Aug. 20, 1940. L. M. AVENSON 2,212,313

DISPLAY PANEL AND THE LIKE

Filed Aug. 31, 1939 2 Sheets-Sheet 1

Fig. 1.

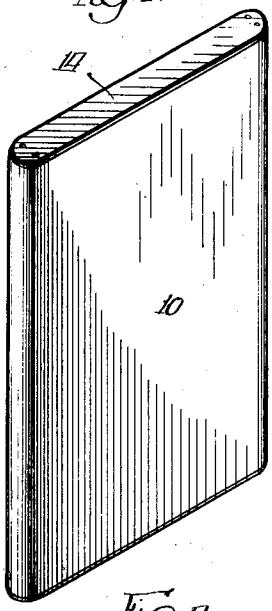


Fig. 2.

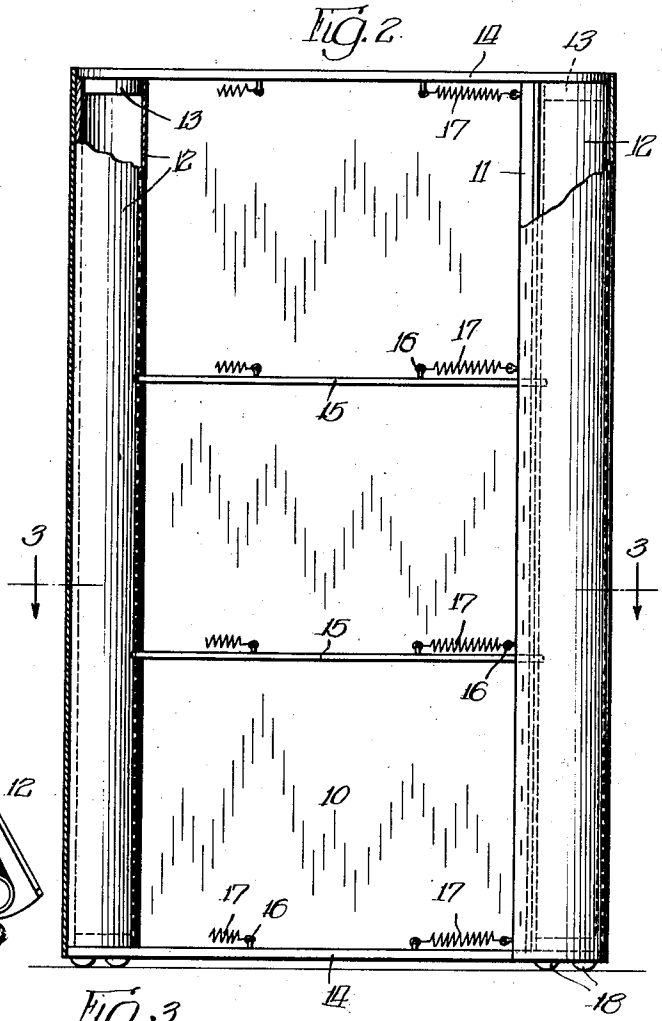


Fig. 4.

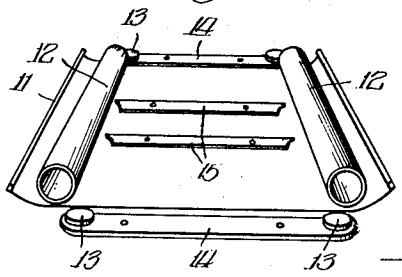


Fig. 3.

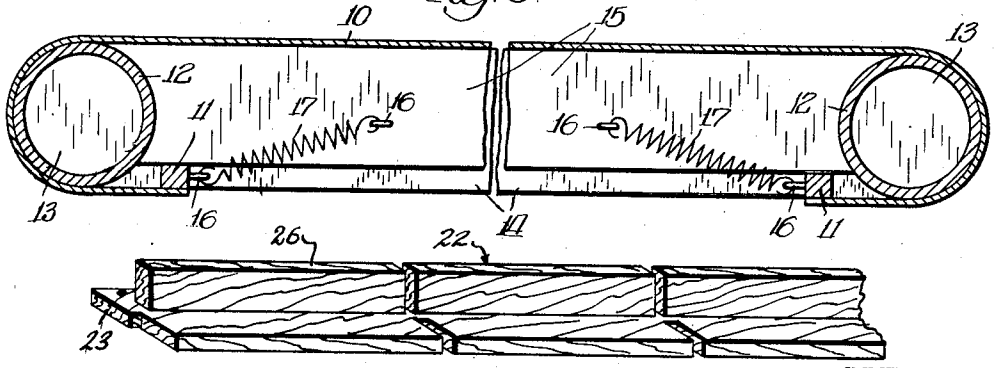


Fig. 8.

