative layer 27" with the metallic plate 40*a*" acting as the first part of a magnetic bridge 45" to be described. First, however, with reference to the display panel insert 12", it is seen in FIG. 8 to be composed of a second metallic plate 38" or second part of a magnetic bridge. The second plate 38" is sandwiched between outer layers 48" and 50" and when nested in the recess 15" completes a magnetic bridge to hold the display panel in the nest, the bridge being composed of the magnets between the bridge elements or plates which in turn cause a strong attractive force to hold the decorative display panel in the nest. It has been found that when a group of magnets of common orientation with respect to their respective poles are sandwiched or captivated between two metal plates, the attractive force is substantial and sufficient to fit the purposes of this disclosure.

While the instant invention is shown and described in preferred embodiments, it will be understood that various changes and modification may be made without departing from the spirit and scope of the invention.

What is claimed is:

1. A panel assembly adapted for use in constructing counter top fixtures, cabinet furniture comprising a base panel defining a generally planar field area and a border portion extending circumferentially of said field area, defining a circumferential border surface raised relative to said field area; a thin broad display panel having at least one face surface of appearance contrasting with the appearance of said base panel field area; and attaching means detachably supporting said display panel on said base panel with said display panel being in flatwise contiguity with and covering said base panel field area, with said face surface thereof facing outwardly of said base panel, said display panel having parallel extending oppositely oriented side edge portions, wherein said base panel border portion defines parallel extending opposingly oriented grooveway structure of configuration adapted for shiftably receiving said display panel, and includes structure forming an access slot in said base panel border structure disposed generally coplanar with said base panel field area and respectively perpendicular with said grooveway structure of said base panel, said access slot being configured for permitting free edgewise passage of said display panel therethrough in translational movement of said display panel in said grooveway structure of said base panel and in covering and uncovering said field area of said base panel.

2. A panel assembly as set forth in claim 1 wherein said base panel border portion, oppositely arranged from said access slot, includes structure defining an abutment slot adapted to abuttingly receive the leading edge margin of said display panel as it is manipulated through said access slot, along the parallel grooveway structure and to a disposition covering said field area.

3. A panel assembly adapted for use in constructing counter top fixtures, cabinet furniture comprising a base panel defining a generally planar field area and a border portion extending circumferentially of said field area, defining a circumferential border surface raised relative to said field area; a thin broad display panel having at least one face surface of appearance contrasting with the appearance of said base panel field area; and attaching means detachably supporting said display panel on said base panel with said display panel being in flatwise contiguity with and covering said base panel field area, with said face surface thereof facing outwardly of said base panel, the circumferential configuration of said display panel corresponding generally with the circumferential configuration of the boundary of said base panel field area, and including magnetic attraction means detachably supporting said display panel flatwise over the field area of said base panel including first magnetic sheet means generally coplanar supported on the display panel, formed of material attractive to magnetic attraction forces, second magnetic sheet means generally integrally supported in said base panel field area, formed of material of permanent magnet property, adapted to magnetically attract the first magnetic sheet means of the display panel.

4. A panel assembly as set forth in claim 3 wherein said display panel is of laminated construction and includes an obverse sheet and a reverse sheet of non-magnetic material, of corresponding configuration flatwise secured together, and wherein said first magnetic sheet means is interposedly secured between said obverse sheet and reverse sheet of said display panel.

5. A panel assembly as set forth in claim 4 wherein said base panel includes a generally thick panelboard body and a thin veneer layer at least coextensive with the field area of said base panel, and wherein said second magnetic sheet means is interposedly arranged between said panelboard body and the veneer layer of said base panel.

6. A panel assembly as set forth in claim 5 wherein said first magnetic sheet means and second magnetic sheet means each includes a plurality of magnetic sheet elements, and with the plurality of first sheet elements and the plurality of second sheet elements being secured respectively to the display panel structure and the base panel structure in corresponding pattern arrangement.

7. A panel assembly adapted for use in constructing counter top fixtures, cabinet furniture comprising a base panel defining a generally planar field area and a border portion extending circumferentially of said field area, defining a circumferential border surface raised relative to said field area; a thin broad display panel having at least one face surface of appearance contrasting with the appearance of said base panel field area; and attaching means detachably supporting said display panel on said base panel with said display panel being in flatwise contiguity with and covering said base panel field area, with said face surface thereof facing outwardly of said base panel, said attaching means comprising a magnetic bridge including a plate of conductive material in the field area, a plurality of magnets arranged on the plate with their poles being commonly oriented, and a conductive plate in the display panel, said display panel having outer decorative layers.

8. A panel assembly adapted for use in constructing counter top fixtures, cabinet furniture panels, comprising:

a base panel defining a generally planar field area and a border portion extending circumferentially about said field area,

said border portion defining a circumferential border surface completely bounding said field area and raised relative to said field area a first distance,

a thin broad display panel of a thickness substantially equal to said first dimension having at least one face surface of appearance contrasting with the appearance of said base panel field area and said border surface; and

attaching means detachably supporting said display panel on said base panel with said display panel being in flatwise contiguity with and covering said base panel field area and bounded by said border surface, with said face surface thereof facing outwardly of said base panel,

the border surface being of an area which is substantial, relative to the area of said field and said display panel, so that when the display panel is detachably connected to said base panel, there are substantial

contrasting generally flush surface areas seen by a viewer of said panel assembly.

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U.S. Cl. X.R.

161—126, 138; 312—204, 257