Nov. 14, 1933. A. VOIGT 1,934,834

DOOR SEPARATOR AND TRACK FOR DOOR RUNWAYS IN DISPLAY CASES

Filed June 14, 1928

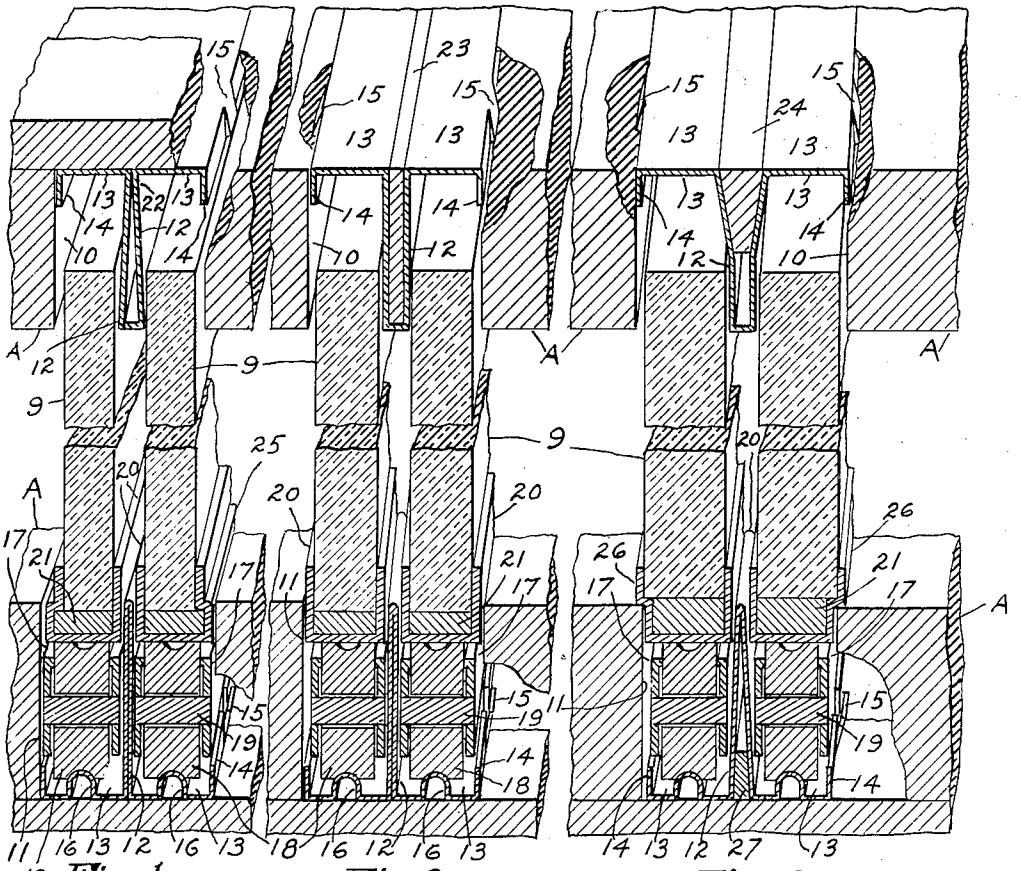


Fig. 1. Fig 2 Fig. 3.

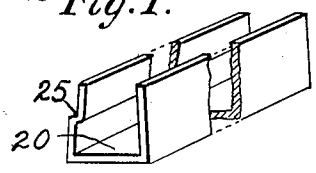


Fig. 4.

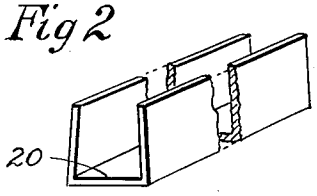


Fig. 5.

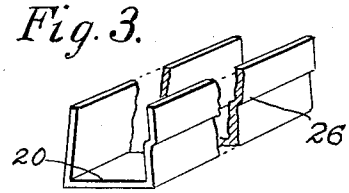


Fig. 6.

