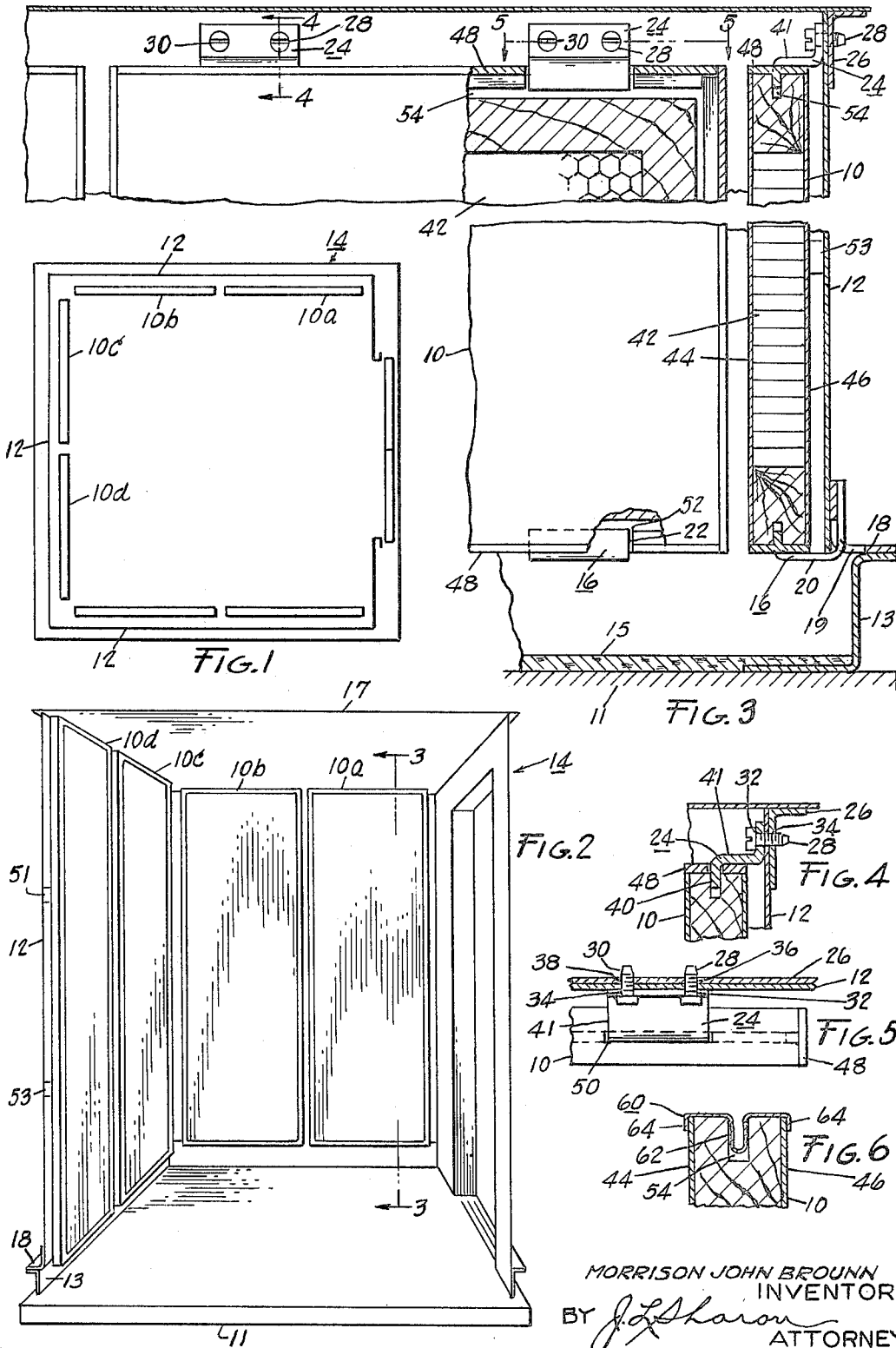


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REVERSIBLE CAR PANELS

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## REVERSIBLE CAR PANELS

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This invention relates to elevators and more particularly to the elevator cab or enclosure for passenger elevators.

As is well understood, the elevator cab proper is not a load bearing element, but rather rests on the platform part of the load bearing car framework and serves to enclose the passengers standing on that platform. As such, it consists of an entranceway which is closed, usually, by a horizontally sliding door or doors, vertical side walls and a roof or canopy over the top. This invention is concerned principally with the side wall portions of the cab.

