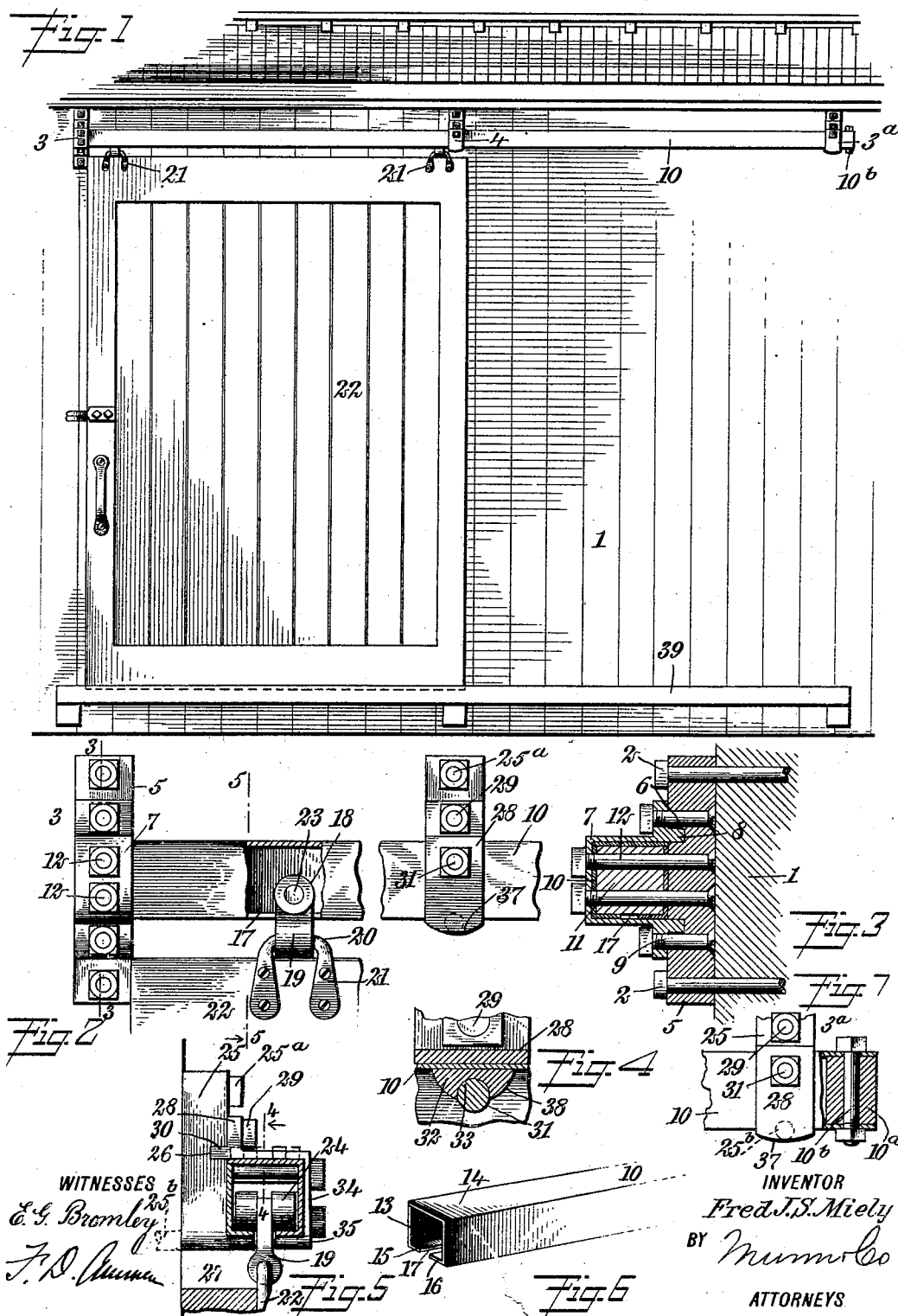


DOOR HANGER.

938,264.

Patented Oct. 26, 1909.



UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed December 16, 1908. Serial No. 467,742.

