SLIDING PANEL DISPLAY

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ABSTRACT

A sliding panel display, or paneling exhibition apparatus, comprising a plurality of panels slidingly confined in a stepped array successively overlapping one another in generally and uniformly parallel relation. Each of the panels may be at least partially slidingly withdrawn independently relative to one another in parallel relation and each includes a reinforcing frame which acts to prevent edge distortion or warping of the panels. Each of the reinforcing frames is independently slidingly supported on respective tracks which act as guides for permitting the independent withdrawal of the framed panels relative to one another. The panels generally extend in vertical relation and in respective parallel directions mutually inclined relative to a vertical plane passing through a common point on each of the panels.

7 Claims, 5 Drawing Figures
SLIDING PANEL DISPLAY

BACKGROUND OF THE INVENTION

The present invention relates generally to a paneling exhibit and more particularly to an exhibit which permits panels to be slidingly displaced relative to one another for observation and inspection.

As is well known, there are many conventional structures which permit panels to be displayed for consumer observation and inspection and these structures usually incorporate means upon which the panels may be pivotally or hingedly displaced relative to one another analogous to the manner by which pages are displaceable relative to one another in a book. The consumer is generally confronted with the problem of having to push a great number of these panels which adjoin one another in one direction away from a particular panel that the consumer wishes to inspect, and this of course, because of the rather great weight of the panels, is somewhat undesirable.

Moreover, the panels are not readily identifiable from distances remote from the display and this tends to diminish the extent of information the display is to relay to consumers passing by the display as they browse through other articles being sold in the outlet in which the paneling is being exhibited.

Thus, from the standpoint of ease by which the individual panels may be inspected or observed by consumers and the manner by which the consumer’s attention is called to the particular paneling exhibit, the paneling exhibits of conventional variety are less than most effective.

Another disadvantage associated with the prior art, or conventional type of hinged supported paneling exhibit or display apparatus, is the fact that the arrangement is not necessarily esthetically pleasing from the standpoint of the consumer and the retailer since, in fact, those panels which are together hingedly displaced away from the selected panel under observation, thereafter, extend such that the back or rear surface portions of the panels so displaced are then visible to consumers and purchasers who then observe different groups of panels extending in different directions and not in a uniform and neat arrangement. Obviously, whenever a particular display is not neat or esthetically pleasing to the consumer, there is certainly a diminished effectiveness in the display to “sell itself.”

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide an improved paneling exhibition apparatus. It is another object of the present invention to provide a paneling display wherein each of the panels are slidingly displaceable relative to one another in generally parallel relation and independently for permitting ready inspection and observation thereof.

It is another object of the present invention to support each of the panels independently relative to one another and obviate the extent of edge distortion and warping during prolonged periods during which the panels are displayed.

It is still another object of the present invention to provide a paneling display in which the panels always remain in uniform parallel relation and in which a great number of panels may be displayed economically from the standpoint of space.

It is another object of the present invention to provide a paneling display such that all the panels can be exposed at one time, wherein each of the panels successively overlap one another and portions are exposed for permitting ready identification of each of the panels relative to one another.

It is another object of the present invention to provide a paneling display wherein each of the panels may be removed, rearranged and exchanged as the need arises, by the retailer.

It is another object of the present invention to provide a paneling display wherein each of the panels may be selected independently without the requirement for displacing a plurality of panels relative to the particular panel which is to be inspected.

It is still a further object of the present invention to provide a paneling display wherein each of the panels is provided with respective rollers to enhance the ease by which each of the panels may be displaced or withdrawn relative to one another for observation.

To this end, the present invention relates to paneling exhibition apparatus comprising means for confining a plurality of panels in a stepped array successively overlapping one another in generally parallel relation such that respective portions of the panels remain exposed, means for permitting at least partial withdrawal of each of said panels independently relative to one another in parallel relation, brace means displaceable with each of said panels independently for reinforcing each of the latter against edge distortion, and guide means along which each said brace means is displaceable for guiding independent withdrawal of said panels relative to one another.

BRIEF DESCRIPTION OF THE DRAWINGS

With the above and additional objects and advantages in view as will hereinafter appear, this invention comprises the devices, combinations and arrangements of parts hereinafter described and illustrated in the accompanying drawings of a preferred embodiment in which:

FIG. 1 illustrates a perspective view of a portion of the paneling display as arranged for observation;
FIG. 2 illustrates an exploded perspective view of a typical panel and the frame members as associated with one another;
FIG. 3 illustrates a generally side elevational view, partly in cross-section, of two adjoining frame panels relative to one another;
FIG. 4 illustrates a generally front elevational view, partly in cross-section, of typical panel as arranged in the display apparatus of the present invention; and
FIG. 5 illustrates a generally plan view in schematic arrangement of the panels as supported in the display apparatus of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings and more particularly to FIG. 1 thereof, there is illustrated a paneling exhibition apparatus generally denoted by the reference character 10.