In the past, these sidewalls were composed of metal or wood sections in fixed position with the interior surfaces suitably finished according to the owner's or an architect's choice. Metal wall cabs usually used baked enamel, lacquered or porcelain enameled surfaces. The fixed wall wooden cabs were generally finished with a cabinet type grained wood veneer on the interior surface or with leather or other decorator-styled surfaces.

More recently, elevator cabs have been made with fixed-position sheet metal side walls to which removable wall panels are fastened. These wall panels generally have a multi-layer wooden base, and are of balanced construction such that the expansion caused by moisture-absorption will be substantially equal on the front and rear surfaces. The front surface, which forms the interior surface of the cab, may be of any suitable construction such as wood veneer, phenolic or plastic, tapestry, ceramic or other type tile, wire mesh or other desired material. The back surface is unfinished, as it is not exposed to view, and, generally but not invariably, has affixed to it studs or clips by which it is fastened to the sheet metal wall. In such arrangements the fixed wall has fashioned in it in suitable locations cooperating slots or key ways for the reception of the clips or studs. Alternatively, the removable panels may be attached to the sheet metal walls by screws and brackets.

The removable wall panel construction offers a number of advantages over the finished-surface fixed-wall method of cab construction. For example, the panels can be removed and temporarily stored, leaving only the sheet metal walls exposed if the elevator is to be used temporarily for freight service such as for moving household furniture. Too, if a panel surface is marred from whatever cause, the panel may be replaced by a spare one while the regular panel is being resurfaced. Additionally, the interior appearance of the cab can be changed materially by replacing one set of panels with a second set having a different dominate feature. Disadvantages, which to some extent offset these advantages, are the cost of the replacing panels, the provision of safe storage for the unused panels, and the effort of transporting and installing the panels at a time of change.

It is an object of the present invention to permit the fashioning of passenger elevator cabs such that all of the heretofore realized advantages of removable panels may be retained while at the same time eliminating all or substantially all of their attendant disadvantages.

It is also an object of the present invention to enable the production of an elevator cab possessing several interior finishes or decorative effects at substantially the cost of a cab having only a single decorative scheme.

It is a further object to provide means for changing the

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decorative treatment of the interior surfaces of the cab from one to a different design with a minimum of effort and loss of service of the elevator during changeover.

It is one feature of the invention that removable panels may be affixed to the walls of a cab in such manner that both the inner and outer surfaces of the panels may optionally be used as decorative surfaces.

A preferred manner in which these and other objects of the invention may be realized through utilization of its various features will be understood from a consideration of the following description when read in connection with the appended drawing in which:

FIGURE 1 is a floor plan view of an elevator cab with reversible wall panels;

FIGURE 2 is a sectional elevation in perspective of the interior of a cab such as shown in FIGURE 1;

FIGURE 3 is an elevation in cross-section of the cab taken along line 3-3 of FIGURE 2;

FIGURE 4 is a cross-sectional view, taken along line 4-4 of FIGURE 3;

FIGURE 5 is a cross-sectional view, taken along line 5-5 of FIGURE 3; and

FIGURE 6 is an enlarged cross-sectional view showing a modification of the portion of the cab wall shown in FIGURE 4.

As shown in FIGURES 1, 2 and 3 the elevator cab enclosure 14 includes a platform 11 to which the lower horizontal leg of base member 13 is fastened in any suitable manner. The platform 11 and the lower horizontal leg are covered by cab flooring 15, which may be any appropriate material. Joined to the upper horizontal leg of base 13 as by welding, riveting, bolting or in any other satisfactory fashion are angles 18, each of which is employed to support one fixed side wall 12 of the cab enclosure 14. Each side wall 12 is supported as, for example, by being welded along its bottom end portion to the vertical leg of its corresponding angle 18. Fastened in any suitable fashion along the top end portion of each side wall 12 is an angle 26 which serves for reinforcement purposes, and as a support to which the roof 17 of the cab enclosure 14 is rigidly secured in an appropriate manner.

In order to finish the interior cab enclosure in either utilitarian or decorative walls, finished decorative faced panels 10a, 10b, etc., are mounted to the fixed side walls 12. Each of these panels 10 is composed of an interior section 42, which may be any suitable veneering base, for example, a frame and honeycomb paper substructure, to which two veneer surfaces 44 and 46 are applied. Each surface of these panels has a finished decorative facing and either is available for use as the interior wall surface when supported in the mode hereinafter to be described.

