

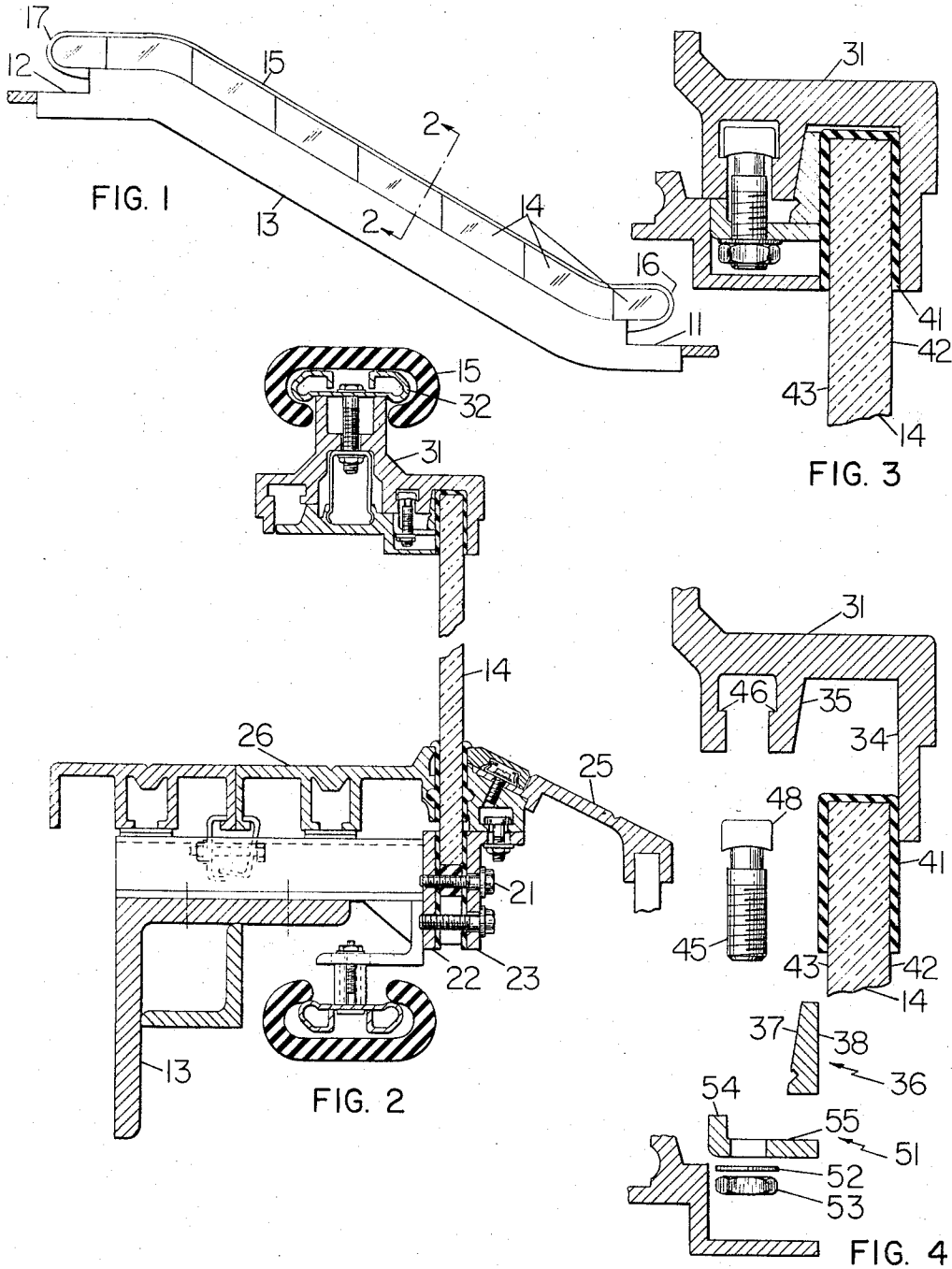
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TRANSPARENT BALUSTRADE FOR A PASSENGER CONVEYOR

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1

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TRANSPARENT BALUSTRADE FOR A PASSENGER CONVEYOR

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This invention relates generally to balustrades for passenger conveyors such as moving stairways and more particularly to balustrades with transparent side panels.

Balustrades for passenger conveyors in which the side panels are transparent have been known for a number of years. Such balustrades have included a series of balustrade posts supported on the truss framework of the conveyor and extending upwardly to support the guide assembly for the moving handrail. In some instances these posts have been in substantial alignment with the panels while in others the panels have been between the moving conveyor surface and the posts. In either case the posts have provided the entire support for the handrail section between the landings.

In order to improve the appearance of the transparent balustrade it is desirable to enhance the impression of its lightness or lack of structure. This can be accomplished by eliminating the balustrade posts and supporting the handrail section in a less visible manner.

It is therefore an object of the present invention to improve the architectural effect or appearance of transparent balustraded passenger conveyors by eliminating the balustrade posts and supporting the moving handrail structure in a relatively obscure manner.