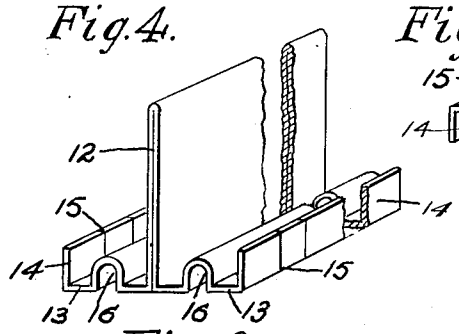


Fig. 8.

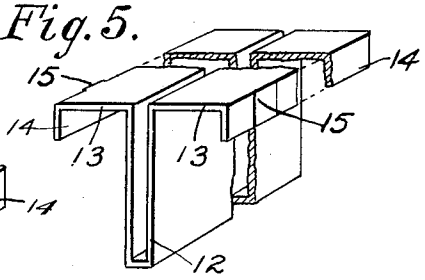


Fig. 7.

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DOOR SEPARATOR AND TRACK FOR DOOR RUNWAYS IN DISPLAY CASES

Albert Voigt, New York, N. Y.

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4 Claims. (Cl. 16—100)

This invention relates to display cases having an opening for affording access to the case and having runways in the top and bottom in relation to said opening for the mounting of doors, and particularly glass doors, therein to have sliding movement one relative to the other, and it is the object of the invention to provide improved means to be mounted in said runways to serve as separators for the doors in the upper runways and the means in the lower runway to serve as a combined door separator and track for a door supporting roller carriage, and to provide means for this purpose wherein a part thereof is adapted to be offset into the wall of the runways to secure and retain the same against displacement therein.

It is a further object of the invention to provide an improved door separator and a combined door separator and track constructed or drawn up from a single piece of sheet metal and arranged with an intermediate and longitudinally extending parting member and the lateral marginal portions at each side of the parting member flanges to extend parallel with the parting member and adapted to be offset into the wall of the runways to retain the same in the runways, and the combined separator and track mounted in the lower runway having a portion intermediate the parting member and marginal flanges offset in the direction of the parting member to provide the same with roller engaging rails.

Another object of the invention relates to an improved separator and a combined separator and track means which may be readily adapted for use in connection with runways of different widths and for use in connection with doors of different thickness.

Other objects and advantages will hereinafter appear.

In the drawing accompanying and forming a part of this application Figure 1 is a sectional view in perspective of a display case showing an embodiment of my improved door mounting means in relation thereto, only so much of the parts being shown as is essential to an understanding of the invention, and showing the same in connection with the mounting of doors of relative thinness.

Figures 2 and 3 are views similar to Figure 1 showing the arrangement of the parts for adapting them for the mounting of doors of increased thickness relative to that shown in Figure 1.

Figures 4, 5 and 6 are perspective views of frame members to be applied to the glass doors for supporting the same upon rollers or carriers therefor.

Figure 7 is a perspective view of a separator adapted for mounting in a runway in the top of a display case for engagement between the top marginal portion of the doors to separate and guide the doors; and

Figure 8 is a perspective view of the combined separator and track for mounting in the lower runway.

In the drawing I have shown an embodiment of the invention in connection with a display case, only so much of the case being shown as is deemed essential to an understanding of the invention, and designated in a general way by A. To afford access to the case it is provided with an opening, usually in the front, which is closed by doors 9, in the present instance constructed entirely of glass, which have longitudinal sliding movement one relative to the other in runways 10, 11, of channel shape in cross section, in the top and bottom of the case in relation to said opening.

