

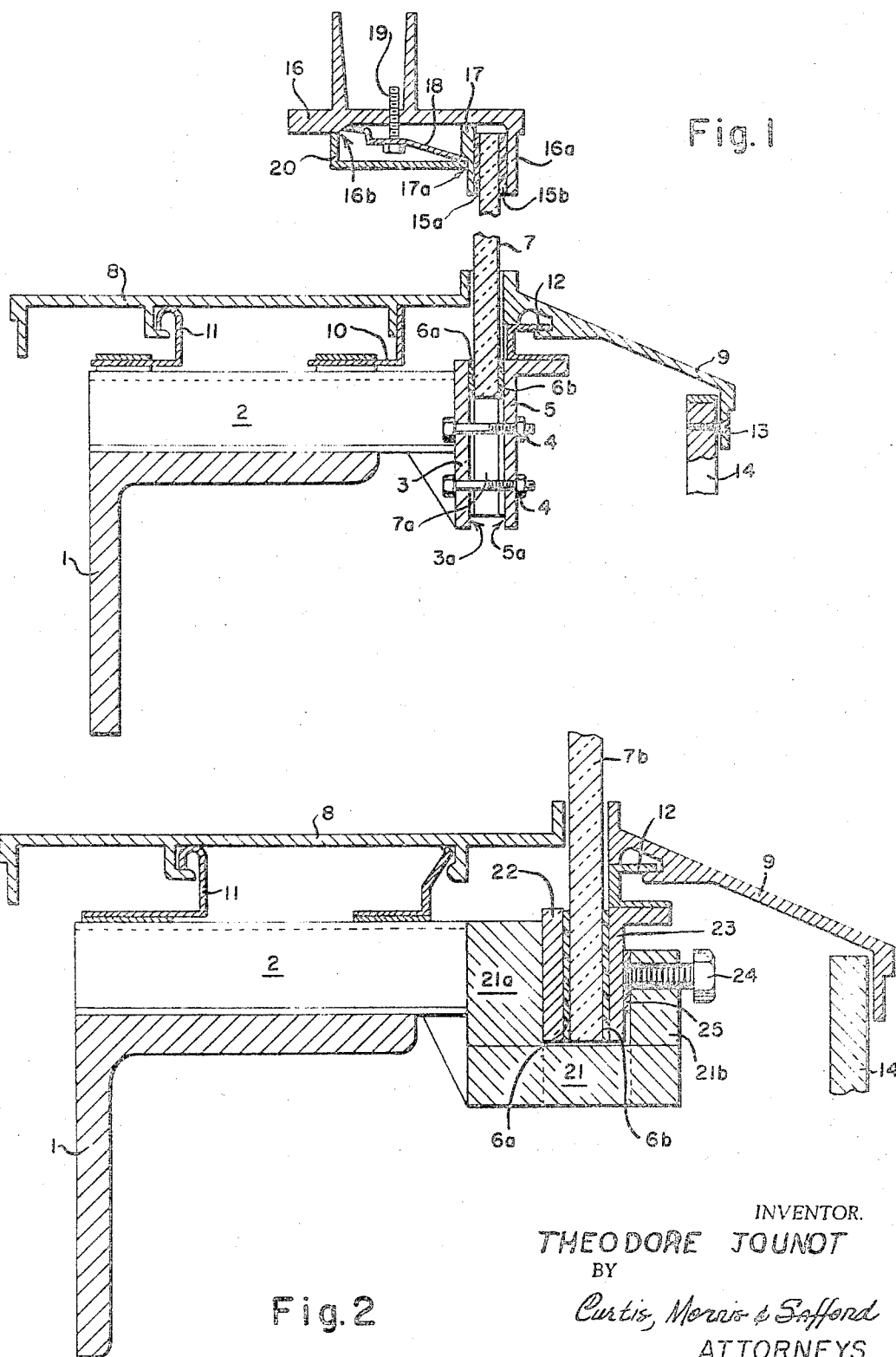
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BALUSTRADE AND THE LIKE

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BALUSTRADE AND THE LIKE

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5 Claims

ABSTRACT OF THE DISCLOSURE

A balustrade construction is disclosed formed by a transparent or translucent panel which is self-carrying and is clamped at the top and bottom by a frame construction.

This invention relates to balustrade constructions and the like and more particularly to such constructions used for moving stairways and for decorative purposes in public buildings.

An object of this invention is to provide simple, attractive and sturdy balustrade constructions and the like. Another object is to provide protective railings for public stairways, moving sidewalks and the like. A further object is to provide for the above with structures which are adaptable to various conditions and requirements which are encountered in the architectural and building fields.

These and other objects will be in part obvious and in part pointed out below.

In the drawings:

FIGURE 1 is a vertical section of one embodiment of the invention, and

FIGURE 2 is a somewhat enlarged view corresponding to the lower portion of FIGURE 1 but showing another embodiment of the invention.

