Nov. 10, 1936. W. A. BEAUCHAMP 2,060,720

TRACK BRACKET

Original Filed July 20, 1931

FIG. 1

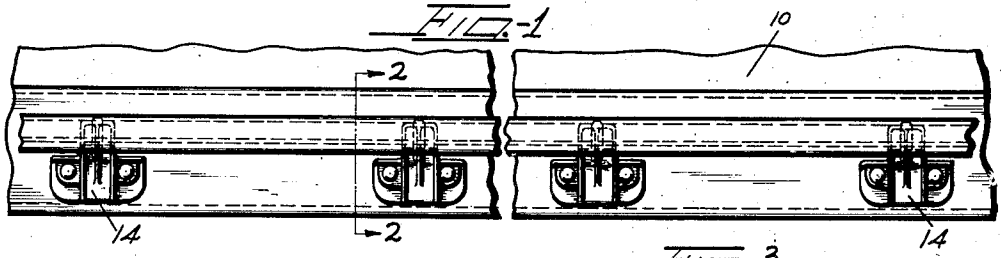


FIG. 2

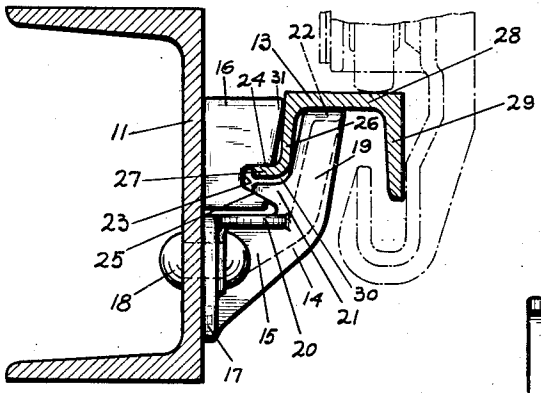


FIG. 3

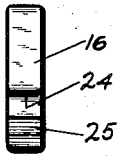


FIG. 4

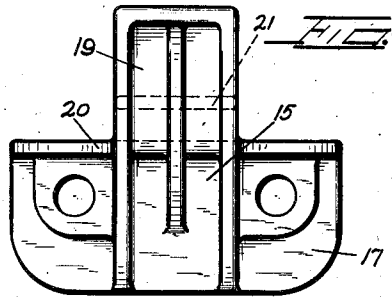


FIG. 5

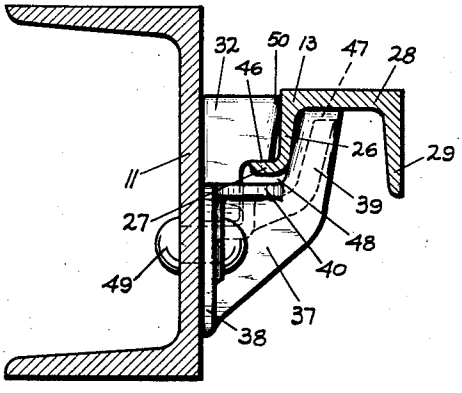


FIG. 6

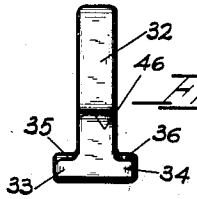
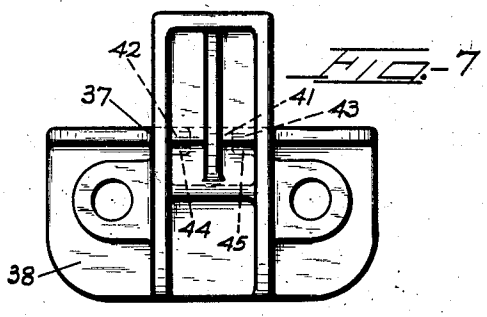


FIG. 7



~INVENTOR~

WILFRED A. BEAUCHAMP

BY~ Samuel Reese

ATTY.