To maintain the doors in spaced relation and permit of free and easy movement of the doors a separator is mounted in the upper runway and a combined separator and track is mounted in the lower runway for the movement of a door supporting roller carriage along the same. The separator in the upper runway is constructed and formed, as by drawing, from a single sheet or strip of metal and comprises an intermediate parting member 12 formed by folding the strip longitudinally upon itself with the opposite portions of the fold in spaced relation and longitudinal marginal portions 13 flanged to extend outwardly at a right angle to the parting member, and said outwardly flanged portions flanged to extend in the same direction as and parallel to the parting member, as at 14. The separator is mounted in the runway 10 with the flanges 14 in contiguous relation to the side walls of the runway and the parting member extending downward and positioned centrally in the runway separating the runway into a pair of runways. The flanges 14 not only serve to position the parting member centrally in the runway but also serve as the means to secure the separator against displacement in the runway. For this purpose the material of said flanges 14 is offset outwardly into the wall of the runway, usually made of wood. This may be done by bulging outwardly the marginal edge portion of the material of the flanges and imbedding the same in the wall of the runway, or said flanges may be arranged with tongues by providing incisions therein to extend from

the edge to adjacent the juncture thereof with the flanges 13, as at 15, and after the separator has been engaged in the runway spreading said tongues outwardly and forcing them into the walls of the runways.

The combined separator and track arranged in the runway 11 is of the same structure as the separator for the upper runway except that the intermediate folded portions 12 comprising the parting member are arranged in contiguous relation to each other and the outwardly flanged portions 13 are offset to arcuate shape in cross section in a direction toward and to extend parallelly of and in spaced relation to the parting member 12 and flanges 14, the offset portions 16 constituting track rails and the portions of the flanges 13 at the opposite sides thereof a supporting base therefor to engage the bottom of a door runway.

The doors are supported to have movement along the rails 16 through roller carriages embodying a carrier 17 of channel shape in cross section, rollers 18 having peripheral grooves to correspond in shape to the rails being rotatably mounted on pins 19 fixed in the opposite legs of the channel carrier, the rollers being of a diameter so that a peripheral portion of the rollers will project through openings in the connecting portion of the channel carrier and beyond the legs thereof, as clearly shown in the drawing.

The doors are supported upon the rollers to have longitudinal movement and to prevent the possible chipping of the doors when made of glass a metal frame 20 of channel shape in cross section is engaged upon the bottom edge of the door with a member 21 of suitable cushioning material interposed between the edge of the door and the connecting portion of the channel frame.

The separator for the upper runway is formed with the opposite folded portions of the parting member 12 equally spaced apart for the entire length thereof, and to adapt the same for mounting in a runway of decreased width the opposite portions of the parting member are pressed together so that the folded portions will converge in a direction from the connecting portion to the ends arranged with the flanges 13, as shown at 22 in Figure 1. In the use of a separator in a runway of a width approximately the same as that of the flanges 13 with the opposite portions of the parting member extending in spaced and parallel relation, as shown in Figures 2 and 7, a spacing member is engaged between the portions of the parting member, as shown at 23 in Figure 2, thus maintaining the folded portions of the parting member in spaced relation and the flanged portions 14 in contiguous relation with the side walls of the runway.

Should the runway be of a greater width a spacing member of V or wedge shape is engaged between the portions of the parting member at the juncture thereof with the flanges 13, as shown at 24 in Figure 3.

The channel frame member 20 for engagement upon the edge of the door is made of yielding sheet metal drawn to form, and to cause the leg portions of said member to firmly engage the opposite surfaces of the door the space between the free marginal portions of the opposite channel legs of said member is arranged of less width than the connecting portion 22 of said legs, which may be effected by converging the legs from the connecting portion, as clearly shown in Figures 4, 5 and 6. To adapt said frame for engagement upon a door of less thickness within the connecting portion of the channel legs the one leg is offset inwardly, as at 25 in Figures 1 and 4, and to adapt such frame member for mounting upon a door of greater thickness one leg of said frame member is offset outwardly, as at 26 in Figures 3 and 6, or both legs may be offset, as described. These frames are engaged upon the door when only one of the legs is offset so that the offset portion will be at the outer side of one door and at the inner side of the other door, as clearly shown in Figures 1 and 3.

