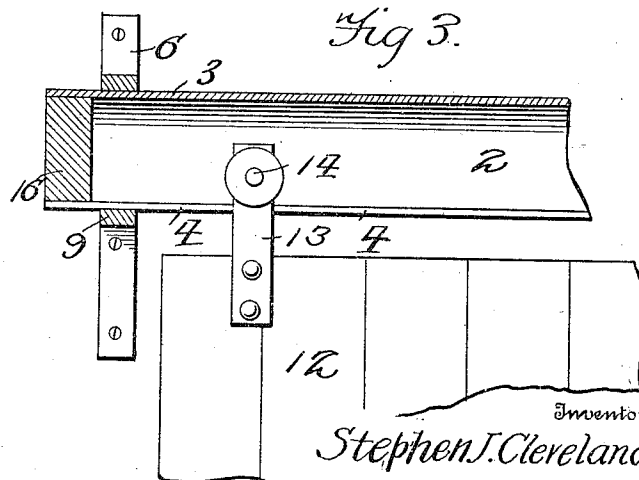
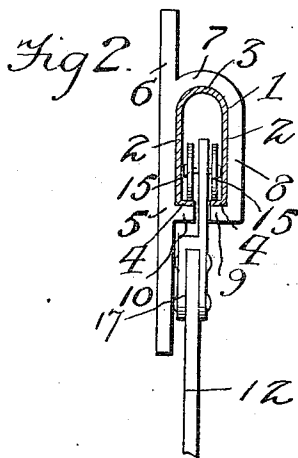
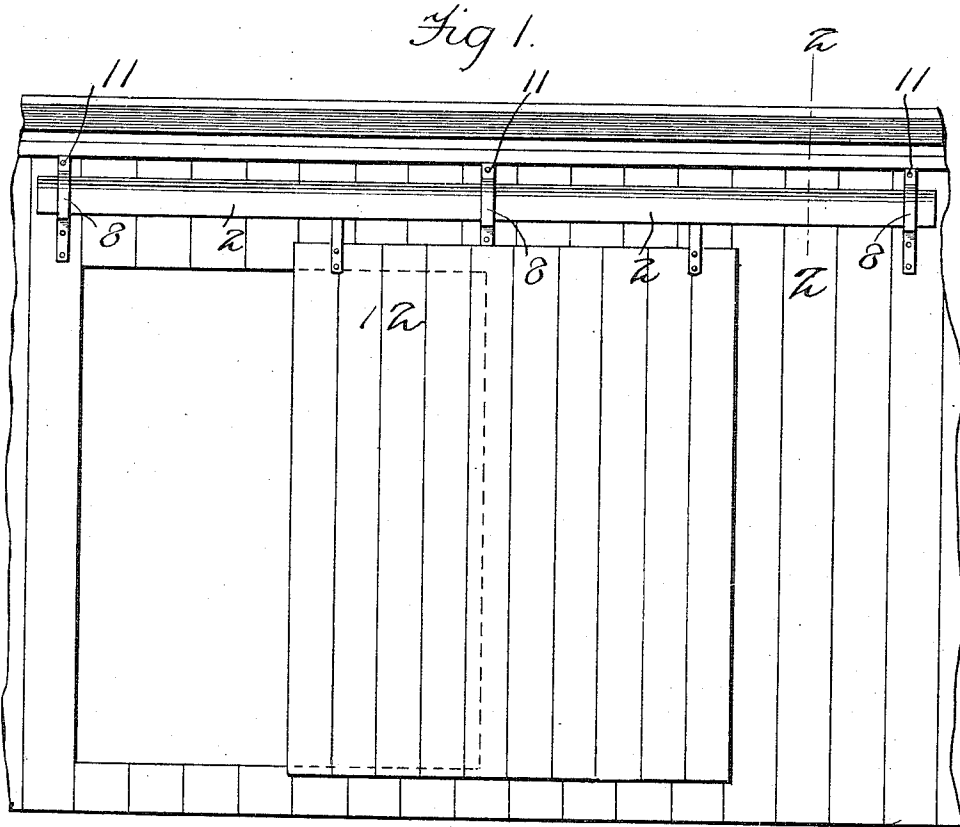


S. J. CLEVELAND.
 COMBINED DOOR HANGER AND TRACK.
 APPLICATION FILED OCT. 2, 1908.

972,679.

Patented Oct. 11, 1910.



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COMBINED DOOR HANGER AND TRACK.

972,679.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed October 2, 1908. Serial No. 455,820.

To all whom it may concern:

Be it known that I, STEPHEN J. CLEVELAND, a citizen of the United States, residing at Mansfield, in the county of Tioga and State of Pennsylvania, have invented new and useful Improvements in Combined Door Hangers and Tracks, of which the following is a specification.

The invention relates generally to an improvement in tracks for sliding doors, and is directed particularly to a combined track and supporting bracket therefor.

The main object of the present invention is the production of a track constructed of sheet metal and wholly inclosed except at the opening for the reception and movement of the door hangers, the construction including a bracket by which the track is supported and engaged throughout the contour of the track, thereby guarding the track against distortion under lateral strain on the door and at the same time insuring an even travel of the door in normal operation. The construction is further directed toward improving this class of track by having the interior transverse dimensions of the track approximately equal to the length of the axles for the wheels of the door hangers traveling within the track, whereby undue swaying of the door in operation is prevented.