Formed into the frame of the interior section 42 along the peripheral faces of each panel 10 is a groove 54 (FIG. 3) in which is embedded the leg of a T-shaped extrusion which forms an edge molding 48. This molding 48 is bonded to panel 10 and encompasses the entire faces of the peripheral edges of each panel. The edge surface of the bar section of the T-shaped extrusion which forms molding 48 makes a border for each panel. Recessed into molding 48 on each panel 10 are two pairs of slots 50 and 52. One pair of slots 50 is in the top edge, the other pair of slots 52 is in the bottom edge. Each slot 50 is the same dimension as and in alignment with a corresponding slot 52; and each slot of a pair is the same distance from its adjacent side edge of the panel. Each of these slots receives a support member when the panel 10 is mounted on its side wall 12. Each panel is thus supported by two bottom supports and two top supports.

Each of the bottom supports for each panel comprises a J-shaped channel member 16 which is fitted through a ventilation slot 19 formed in the junction of the horizontal

and vertical legs of angle 18. The longer leg of channel 16 is fastened to the vertical leg of angle 18 in a suitable manner, such as, by welding or bolting, thereby securing the channel member to the fixed side wall structure of the cab enclosure. The elements of channel members 16 which form the bottom supports for panel 10 are web portions 20 and shorter legs 22. Shorter legs 22 are dimensioned in length, width and depth so as to fit snugly in slots 52. Web portions 20 are sized to provide sufficient depth to channel members 16 so that, when panel 10 is resting on webs 20 with shorter legs 22 inserted in grooves 52, the lower portion of the unexposed back surface 46 of panel 10 is not in contact with the interior surface of fixed wall 12.

As is shown in FIGURES 3, 4 and 5 each of the top supports for each panel 10 comprises a clip 24 secured to reinforcing angle 26 of fixed wall 12 by means of bolts 28 and 30 which, respectively, pass through apertures 32 and 34 in clip 24 and apertures 36 and 38 in reinforcing angle 26. The webs 41 and the downwardly directed legs 40 are the parts of clips 24 which form the top supports for each panel 10. These are dimensioned so that the downwardly directed legs 40 fit snugly in slots 50 and are in alignment with legs 22 of channels 16. This insures that the panel is held vertically with the upper portion of the unexposed back surface 46 spaced from the interior surface of the fixed wall 12 the same distance as the lower portion of the panel. This spacing prevents the finished surfaces of the panels from being marred by contacting the fixed walls 12. It also permits air to circulate over the unexposed surface 46, preventing the accumulation of moisture and warping of the panel.

Although the close fitting of legs 22 and 40 in slots 50 and 52, respectively, plus the frictional forces existing between web portions 20 and 41 and their abutting molding faces on panels 10 hold the panels fixed and stable, nevertheless, there may be deflection when a person leans against them. To prevent this, felt covered blocks 51 and 53 are fastened in a suitable manner to wall 12 to preclude any deflection which may otherwise occur (FIG. 2).

FIGURE 6 shows an alternate arrangement for edge molding 48 comprising a clip 60 made of spring steel and having a concavo-convex tongue 62 and lips 64-64. The tongue is compressed into groove 54 of panel 10 and secures the clips to the panel. The lips 64-64 also act to secure the clip to the panel by being so fitted as to act in compression against the panel surfaces 44 and 46. Channel members 16 and clips 24 act in the same manner as has been previously described to secure the panel, except that the concave portion of tongue 62 produces compressive forces against the short legs 22 of J-shaped channel member 16 and the downwardly directed legs 40 of clips 24. These forces aid in holding the panels 10 fixed and stable and are not present in the previously described arrangement.

To help visualize the versatility of an elevator cab arranged in the previously described manner, let it be assumed that surfaces 44 of all panels 10 are finished in wood veneer and that surfaces 46 are finished in stainless steel. Accordingly, if all panels are mounted with surfaces 44 exposed a cab with a wooden interior decor is presented, and a cab with a stainless steel appearance is presented if all panels are mounted with surfaces 46 exposed. These two arrangements, however, are not the limit of the possible interior decors, for example, the two sides of the cab could be of wooden appearance and the rear could be of stainless steel, or the two sides could be of stainless steel and the rear of wood. Thus it is evident that a variety of interiors is possible by a simple reversal of the wall panels and this is especially true if the finished decorative facings on various panels differ.