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2,060,720

TRACK BRACKET

Wilfred A. Beauchamp, Chicago, Ill., assignor, by mesne assignments, to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Original application July 20, 1931, Serial No. 551,855, now Patent No. 1,963,821, dated June 19, 1934. Divided and this application October 28, 1933, Serial No. 695,557

7 Claims. (Cl. 16—94)

This invention relates to track brackets and concerns itself primarily with brackets for securing tracks for sliding doors of railway house cars in position without the use of rivets or the like.

A considerable part of the cost of application of car fixtures for sliding car doors may be attributed to the expense involved in supporting the tracks for said doors upon the car underframe. For such support brackets are usually employed, these brackets being riveted to the side sills of the car underframe and the track being riveted to the brackets. The expense entailed in the operation of riveting the track to the brackets is material. The employment of supporting brackets which obviate this operation appears highly desirable and conducive of economies which measurably reduce the cost of car construction.

It is an object of this invention to provide track supporting brackets which eliminate in a large measure the necessity of riveting said track to the brackets and the expense incident thereto.

A further object is the provision of track brackets which, while obviating riveting of the track thereto, provide secure support for said track.

An object is the provision of track supporting brackets with which a track may be readily and simply assembled.

It is an object to provide track supporting brackets in which the assembly with the track is completed by the riveting operation which secures the brackets to the side sills.

Other objects of this invention will become apparent as the description thereof proceeds.

In the drawing forming part of this specification:

Figure 1 is a partial elevation of a house car showing one embodiment of the invention applied thereto;

Figure 2 is a vertical section taken on line 2—2 of Figure 1, the lower portion of a door and a supporting hanger being shown in dot and dash lines to indicate the relationship thereof with the track;

Figure 3 is a front elevational detail of a complementary arm member as shown in Figure 2 of the drawing;

Figure 4 is a front elevational detail of the other complementary member of the track bracket illustrated in Figure 2;

Figure 5 is a vertical section similar to Figure 2 illustrating a modification of the invention;

Figure 6 is an elevational view similar to Figure 3 illustrating the complementary arm member of the bracket shown in Figure 5; and

Figure 7 is a view similar to Figure 4 illustrating the other complementary member of the track bracket shown in Figure 5.

Referring to the embodiment of the invention illustrated in Figures 1 to 4, inclusive of the drawing the numeral 10 designates a fragmentary portion of a house car which embodies a side sill 11. The track 13 is adapted to be supported from the side sill by means of a plurality of track brackets 14. The track is utilized to support a sliding door, shown partially in dot and dash lines in Figure 2 of the drawing, customarily employed upon each of the sides of a house car.

In this embodiment of the invention each of the track supporting brackets 14 comprises an outwardly disposed member 15 and an inwardly disposed complementary arm member 16. The outer member 15 is provided with a vertical flange 17 by means of which said member may be attached to the side sill 11 by a plurality of rivets 18. The outer member 15 is provided, additionally, with an upwardly extending arm 19 disposed in outwardly offset relationship with respect to the attaching flange 17. The upwardly extending arm 19 adjacent the horizontally offset portion 20 of the member 15 is provided with an inwardly extending lug 21, the underface of which as clearly indicated in Figure 2 of the drawing, is downwardly and outwardly inclined. The upper extremity of the arm 19 is turned outwardly so as to provide a supporting flange 22, for a purpose which will hereinafter appear.

The member 16 is complementary with the outwardly disposed member 15 and cooperates therewith in the formation of the track supporting bracket. Said complementary arm member 16 is recessed at 23 so as to provide a ledge 24 and a downwardly and outwardly inclined projection 25.

The track 13, which is adapted to be supported by the track brackets 14, embodies a substantially vertical flange 26 from one extremity of which there projects a substantially horizontal flange 27. A substantially horizontal flange 28 projects from the other extremity of said vertical flange and constitutes the tread of the door supporting track 13. This tread is provided with a downwardly extending depending flange 29 which, as clearly appears from Figure 2 of the drawing, is adapted to coact with the door hangers in order to prevent disengagement of the lower portion of the door from the track.