Referring to FIGURE 1 of the drawings, the balustrade construction which is shown is one side of a moving stairway or moving sidewalk. As here represented a rubber covered, endless steel belt moves at the left of the figure and a moving hand rail is mounted at the top of the figure but these elements are not shown in the drawings. A stationary under-frame is formed by an angle iron 1, upon which is mounted a plurality of cross-beams 2, which carry the balustrade structure. At the right of cross-beams 2 there is a plate 3 and spaced from plate 3 there is a similar plate 5 which has an angle portion at the top. Mounted between the surfaces 3a and 5a of plates 3 and 5 is a translucent or transparent panel 7 which has spaced vertical slots 7a extending from its bottom edge. A pair of bolts 4 are positioned in each of these slots to clamp plates 3 and 5 together, and a pair of cushion strips 6a and 6b are positioned at the sides of panel 7 between the panel and plates 3 and 5, respectively. Hence, the panel 7 is securely clamped in place and the resilient strips insure a proper mounting. Mounted at the left of panel 7 is a masking cover or protective strip 8 which is supported by a plurality of spring brackets 10 and 11 mounted on cross-beams 2. At the right of panel 7 there is a masking cover 9 which is supported adjacent the panel by a U-section strip 12 and at the right by screws 13 through fixed support 14 of the under-frame.

A top frame 16 is clamped to the upper edge of the panel and has an angle flange 16a extending downwardly along the outside surface of the panel and a movable clamping strip 17 carried by frame 11 is positioned against the other side of the panel. A pair of flexible strips 15a and 15b are positioned along the sides of the panel to provide cushions between the panel and the adjacent surfaces. Top frame 16 has an angle ledge 16b and strip

17 has a ledge indicated at 17a. Extending between these two ledges is a flexible clamping channel 18 which is normally dished somewhat downwardly. A plurality of stud bolts or screws 19 extend through clamping channel 18 and are threaded into top frame 16. The tightening of screws 19 draws the central portion of the clamping channel upwardly so as to tend to straighten it and push its opposite edges away from each other. The left-hand edge of the clamping channel is securely anchored on the stationary ledge 16, thus the tightening of screws 19 moves the right-hand edge of the clamping channel to the right and that presses strip 17 against panel 7 thereby securely clamping the panel in place. The openings in the clamping channel through which the stud bolts or screws 19 extend are sufficiently large to permit the desired leeway. A cover strip 20 is mounted beneath the clamping channel and a pair of vertical flanges on the top of frame 16 provide for the mounting of the hand rail.

In the embodiment of FIGURE 2, the structure is identical with that of FIGURE 1 except as will now be described.

A fabricated channel assembly 21 has a side portion 21a welded to cross-beams 2 and a side portion 21b which extends along the opposite side of the lower edge of panel 7b. A pair of plates 22 and 23 are positioned within the channel upon the opposite sides of the panel and flexible strips 6a and 6b positioned at the sides of panel 7b provide for cushioned clamping of the panel. A flexible strip 25 is positioned along the side of plate 23 and a plurality of stud bolts 24 are tightened to clamp the panel in place.

With the structure described above, the panel is supported firmly and the railing does not require additional structural support. A series of panels may be positioned in spaced relationship and they may be decorative or light-transmitting, or both. When desirable, a single panel may be provided and the resultant structure presents a continuous smooth appearance devoid of any intermediate structural components to mar the light-transmitting characteristics of the panel. The invention contemplates that other types of transparent or translucent panels may be used.

What is claimed is:

1. In a balustrade construction, the combination of, an upstanding panel member having an edge with adjacent parallel side faces, and a frame clamping said panel member at said edge, said frame comprising a generally horizontal member having a flange portion in clamping relationship to one of said side surfaces and a horizontal portion integral therewith and projecting past said edge and beyond the other of said side surfaces and a clamping strip positioned parallel to said flange and extending along said other side surface in clamping relationship thereto, said horizontal portion and said clamping strip having angle ledges spaced from each other and there being a clamping zone therebetween, said angle ledges presenting surfaces against which forces may be exerted parallel and transversely to said other side surface, said frame member also including a resilient clamping member having a generally channel portion and integral adjacent portions each of which presents a pressure surface which rest respectively against said angle ledges, said generally channel portion being positioned with respect to said horizontal portion upon the opposite side of a plane extending between said angle ledges, said frame member including clamping means which is tightened to move said generally channel portion toward said horizontal portion thereby to urge said clamping pressure surfaces from each other and exert clamping forces respectively upon said angle ledges and clamp said panel member between said clamping strip and said flange.

3

2. The construction described in claim 1, wherein the last-named means comprises a plurality of screws.

3. The construction as described in claim 1, wherein said panel member is light-transmitting and provides support for said frame member.

4. The construction as described in claim 3, which includes a series of said panel members, and a base support frame for said panel members including a pair of parallel clamping members and a plurality of bolts extending through said panel members.

5. The construction as described in claim 3, and a bottom frame member comprising a rigid channel and a pair of clamping strips positioned therein with clamping faces upon the opposite sides of said panel members, and a plurality of stud bolts engaging one of said clamping strips and clamping said clamping strips and said panel members in said channel member.

4

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