The invention in the preferred form of details will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a view in broken elevation showing a portion of a car having the door thereof mounted for movement on the improved track. Fig. 2 is an enlarged broken sectional view on the line 2—2 of Fig. 1, the car being omitted. Fig. 3 is a broken longitudinal sectional view through the track and supporting bracket, a portion of the door and connected parts being shown in elevation.

Referring particularly to the accompanying drawings the improved track is made up of sheet metal, as sheet steel, being formed into a hollow housing 1 having flat parallel side walls 2 projected in spaced parallel relation from a rounded upper end or roof 3. The lower edges of the side walls are turned inwardly at right angles to the side walls to provide treads 4, the relatively inner or proximate edges of the treads being spaced

apart for a purpose which will presently appear. The track thus described is to be co-extensive in length with the desired length of movement of the door, and is designed to be supported from the structure of which the door forms a part, a box car in the instance shown, by brackets 5, each of which includes a bearing strip 6 from which at a point adjacent the upper end there is integrally projected a holding strip including a curved portion 7 corresponding in curvature to the top 3 of the track, and a depending section 8 which is extended in parallel relation to the supporting strip 6 and is spaced therefrom a distance to snugly receive the side walls 2 of the track between said strips 6 and 8. At the lower end of the strip 8 the bracket is provided with an in-turned lip 9, and the strip 6 is also provided with a similar lip 10 projecting therefrom in alinement with the lip 9. The lips 9 and 10 are designed to directly underlie and support the parts 4 of the track when the said track is in position, the proximate ends of the lips 9 and 10 being spaced a distance equal to the spacing between the proximate edges of the treads 4. From this construction it will be noted that the brackets 5 support and bear upon the track throughout the sectional contour of the latter, and are particularly effective in supporting the tread or weight-receiving portions of the track. The brackets are secured in place on the car or other structure in any desired number and by any proper fastenings as screws or bolts 11 passed through the supporting strip 6, and through the structure.

The door 12 is provided with oblong hangers which include shank portions 13. The shanks 13 are rectangular in cross section and considerably less in thickness than the space between the treads 4 of the track. The upper ends of the hangers are provided with transversely disposed axles 14 upon the opposite ends of which are mounted bearing wheels 15. The upper end portions of the shanks extend into the track and the wheels 15 bear on the treads 4, while the opposite terminals of the axles slightly bear on the opposed inner surfaces of the track. The portions of the shanks below the lips 9 are provided with door receiving sockets, the said sockets being formed by strips 17, the upper ends of which are bent inwardly and at right angles and formed integral or otherwise secured with the shanks, the bodies of

the strips extending parallel with the lower end portions of the shanks the spaces there-between receiving the door. With this construction it will be manifest that the axes
 5 of the said sockets will be in alinement with so. By reference to Fig. 1 it will be seen that three brackets support the track and are spaced apart for a distance corresponding
 10 ing approximately to the distance between the opposite outer faces of the hangers which support the door, so that when the door is in closed position the hangers will bear on the lower portions of the brackets. When it
 15 is remembered that the thickness of each shank is considerably less than the space between the treads and the weight of the door is thrown to the inner side of a line drawn through the axle and upper end portion of
 20 the shank by virtue of the disposition of the socket, it will be evident that when the door is let to swing free it will incline downwardly and outwardly whereby the shank will bear on the outer tread of the track.
 25 Reference to Fig. 2 discloses the fact, when the lower end of the door is moved inwardly to bear on the body of the car, and the upper portion of the shank of the hanger moved from engagement with the outer lip
 30 that the strip 17 will be in the plane of the strip 6, and when so positioned it will be evident that movement of the door will be prevented by virtue of these surfaces abutting. When, however, the door is released
 35 and inclines downwardly and outwardly as before described the strip 17 will have moved outwardly beyond the plane of the strip 6, thus permitting the door to be moved to open or closed position.
 40 The salient features of the present invention reside in forming the track with distinct tread portions at right angles to the side walls, in so forming the supporting brackets as to provide positive supports for
 45 the tread portions, and in adapting the inner spacing of the side walls with particular relation to the length of the axle supporting the wheels on the door hangers.

The ends of the track may be, if desired,

closed by blocks 16 conforming in sectional 50 contour to the track and secured in the ends of the track in any preferred manner.

Having thus described the invention what I claim is:—

In a support for the sliding doors of box 55 cars, the combination with a car body having a door opening; of supporting brackets each including a bearing strip arranged above either side of the door opening and secured to the car body, said strips having on their
 60 outer faces and adjacent to their lower ends outwardly extending lips, and further provided adjacent to their upper ends with outwardly and downwardly extending limb portions terminating in inwardly extending 65 lips, the last-named lips lying in a plane with and spaced from the first-named lips, an inverted U-shaped track arranged between the bearing strips and outwardly and downwardly extending limb portions, the 70 opposite limbs of said track terminating in inwardly extending spaced treads bearing on said lips, oppositely positioned wheels arranged for travel on said treads, a single
 75 axle connecting said wheels and having its terminals bearing on the opposed inner faces of the side walls of said track, an oblong hanger having one end secured to the axle between the wheels and provided at its opposite end and on that face adjacent to the car 80 body with a door receiving socket the long axis of which alines with the inner of said lips, that portion of the hanger extending between the lips and treads being considerably less in thickness than the space between 85 the said lips and treads whereby a door supported by the hanger will incline outwardly sufficiently far to clear the bearing plates when moved and when closed may be moved 90 bodily inward to bear on the opposed sides of the bearing strips.

In testimony whereof I affix my signature in presence of two witnesses.

STEPHEN J. CLEVELAND.

Witnesses:

CHAS. A. LAMB,
 L. F. KURCH.