In order to reverse some of the six panels, for example 10c and 10d, so that the interior decor of the cab is changed, bolts 28 and 30 of each clip 24 holding these two panels are removed, the clips are then raised out of

grooves 50 and the panels lifted off their support channels 16. Upon being reversed the panels are re-mounted on channels 16 so that the legs 22 are fitted into grooves 52. The legs 40 of clips 24 are again inserted in grooves 50 and the bolts 28 and 30 are then refastened so that the panels are properly supported.

It should be understood that many variations of the invention are possible. For example, vertical slots could be provided in place of the apertures 32 and 34 in clips 24 or in place of the apertures 36 and 38 in support angle iron 26 so that the bolts 28 and 30 would not have to be completely removed to permit reversing a panel. For this reason the preceding description has been given only for explanatory reasons and should not be construed in any limiting sense.

What is claimed is:

1. An elevator cab with multi-panelled walls comprising a structural shell; a plurality of panels each having two finished decorative facing surfaces, a top face, and a bottom face; molding means secured to and covering said top face and said bottom face and forming a border along said facing surfaces; said molding means having slots; and supporting elements secured to said shell and having legs inserted in said slots in said molding means.

2. An elevator cab having a multi-panelled wall construction comprising a structural shell having fixed walls; a plurality of panels mounted so as to be spaced from said fixed walls, each panel having two finished decorative facing surfaces; each panel having a peripheral edge including a top face, a bottom face and side faces; a groove in and along the peripheral edge of each panel; a T-shaped extrusion fitted into said groove and secured to said panel and encompassing the entire peripheral edge of said panel; slots in the extrusion along the top face of the panel and slots in the extrusion along the bottom face of the panel; panel support members rigidly secured to the structural shell and having upwardly extending legs closely fitted into said slots in said extrusion along the bottom face; clips removably fastened to said structural shell and having downwardly extending legs closely inserted in said slots in said extrusion along said top face; and a plurality of blocks fastened to said fixed walls intermediate said fixed walls and said panels.

3. An elevator cab according to claim 2 wherein said extrusion comprises a spring steel member having a concavo-convex tongue forming the leg of the T-shape.

4. An elevator cab having an interior wall of multi-panelled construction comprising a structural shell; a plurality of panels, each having two finished decorative facing surfaces; each panel having a peripheral edge; a groove in and along said peripheral edge; an extrusion fitted into said groove and secured to said panel; slots in said extrusion; and panel support members secured to said structural shell and closely inserted in said slots, at least some of said panel support members being removably secured to said shell.

5. An elevator cab having interior walls of multi-panelled construction comprising a shell; a plurality of panels, each having two finished decorative surfaces; each panel having a perimetrical edge including a top face, a bottom face and side faces; a groove in said faces; a T-shaped extrusion secured to said panel and encompassing said faces; the leg of said T-shaped extrusion closely fitted into said groove; two slots in said extrusion along said top face; two slots in said extrusion along said bottom face; channel support members rigidly secured to said shell and having upwardly extending legs closely fitted into said two slots in said extrusion along said bottom face thereby supporting said panel; and clips removably fastened to said shell and having downwardly extending legs closely fitted into said two slots in said extrusion along said top face thereby supporting said panel.

6. An elevator cab having a multi-panelled interior wall

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construction comprising a structural shell; a plurality of panels, each having a peripheral edge with apertures therein and two finished decorative facing surfaces; and panel support members secured to said structural shell having legs closely inserted in said apertures and fixing the positions of said panels with respect to said structural shell so that either facing of any panel can be selectively exposed as part of the interior wall surfaces of said cab.

7. An elevator cab having multi-panelled interior walls comprising a structural shell having vertically extending sides; a plurality of panels, each having two finished decorative facings and a pair of oppositely disposed edges, said edges having apertures therein; and panel supporting means secured to said shell having members inserted in said apertures holding said panels in spaced vertical and substantially parallel displacement with respect to the sides of said shell such that either facing of any panel can be selectively displayed as part of the interior wall surfaces of the cab.

8. An elevator cab having an interior wall of multi-panelled construction comprising a structural shell having vertically extending sides; a plurality of panels each having two finished decorative facing surfaces and a peripheral edge; panel supporting means secured to said shell having a first set of elements supporting said panels

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along their peripheral edges; said panels having a second set of elements along their peripheral edges cooperating with said first set of elements and holding said panels in spaced vertical and substantially parallel displacement with respect to the sides of said shell; elements of one set defining apertures and elements of the other set having legs inserted in said apertures so that either facing of any panel can be selectively displayed as part of the interior wall surface of the cab.

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