The paneling exhibition apparatus 10 generally includes a plurality of framed panels 12 which extend in generally parallel relation with one another and are slidingly displaceable along respective pairs of tracks, the upper tracks denoted by the reference character 14 and the lower tracks denoted by the reference charac-
the respective tongues 48 thereof will snap through and outwardly of respective grooves or slots 50 provided along the channels in each of the side reinforcing edge members 28 at the upper portions thereof. Once each of the upper corner connecting members 40 is properly connected to the respective side reinforcing edge members 28, the members 40 may be utilized for interconnecting the opposite end portions of the upper reinforcing edge member 30 to the side reinforcing edge members 28.

In this respect, each of the upper corner connecting members 40 is provided with a generally vertically extending tongue 52 which may be inserted through appropriate grooves or slots provided at the opposite end portions of the upper reinforcing edge member 30.

The lower corner connecting members 44 are generally very similar to that of the upper corner connecting members 40, except for the fact that the lower corner connecting members 44 are provided with axially extending follower projections 46 respectively, whereas the upper corner connecting members 40 are provided with respective follower rollers 42. Thus, the lower corner connecting members 44 are provided with generally horizontally extending depressible tongues 56 respectively and may be properly inserted into respective channels (not shown) at the lower end portion of each of the side reinforcing edge members 28, the depressible tongues 56 being projectable through respective grooves or slots 58 in each of the lower portions of the side reinforcing edge members 28.

In this manner, the lower corner connecting members 44 will also be resiliently held detachably in the respective side reinforcing edge members 28. Moreover, the lower corner connecting members 44 are each provided with generally vertically extending tongues 60 for insertion into respective grooves or slots 62 provided at the opposite end portions of the lower reinforcing edge member 32.

It should be clear, that the utilization of depressible or resiliently supported tongues which cooperate with associated grooves or slots in the respective edge members permits each of the panels 12 to be readily framed along the edge portions 26 thereof to diminish to a great extent, if not altogether, edge distortion, warping and other damage to the panels along the edges thereof as would otherwise occur in the absence of the protective support or bracing frame. Moreover, the frames may be readily removed for permitting one panel to be exchanged with another. It should be understood, that although the upper and lower corner connecting members 40 and 44 respectively have been described as the means for interconnecting the reinforcing edge members 28, 30 and 32 to one another, other suitable means, as those skilled in the art readily appreciate, may be readily incorporated for interconnecting these members to one another as aforementioned.

As illustrated in FIG. 2, each of the upper tracks 14 is provided with a longitudinally extending groove 64 along which the follower rollers 42 of the upper corner connecting members 40 may be displaced freely. Moreover, each of the lower tracks 16 is provided with a longitudinally extending groove 66 in and along which the respective follower projections 46 of the lower corner connecting members 44 may be displaced freely. Thus, the grooves 64 and 66 provided in the tracks 14 and 16 respectively, act as guides for maintaining each of the framed panels 12 generally vertical and permit parallel
displacement of these panels 12 relative to one another for observation and inspection.

This relationship, wherein the rollers 42 and projections 46 are associated with the grooves 64 and 66 in the upper and lower tracks 14 and 16 respectively is most clearly evident in FIG. 3. The paneling exhibition apparatus 10 is provided with an upper track supporting member 68 and a lower track supporting member 70, between which the respective bracing frames 72 which reinforce the panels 12 along the edge portions thereof are displaceable. The upper tracks 14 are generally bracketed as illustrated in FIG. 3 and connected to the upper track supporting member 68 through the intermediary of screws 74 or the like.

The paneling exhibition apparatus 10, is provided with what may be generally characterized as a housing 76, having a flooring 78 and cross-beams 80 at both the upper and lower portions of the housing 76 for appropriately supporting the upper and lower track supporting members 68 and 70 respectively.

The arrangement of the paneling exhibition apparatus 10 and the relative operative association of each of the panels 12 relative to one another is best illustrated in FIG. 5. In this respect, FIG. 5 illustrates a generally plan view of the arrangement of the present invention, wherein each of the bracing frames 72, in which are respectively mounted the panels 12, extends in generally spaced parallel relation with one another and successively overlap one another in what may be characterized as a stepped array. Moreover, each of the bracing frames 72 may be displaced from respective display positions, generally illustrated in solid line, between rear and front abutments 82 and 84 respectively which act to limit the extent of displacement of each of the bracing frames 72 relative to one another. Preferably, the front abutment 84 is detachable to permit replacement or removal of the framed panels 12. Reference character 86 generally denotes positions illustrated in phantom which define the forward-most position that each of the panels 12 or the bracing frames 72 may be displaced into for permitting complete observation and inspection of the panels 12 relative to one another.