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Aug. 20, 1940. L. M. AVENSON 2,212,313

DISPLAY PANEL AND THE LIKE

Filed Aug. 31, 1939 2 Sheets-Sheet 2

Fig. 5

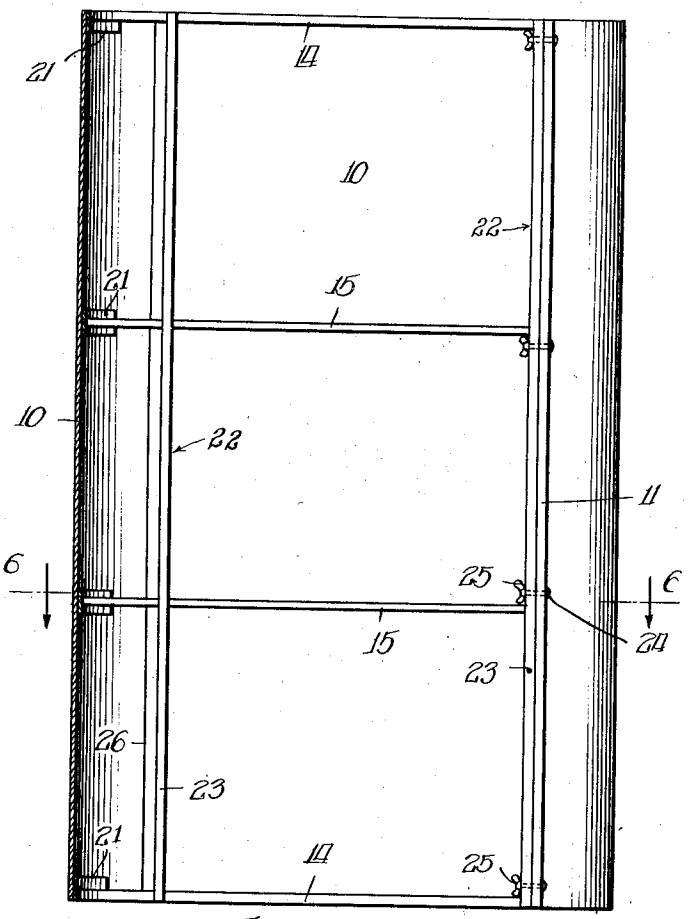


Fig. 6

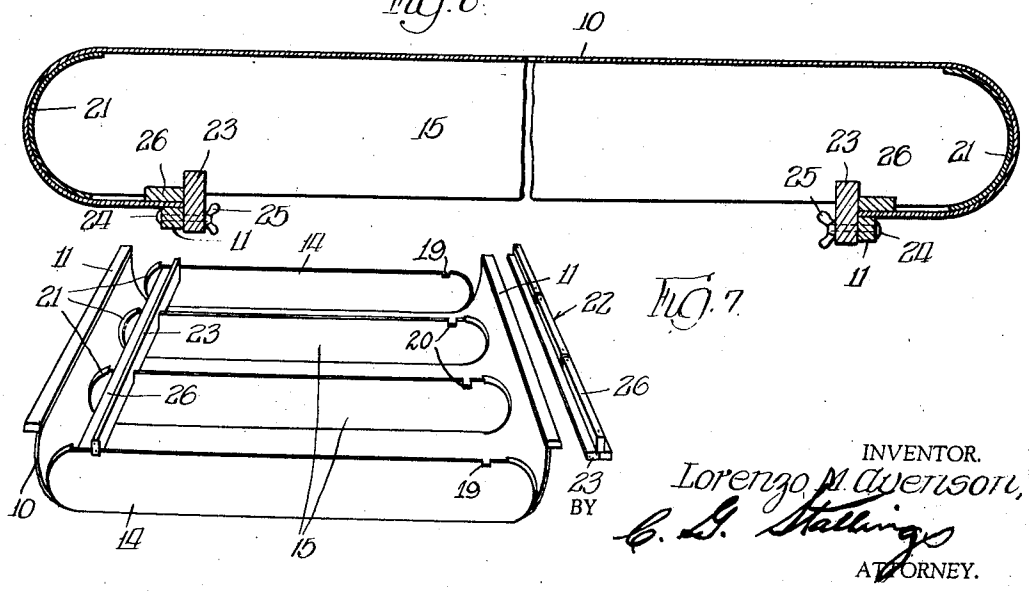


Fig. 7

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2,212,313

DISPLAY PANEL AND THE LIKE

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2 Claims. (Cl. 40—125)