In supporting the track 13 by a plurality of the track brackets illustrated in Figures 1 to 4, inclusive, the outwardly disposed member 15 and the complementary arm member 16 are assembled with the track so that the latter is disposed with the vertical flange 26 thereof and the horizontally extending flange 27 positioned within the vertically and laterally extending recesses 30 provided by the complementary engagement between the members 15 and 16. Additionally, the tread 28 of the track is disposed upon the outwardly extending flange 22 of the arm 19 whereby said flange acts as an abutment or support for the tread of the track. It will be observed from Figure 2 of the drawing that the complementary arm member 16 in the application of the track and track brackets to the side sill 11 is positioned in engagement with said side sill. Furthermore, the projection 25 provided on the complementary arm member 16 is disposed with its downwardly and outwardly inclined face engaging under the correspondingly inclined lug 21 provided on the arm 19. When these parts are applied to the sill and the rivets 18 driven through the attaching flanges 17 and the side sill it will be apparent that the outer member 15 of each of the supporting brackets will be forced into engagement with the sill and that, as a consequence of the engaging inclined faces provided on the complementary arm member 16 and on the arm 19, said complementary arm member 16 will be forced tightly into engagement with the side sill and will have imparted thereto a downward movement. As a result of this movement of the complementary arm member the ledge 24 will exert a downward pressure upon the track 13 through its engagement with the horizontal flange 27, while the outer corner 31 of each of the complementary arm members will engage the vertical flange 23 of the track 13 and thus insure firm seating of the tread 28 of the track upon the tread supporting flange 22 provided on the arm 19.

A modification of the invention is illustrated in Figures 5, 6 and 7 of the drawing. In this modification a complementary arm member 32 is utilized which, as clearly appears from Figure 6 of the drawing, is substantially inverted T-shaped in front elevation. Oppositely extending flanges 33 and 34 provided at the lower extremity of the complementary arm member have downwardly and outwardly inclined upper faces as indicated at 35 and 36.

The complementary arm member 32 is adapted to coact with a member 37 to provide a track supporting bracket, the member 37 of which is disposed outwardly relative to the complementary arm member 32 in the operative position of said bracket. The outwardly disposed member 37 comprises a vertical attaching flange 38 and an outwardly offset arm 39, there being an offset 40 between these portions. Said offset portion 40 is recessed as indicated at 41 so as to provide flanges 42 and 43 so disposed that the recessed portion 41 is substantially of inverted T-shaped formation. Each of the flanges 42 and 43 has its lower face formed so as to provide downwardly and outwardly inclined portions 44 and 45.

In addition to the foregoing described elements the complementary arm member 32 is formed with a ledge 46 and the arm 39 of the outwardly disposed member 37 is provided with an outturned supporting flange 47.

In the application of the brackets of this modified form of the invention and the track 13 to the side sill 11 the vertical flange 26 and the horizontal flange 27 provided on the track 13 are disposed in the downwardly and laterally extending recess 48 provided between the outwardly disposed member 37 and the complementary arm member 32 of each of the track supporting brackets. The portion of each of the complementary arm members 32 lying below the ledge 46 extends into the recess 41 provided in the outwardly extending member 37 so that the flanges 33 and 34 of said complementary arm member lie below and in engagement with the flanges 42 and 43 provided on said outwardly disposed member. In this relationship the outwardly and downwardly inclined faces 35 and 36 formed on the complementary arm member engage the correspondingly formed faces 44 and 45 on the underside of the flanges 42 and 43. These parts are secured to the side sill 11 by means of a plurality of rivets 49, the complementary arm members being positioned in engagement with the side sill. As the rivets 49 are driven through the attaching flanges 38 and the side sill the complementary arm members, because of their engagement with the side sill and because of the coaction of the downwardly and outwardly inclined faces provided on said complementary arm members and said outwardly disposed members 37, will be forced downwardly. As a consequence of this movement of the complementary arm members, the ledges 46 provided thereon will engage and exert a downward force upon the horizontally extending flange 27 of the track 13 while the outer corner 50 of each of the complementary arm members will engage the vertical flange 26 of the track so as to insure firm engagement of the tread 28 upon the horizontal flange 47 and tight binding engagement of the track between the complementary members of each of the track supporting brackets. It will be apparent, therefore, that in each of the embodiments of the invention the track will be securely held against movement relative to the side sill by means of the track supporting brackets of the invention.