It is important to note, that the rear and front abutments 82 and 84 respectively may be of minimal extent and provided on either or on both of the upper and lower track supporting members 68 and 70 respectively. Moreover, in order to stabilize the upper and lower track supporting members 68 and 70 respectively relative to one another, there are provided a plurality of vertical posts 88 between respective groups of the bracing frames 72 and these vertical posts 88 are generally concealed by the panels 12, at the rearmost positions of the latter, so as not to detract from the esthetic appearance of the display pursuant to the present invention.

An important feature of the present invention is the fact that each of the panels 12, or the bracing frames 72, extend in generally vertical parallel planes with one another and extend in respective parallel directions mutually inclined relative to a vertical plane, generally denoted by the horizontally disposed line 90 in FIG. 5, passing through a common point, the rear edge, of each of the bracing frames 72, or panels 12. This feature of the present invention permits each of the panels 12 to be provided with the respective exposed portions 20, generally defined by the spacing E between two adjacent panels 12 as illustrated in FIG. 5. Therefore, the coloring and other surface configurations provided on the panels 12 which differ from one another, may be readily observed whether one or a plurality of adjoining panels 12 are slidingly displaced forwardly into the positions denoted by the reference character 86 in FIG. 5 for direct comparison. Moreover, each of the labels 24 provided on the panels 12 respectively is also directly observable for comparison purposes.

Accordingly, the present invention obviates a number of disadvantages associated with conventional paneling displays, in that the present invention permits the consumer to readily observe an esthetically pleasing display, and one which does not become unsightly due to the lack of care and harsh treatment that the panels are usually subjected to as displayed. The present invention permits the panels to be displaced relative to one another simply without any necessity for displacing other panels away from a selected panel. Moreover, the panels as framed, and slidingly mounted, provided a display which is economical in space, one that permits panels to be removed, exchanged and rearranged relative to one another, and prevents the panels from being damaged or distorted along the edge portions thereof.

Numerous alterations of the structure herein disclosed will suggest themselves to those skilled in the art. However, it is to be understood that the present disclosure relates to a preferred embodiment of the invention which is for purposes of illustration only and is not to be construed as a limitation of the invention.

What is claimed is:

1. Paneling exhibition apparatus comprising housing means for confining a plurality of panels in a stepped array successively overlapping one another in generally parallel relation, said panels being disposed in generally vertical relation and extending in respective parallel directions mutually inclined relative to a vertical plane passing through a common point on each of said panels to permit display of at least a portion of each of said panels when said panels are confined in said housing means in said stepped array, brace and guide means for permitting at least partial withdrawal of each of said panels from confined position in said housing means with said panels being withdrawn independently relative to one another panel in parallel relation, said brace means being displaceable with each of said panels independently for reinforcing each of said panels against edge distortion, said brace means including generally rectangular frames spaced from one another to provide one of said frames for each of said panels, each of said frames including adjoining edge members each provided with an open groove for receiving respective edge portions of an associated one of said panels, corner means for detachably connecting one of said edge members to another of said edge members for each of said frames to define a pair of upper corner frame members and a pair of lower corner frame members for each of said panels, each of said corner frame members being provided with follower members operatively associated with said guide means, said guide means being disposed on housing means with each of said frames being displaceable along said guide means for guiding independent withdrawal of said panels relative to one another, said guide means including a plurality of pairs of horizontally extending tracks, each track of each of said pairs of tracks being vertically separated from one another to define an upper track and a lower track, each upper track receiving said follower members of
associated upper corner frame members, and each lower track receiving said follower members of associated lower corner frame members.

2. Paneling exhibition apparatus as claimed in claim 1 including vertically extending members interposed between at least two of said panels for maintaining each pair of tracks in vertically spaced relation, said vertically extending members being hidden by the latter said panels.

3. Paneling exhibition apparatus as claimed in claim 1 wherein each of said upper corner follower members includes at least one roller rotatably supported thereon and each of said lower corner follower members includes at least one stationary projection.

4. Paneling exhibition apparatus as claimed in claim 1 wherein each track of each of said pairs of tracks is provided with open grooves into which said upper and lower corner follower members are downwardly receivable.

5. Paneling exhibition apparatus as claimed in claim 1 including abutment means for limiting the extent of withdrawal and return of said panels.

6. Paneling exhibition apparatus as claimed in claim 1 wherein each of said panels includes a normally concealed portion relative to adjacent panels and an exposed portion relative to adjacent panels, the exposed portion of each of said panels including means for identifying each respective panel.

7. Paneling exhibition apparatus as claimed in claim 1, wherein said housing means includes upper and lower portions for supporting said upper and lower tracks respectively.
UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION


Inventor(s) BERN MARGOLIS, ET. AL.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the cover sheet [73], "Ply & Gem Industries, Inc." should read -- Ply*Gem Industries, Inc. -- .

Signed and sealed this 25th day of December 1973.

(SEAL)
Attest:

EDWARD M. FLETCHER, JR.
Attesting Officer

RENE D. TEGTMeyer
Acting Commissioner of Patents