This invention relates to panels, such as those known as background panels, which are used for various display purposes. One use of such a panel is to form a background for window displays and displays in stores, where the displays are frequently changed and it is necessary to alter the background to match a new display. In organizations such as chain store organizations, where there are several hundred stores, the preparation of such panels or their purchase in the open market, constitutes a sizeable item of expense. An ordinary general store will use a large number of these various displays, sometimes as many as twenty or thirty.

In the past it has generally been necessary to procure new display panels for each different type of background needed. Assume, for example, the display is ice boxes. Ordinarily the background panel would be white or a silvery color accentuating the impression of "coolness" of the ice boxes. When it is desired to replace the ice boxes with a display of stokers, for instance, the background would preferably be some other color than white, possibly green or red. In the past where a panel has been finally made up, it has generally been necessary to either store or junk the panels of the discontinued display and procure an entirely new set for the new display, with high cost and much trouble.

Applicant has provided a display panel which overcomes the objections to the ordinary display panel, set forth above, and one which makes it unnecessary to destroy a panel when changing a display. One of applicant's objects is to provide a panel which is readily adaptable to changing displays, and on which the cover already in use may be quickly and simply removed and stored for later use and a new cover provided for a minimum cost.

One object of applicant's invention is to provide a structure which may be shipped "knocked down" and may be readily assembled without special tools when ready for use. The "knocked down" feature is advantageous, too, in the storage of panels not in use since a minimum amount of space is needed when the panel can be disassembled, the parts placed in a small package and the background itself rolled into a comparatively small, neat roll. This eliminates a large loss of storage space and also makes it easy to keep the panel clean and in first class condition.

It is the object of the present invention to provide an arrangement which is cheap, can be manufactured without special equipment, and is simple in structure.

It is an object to provide an arrangement wherein most of the parts may be used over and over again in various types of display, being for that purpose comparatively permanent. The framework and various parts of the panel should last for an indefinite number of years if handled with care.

It is an object to provide an arrangement in which the expansion and contraction ordinarily attributable to coverings and devices similar to this are automatically compensated for. In changing weather and under different atmospheric conditions, paper or cardboard used in covering a display of this type will expand or contract. For example, a piece of cardboard nailed to a frame may fit perfectly. If after nailing, it is wet, it will expand and become baggy and loose. Upon drying it will contract to its original condition and generally go further, to where it is drawn as tight as a drum head. These expansion and contraction properties make it necessary to provide some compensating means, and as above noted, the compensating means herein provided allows for either expansion or contraction and keeps the panel covering at the proper tension at all times. This compensating means also tends to prevent warping and damage to the covering.

It is a further object to provide a construction which allows the panels to be placed back to back for a floor display in such a way that the panels appear "flush," that is, come up against each other at all sides so that the interior of the back portion of either panel cannot be seen while the other panel is up against the back thereof. This requires the elimination of ordinary protuberances.

It is an object to provide a construction which makes the changing of covers to provide seasonal colors for certain displays, or for other reasons, extremely economical, and makes it possible to economically center the preparation of covers and replacement parts, it being comparatively easy and inexpensive to ship a cover or a part.

It is another object to provide a panel which can be assembled or taken apart by one person in a few minutes and with no special tools.

It is another object to provide a panel that is light weight, and one which will stand without additional support under normal conditions.

It is also an object to provide a panel in which all of the parts are standardized and lend themselves to mass production methods.

Other objects and advantages of the invention will appear as the nature of the improvements

is better understood; the invention consisting substantially in the novel construction, combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and finally pointed out in the appended claims.

In the drawings:

Figure 1 is a front perspective view of a preferred embodiment of the structure of the present invention;

Figure 2 is a rear elevational view of the device of Figure 1, a portion of the structure being broken away to show details of construction;

Figure 3 is a fragmentary, sectional view taken on the line 3—3 of Figure 2, looking in the direction of the arrows;

Figure 4 is a schematic view showing the parts in approximate position for assembly, the device being that of Figures 1, 2 and 3;

Figure 5 is a rear elevational view of a modified form, the view being fragmentary in that certain portions are broken away to show the details of construction;

Figure 6 is a fragmentary sectional view, taken on the line 6—6 of Figure 5, looking in the direction of the arrows; and

Figure 7 is a view corresponding to Figure 4, but illustrating the modified form of construction shown in Figures 5 and 6.