In accordance with the invention there is provided a transparent balustrade for a passenger conveyor in which a moving handrail is supported on handrail guide support brackets above a side panel section wherein a plurality of transparent side panels aligned in end to end relation extend downwardly from the handrail portion to the vicinity of the moving conveyor surface and being characterized by the absence of balustrade posts and in that the handrail portion is mounted directly on and supported solely by the transparent side panels along their upper edge, the handrail support brackets each having a downwardly opening longitudinal slot embracing a side panel along its top edge by a clamping member inserted into the slot from below and pressed upwardly by a lever to move the member laterally so as to force the side panel along its top edge against one wall of the slot.

For a clearer understanding of the invention, reference may be made to the following detailed description and the accompanying drawing in which:

FIGURE 1 is a side elevation view of a conveyor incorporating the present invention;

FIGURE 2 is a cross section view taken on the line 2—2 of FIGURE 1;

FIGURE 3 is an enlarged detail view of the clamping mechanism; and

FIGURE 4 is an exploded view of the mechanism of FIGURE 3.

Referring first to FIGURE 1, there is shown a side view of a moving stairway for carrying passengers between a lower landing 11 and an upper landing 12. The stairway includes a structural truss 13 and a plurality of transparent side panels 14 surmounted by a handrail 15. The panels 14, preferably made of tempered glass, are spaced apart slightly with no posts between and extend upwardly from the truss 13 to the vicinity of the

2

handrail 15. The latter is formed into semi-circular portions 16 and 17 at each landing and is returned to the opposite landing through an opaque portion of the truss 13.

As best shown in FIGURE 2 each of the panels 14 is supported at its lower edge by a series of bolts 21 which pass through apertures or slots formed in the panels and which clamp the panels between two members 22 and 23, which in turn are fastened to a portion of the structural truss 13. The panels 14 are flanked by interior and exterior ledges 25 and 26 respectively.

A handrail guide support bracket 31 in turn supports a track 32 on which the handrail slides. As best shown in FIGURES 3 and 4, the support bracket 31 is formed with a first generally vertical slot which includes a substantially vertical wall 34 and an inclined wall 35. An elongated wedge 36 has a complementary inclined face 37 and a generally vertical face 38. A resilient nosing or gasket 41 covers the top edge of the side panel 14. The support bracket 31 is placed over the top edge of the side panel 14 and nosing 41 so that the wall 34 is positioned adjacent to one vertical face 42 of the side panel while the wall 35 is positioned adjacent to the other vertical face 43.

The support bracket 31 is formed with a second generally vertical slot into which a bolt 45 is placed with the head uppermost. The slot is formed with a pair of generally horizontal shoulders 46 which engage the bottom of the head 48 of the bolt 45.

The wedge 36 is supported by an elongated angle shaped lever 51 which in turn is supported by a washer 52 and a nut 53. The latter is threaded onto the bolt 45 which passes through a hole in the lever 51. When the nut 53 is tightened, the upturned end 54 of the lever 51 bears against the support bracket 31 while the other end 55 urges the wedge 36 upward thereby urging the panel 14 to the right, as viewed in FIGURES 2, 3 and 4, and clamping it securely to the support bracket 31.

It is contemplated that there be one wedge 36 for each of the side panels 14 and that each wedge extend approximately the full length of the panel. The bolts 45 and levers 51 may be provided every 25 centimeters or so.

What is claimed is:

1. A transparent balustrade for a passenger conveyor, said balustrade having a handrail portion including a moving handrail supported on handrail guide support brackets, and a side panel section including a plurality of transparent side panels aligned in end to end relation and extending downwardly from said handrail portion to the vicinity of the moving conveyor surface, said balustrade being characterized by the absence of balustrade posts and in that the handrail portion is mounted directly on and supported solely by the transparent side panels along their upper edge, said handrail support brackets each having a downwardly opening longitudinal recess embracing a side panel along its top edge by a clamping member inserted into the recess from below and pressed upwardly by a lever to move said clamping member laterally so as to force the side panel along its top edge against one wall of the recess.

2. A transparent balustrade for a passenger conveyor in accordance with claim 1 characterized in that said clamping member is an elongated wedge.

3. A transparent balustrade for a passenger conveyor in accordance with claim 2 characterized in that said longitudinal recess includes a first substantially vertical wall against which one face of said side panel is pressed and a second inclined wall against which said wedge is pressed.

3

4. A transparent balustrade for a passenger conveyor in accordance with claim 3 characterized in that pressure is exerted on the lever by a nut bearing thereagainst and threaded onto a bolt held captive by a recess in the supporting frame.

5. A transparent balustrade for a passenger conveyor in accordance with claim 4 characterized in that a plurality of elongated wedges are provided, each extending approximately the full length of one side panel.

6. A transparent balustrade for a passenger conveyor

4

in accordance with claim 5 characterized in that each wedge is pressed upwardly by a plurality of levers.

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5

10