The parting members are of a length to extend between the doors to maintain the doors in spaced relation and co-operate with the lateral walls of the runways to guide the doors in their movement. To adapt the separator and track for runways of greater width the opposite portions of the parting member are spread by the engagement of a wedge therebetween, as shown at 27 in Figure 3.

In the method of mounting the separator in the upper runway as shown in Figure 1 the flanged ends of the opposite folded portions 12 are moved in a direction toward each other to such an extent as to permit of the engagement of the separator in the runway with the flanges 14 to engage the side walls of the runway, and when the flanges 13 are seated against the bottom of the runway the material of the flanges 14 are offset into the side walls of the runway, this being facilitated by the arrangement of the lips 15.

In the method of mounting the separator in the runway shown in Figure 2, the spacer 23 is first partially inserted between the folds 12, this spacer preferably being slightly tapered, when the separator is forced into the runway the spacer engaging the bottom of the runway is simultaneously forced between the folds 12 and spreading the same causing the flanges 14 to firmly engage with the side walls of the runway when portions of such flanges are offset into the wall of the runway.

The method of mounting the separator and the combined separator and track in the runways in Figure 3 is the same as that described in connection with the mounting of the separator in the runway in Figure 2, the spacers 24 and 27 being in the form of a wedge but of a width less than the width of the folded portions 12.

From the foregoing description it will be obvious that I have provided a separator for the upper edges of doors engaged in runways of display cases, and a combined separator and track for a door supporting roller carriage, which may be readily adapted for different widths of runways, and provided a door engaging frame which may be readily adapted for doors of different thickness, and that various modifications may be made in the construction and arrangement of such parts without departing from the scope of the invention.

Having thus described my invention I claim:

1. The combination with a display case having a longitudinal groove in the base thereof, of means to provide the groove with parallel door supporting roller runways comprising a plate folded upon itself midway of its sides with the longitudinal marginal portions flanged laterally to opposite sides to engage the bottom of the groove and the marginal portion of said flanges flanged to extend parallel with the intermediate folded portion and engage the side walls of the groove, and a wedge member engaged between the intermediate folded portion to spread the

same and impinge the marginal flanges against the side walls of the groove and position the intermediate folded portion centrally of the groove to serve as a door parting member.

2. In a separator for door runways of display cases and the like, a metallic plate folded upon itself midway of its sides substantially to U shape in cross section to constitute a door parting member and the longitudinal marginal portions of the plate flanged to extend laterally from opposite sides of the folded portions and adapted to engage the bottom of the runway, and the marginal portions of said flanges flanged to extend in parallel relation to the folded portions and adapted to lie contiguous to the side walls of the runway and space the separator centrally therein and portions of said lateral flanges offset into the walls of the door runway to secure and support the separator therein, and a spacing member engaged in the space between the folded portions to spread said portions and impinge the marginal flanges against the walls of the runway.

3. In a lining and guiding means for sliding doors in channel runways of display cases, an elongated metallic plate folded upon itself midway of the longitudinal edges to extend in parallel relation and the longitudinal marginal portions flanged laterally at right angles to opposite sides of the folded portion to engage the bottom of the runway, and the marginal portion of each of said laterally flanged portions flanged to extend parallel with the folded portion and engage the side walls of the channel runway and spacing the folded portion centrally of the runway to serve as a door parting member, and the marginal flanged portions offset into the wall of the runway to secure the lining and guiding means in the runway.

4. In a lining and track for sliding doors in runways of display cases, a sheet metal member positioned in the groove, said member being offset intermediate the longitudinal edges to arch shape in cross section and extending longitudinally of the member to constitute a roller supporting track rail, the portions of the member at opposite sides of said offset portion engaging the bottom of the groove for supporting the member therein, and the longitudinal marginal portions of the member flanged at right angles in the direction of the offset to engage the side walls of the groove and portions thereof offset into said walls to secure the plate in the groove.

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