Figure 8 is a fragmentary perspective view of an element.

Referring more in detail to the construction shown in the various figures, the same number indicates the same device or portion of construction wherever used in various figures.

In Figures 1, 2, 3, and 4, I have provided the cover 10, which is attached to the side rails 11 by staples, tacks, or other common means which will hold it securely to the side rails.

I have provided the tubes 12, which form upright support for the cover when the cover is in position after assembly. These tubes 12 are preferably constructed of light materials, such as cardboard or linoleum, although they may be solid if weight is desired, preferably having a space at each end hollowed out for receipt of the blocks 13 of the end cross members 14. The end cross members, as will be apparent from examination of Figures 1, 2, and 4, fit over the ends of the two tubes, and have attached to them the blocks 13. The ends of the cross members 14 are preferably rounded to conform with the contour of the tubes 12, and the blocks 13 are offset a slight distance from the ends of the cross members 14, so that when in position the side of each tube and each end of the cross member 14 are flush vertically. This provides a smooth surface for the cover 10 when in position and prevents unsightly bulges.

Preferably the blocks 13 are a close fit into the ends of the tubes 12, so that the assembled structure will be sturdy.

The display panel is provided with the center cross members 15, which have their ends cut away in a concave shape as will be clearly apparent from examining Figures 3 and 4, the shape of the ends of these center cross members 15 conforming generally to the rounded contour of the tubes 12. As will be more clearly apparent from examination of said Figures 3 and 4, the portion of the cross members 15 adjacent the front of the display panel has the end extended a little further than the portion adjacent the back of the display panel, so that the forward edge of the center cross members 15 will come flush with the vertical plane tangent to the front portions of the tubes 12, forming the front of the supporting structure. With this arrangement the cross members 15, in addition to forming support for the tubes 12, also form a backing for the cover 10 and prevent sagging due to a large, unsupported surface. As many of these cross members may be provided as is considered desirable, but two form a good support.

At the back portion of these cross members 15, the rear edge does not normally come to a position parallel with a vertical plane tangent with the back portions of the tubes 12, falling short of that position by a distance equal to the thickness of the side rails 11 and cover 10.

As will be clearly apparent from examination of Figure 3, this provides a rear portion to the display panel which is flat and readily adapts itself to placing two panels back to back and securing a flush, neat appearance. The center cross members 15, and the end cross members 14, are provided with eye screws 16. Hook screws or other fastening means would substitute equally well, but the eye screws seem to be very acceptable anchoring means for the springs 17. If eye screws are provided, the springs 17 preferably have hook ends which insert in the eye screws 16. The side rails 11 are provided with eye screws, such as 16, at positions generally adjacent their ends and the positions of the center cross members. The springs 17 hook between the eye screws on the side rails 11 and the cross members 14 and 15. The tension of the springs 17 holds the cover taut and in position, and compensates for expansion and contraction of said cover 10.

The tension of the spring 17 likewise holds the cross members 15 in relative position, and retains the end cross members 14 snugly in position.

When this device is assembled it is sturdy, light, and forms a panel having a pleasing and "rich" appearance due to its thickness. It makes an excellent background for any display.

I have provided the chair glides 18 on the bottom end cross member 14. Preferably at least two of these chair glides 18 are provided under each tube in a position which will give strongest support. These allow the display panel to be used on a surface which is warped or irregular, and still secure a firm seat for the panel.

Referring particularly to Figures 2 and 4, the display is set up in a few moments by one person. It is placed on the floor or on a table, the cover underneath, the tubes 12 and center members 15 on the cover in relative position for use, and the end cross members 14 placed at the ends of the tubes 12. The assembly is preferably performed by first inserting the blocks 13 of the top cross end member into the tubes 12. Then the center cross members 15 are placed in position and the bottom end cross member 14 has its blocks 13 inserted in the tubes 12. On this skeleton frame work the cover is fastened by fastening one end of a spring 17 to the eye screw 16 of the side rails 11 and the other end of the spring 17 to the eye screw 16 of the cross end members 14. Both side rails are so fastened and then the center cross members are fastened likewise by springs. The assembly is completed in a few moments in this way. The covers are easily changed by unhooking the spring 17 from the side rails 11, placing another cover having similar side rails in position and rehooking them.