This application is a division of application Serial No. 551,855, filed July 20, 1931, which has become Patent 1,963,821 granted June 19, 1934.

It will be apparent that numerous changes and modifications in the details of the invention will be clear to those skilled in the art. It is intended, therefore, that all such modifications and changes be comprehended within this invention, which is to be limited only by the scope of the claims appended hereto.

I claim:

1. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying a plurality of spaced arms movable toward each other and adapted to be associated to present a substantially vertically and horizontally extending recess open at its upper end, said recess being adapted to receive a track flange conforming substantially to said recess, said bracket being adapted to be secured to a support with one arm of said bracket in engagement with said support subsequent to the disposition of said track flange in said bracket recess, cooperating means provided on said arms, said latter means cooperating during the attachment of said bracket to said support effecting movement of said bracket arms toward each other to clamp said track between said arms.

2. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying relatively movable complemental arm members having interengaging

portions, said bracket being adapted to be secured to a support with one of said arm members of a bracket abutting said support, said complemental arm members being associated to provide a substantially vertically and horizontally extending recess adapted to receive a substantially vertically and horizontally extending track flange, one of said arm members of said bracket being rigidly fastened to said support, said interengaging portions cooperating during said fastening operation to impart movement to said arms whereby the latter firmly grip said track flange.

3. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying an outwardly disposed member adapted to be fastened to a support and a separate means adapted to be disposed between said member and said support, said member having a shoulder directed toward the support and provided with a downwardly and outwardly inclined lower surface, said member and said separate means being adapted to receive between them a portion of a track having a horizontal flange, said separate means having a shoulder engaging under the shoulder on said member and having a portion adapted to be disposed in overlapping engagement with said horizontal track flange.

4. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying a member having spaced ledges and separate means comprising a vertical portion adapted to extend into the space between said ledges and oppositely extending flanges adapted to engage the under sides of said ledges, said vertical portion of said means having a shoulder spaced vertically from said ledges, said bracket being adapted to be associated with a support and a track having a horizontal flange in the rear and for the purpose set forth.

5. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying a plurality of members capable of relative movement toward each other, said members being adapted to receive a portion of a track between them, one only of said members of said bracket being adapted to be attached to a support, the other of said members being adapted for disposition between said track portion and the support, said attachment of said members to said support effecting movement of said one member toward the support, said movement clamping the track portion between said bracket members and frictionally gripping the other member of said bracket between the track portion and the support.

6. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying a plurality of members movable toward each other, said members being adapted to receive between them a portion of a track having a substantially horizontal flange, said members having cooperating overlapping shoulders, certain of said shoulders having downwardly and outwardly inclined faces engageable with the remaining shoulders, certain of said members being also provided with another shoulder adapted to engage upon the horizontal track flange, one of the members of said bracket being adapted to be attached to a support, the other member of said bracket being adapted to abut the support, the attachment of said members to said support effecting movement of said one member toward said support whereby to clamp said track portion between said bracket members and to frictionally grip said other bracket member between the track portion and the support, said overlapping shoulders on said bracket members cooperating to force said other shoulder upon said horizontal track flange.

7. Means for supporting a door track at a plurality of spaced points comprising a bracket, said bracket embodying a plurality of members capable of movement toward each other, said members being capable of receiving a portion of a track between them, one of said members being adapted for disposition between the track portion and a bracket support, shoulders on said bracket members having overlapping engagement, one of said members of each bracket being adapted to be attached to a support, said latter member exerting pressure against said track portion and the other member of said bracket to frictionally grip the track portion and other member between said attached member and the support.

WILFRED A. BEAUCHAMP.