The discarded cover may then be rolled around

the side rails (preferably loosely) and stored for further use. If the cover is soiled a second cover may be "tacked" over the first on the siderails, or the first may be removed and the siderails used with another cover. This is true also with the modified form of Figures 5, 6 and 7.

Referring to Figures 5, 6 and 7, the tubes 12 have been eliminated. The cross end members 14 are constructed somewhat differently, have shallow notches 19, and the center cross members 15 are likewise somewhat different in shape and have deep notches 20. The cross members 14 and 15 are provided with the strips 21, which form a broader supporting surface for the cover than the edges of the cross members 14 and 15. These strips 21 are preferably rounded to conform to the contour of the panel edges, and are flush with the ends of the cross members 14 and 15. While, as is clearly apparent from Figure 5, only a small strip 21 has been provided on each cross member, the size of the strips may be extended vertically and horizontally, or either, sufficiently to give a desired smooth support to the cover 10.

The vertical members 22 are provided instead of the tubes 12, shown in the other construction. These vertical members are preferably formed by using an upright 23 of wood, or the like, and preferably about 2½"x ¾" stock, which upright 23 is notched to receive the edges of the center cross members 15, correspondingly notched, and hold them securely against vertical movement. On the side of the upright 23 from the notches, I have provided holes to receive the bolts 24, which are preferably provided with wing nuts 25. The purpose of these bolts will be explained later.

On the upright 23 and between the position (when assembled) of the cross members 14 and 15, are fastened the vertical sections 26 which are short sections and are spaced apart a distance equal to the extent of the cross members 15. These vertical sections 26, when in the assembly, form a holding element assisting in retaining the cross members 14 and 15 in relative position, and strengthen the construction. Preferably the notches on the upright 23 and the spaces between the vertical sections 26, form a tight fit for the members 15 so that no nails are necessary to hold the members 15 in place.

The upright 23 of the vertical member 22 has about half of each end cut away to form a seat for the end members 14. These end members 14 are each provided with a shallow notch which receives a portion of the "extension" of the upright 23, as will be best apparent from examining the arrangement of Figure 7. The upright 23 extends outwardly in a rearwardly direction far enough for the side rails 11 to fit flush against it, and be bolted into position with the bolt 24 and wing nuts 25.

In assembling this structure, the cross members 15 are usually first provided with the strips 21, and are placed in relative position over the cover 10. The vertical members 22 are set down into position in the notches of the members 15, and the members 14 are placed in position and preferably nailed or screwed to the vertical members 22. For this purpose a single nail in each end of each vertical member will form a very solid structure. When the vertical members 22 and the cross members 14 and 15 have been assembled, the side rails 11 (which, as has been indicated heretofore, are provided with holes for the bolts 11 corresponding in position to the holes on the upright 23) carrying the cover 10 are bolted in position. Preferably the side rails do not come entirely up to the upright 23 so that by adjustment of the wing nuts 25, the cover may be loosened slightly or tightened to compensate for changes in atmospheric condition, resulting in expansion and contraction.

The assembled structure is strong and the cover can be quickly changed by removing the bolts 24, substituting another cover and replacing the bolts, in much the same manner as with the structure of Figures 1, 2, 3 and 4. While I have not shown the chair glides, they are preferably provided for this structure for the same reason as in the other form.

The forms of the invention shown and described present preferred embodiments thereof, and delineates its adaption to practical use, but it is to be understood that the present disclosure is to be considered from the illustrative standpoint and not as imposing restriction or limitation on the invention.

While I have herein shown and described certain features of my invention, still I do not wish to limit myself thereto, except as I may do so in the claims.

I claim:

1. In a device of the class described a panel comprising in combination a plurality of end cross members, one or more center cross members, a plurality of tubes maintained spaced apart by said end and center cross members said end cross members having blocks that fit into the ends of the tubes securing said tubes solidly into position, said center cross members having end portions that are concaved and fit around a portion of the tubes, a cover having side rails, and fastening means comprising a spring means attached to the side rails by eye screws and to the end and center cross members by screws, retaining the cover in position on the panel, the bottom end cross member of said panel being equipped with chair glides.

2. In a device of the class described a panel comprising in combination a plurality of end members, one or more center cross members, a plurality of uprights maintained in spaced relation by said end and center cross members, a removable cover having side rails, said cover being maintained removably in place by spring fastening means between the cross member and the side rails.

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