To all whom it may concern:

Be it known that I, FRED J. S. MIELY, a citizen of the United States, and a resident of Gunnison, in the county of Gunnison and State of Colorado, have invented a new and Improved Door-Hanger, of which the following is a full, clear, and exact description.

This invention relates to door hangers, and especially to such as are employed for hanging sliding doors such as car doors, barn doors, and the like.

The object of the invention is to provide a track of improved form which will be reliable in operation, and further, to provide improved means for supporting the track.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a portion of the side of a car to which the invention has been applied; Fig. 2 is a side elevation upon an enlarged scale showing a short portion of the hanger partly broken away and also in section, this view also showing a short portion of a door; Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2 passing through one of the end brackets; Fig. 4 is a vertical section on the line 4—4 of Fig. 5 and illustrating the construction of the intermediate bracket; Fig. 5 is a section taken on the line 5—5 of Fig. 2; Fig. 6 is a perspective view showing a short portion of the track, and Fig. 7 is a front elevation and partial section broken away and showing the right-hand end bracket.

Referring more particularly to the parts, 1 represents the car to which the invention is applied. In applying the invention I provide a track 10, which is attached over the doorway in a horizontal position, and running longitudinally of the car 1. This track is supported at its ends on end-brackets 3, 3^a, and at an intermediate point of the length thereof by an intermediate bracket 4. The left end bracket 3 comprises a base plate 5, having transverse grooves 6 in the outer face thereof. On the outer face of the base plate a keeper 7 is attached, the said keeper having transverse tongues 8 at the inner face thereof, which fit in the grooves

6, as indicated. This keeper 7 is attached to the base by means of bolts 9, as shown. The keeper 7 is of rectangular form, so as to enable it to hold the ends of the track 10, which track is also of rectangular form and constructed of sheet metal or similar material. The end of this track extends into the bracket, as shown, and within the track, at the bracket, there is provided a plug 11 of wood or similar material. In order to secure the plug in the end of the track and at the same time secure the track to the end brackets, through bolts 12 are provided, which pass through the parts from the inner face of the base. The base 5 is attached to the side of the car by through bolts 2, as shown. Attention is called to the fact that by means of the plugs in the ends of the hollow track, the two angle bars that form the track are held rigidly with respect to each other and are rigidly attached to the supports.

As indicated most clearly in Fig. 6, the track 10 is formed of two angle bars 13 and 14. The angle bar 13 is of simple form, consisting of a vertical web having a flange 15 at the lower edge thereof, projecting inwardly. The angle bar 14 has two webs at right angles to each other, and its vertical web has a flange 16 which projects inwardly toward the flange 15. These flanges 15 and 16 do not meet and for this reason they form a slot 17 between them, which runs the entire length of the rail, as will be readily understood. It will be evident that the angle bar 13 forms one side and part of the bottom of the track, while the angle bar 14 forms two sides, including the upper side, and also forms a part of the bottom of the track. From this arrangement it will be evident that the track may be described as a box rail or hollow track, formed of angle bars. It will be evident also that these angle bars can be very conveniently formed by stamping them out of light sheet metal, such as steel.

Running within the track 10, I provide trolleys 18. Each of these trolleys consists of a stirrup 19, which extends down through the slot 17 and is attached to the wrist 20 of a shackle 21, which is attached to the side of the door 22, as indicated. The stirrup 19 is provided with a transverse pin 23 within the track upon which rollers 24 are loosely mounted so as to roll upon the flanges 15 and 16, as indicated.

Referring now to the construction of the bracket 3^a and the intermediate bracket 4, and referring especially to Figs. 4 and 5, these brackets each comprise a base 25, which is attached to the side of the car at its upper end by a through bolt 25^a and at its lower end by a stud bolt 25^b. In its upper portion its outer face is provided with a transverse groove 26. At the lower end of the base an outwardly-projecting toe 27 is provided, the upper face whereof constitutes a shoulder to support the track 10, as indicated. The lower edge of this toe 27 is rounded and is continued down to the inner face of the base, so as to give the lower end of the base a rounded form. To the outer face of the base 25 a keeper 28 is attached by means of a bolt 29. This keeper has a transverse tongue 30, which fits in the groove 26, as indicated. In addition to the bolt 29, the keeper 28 is secured by means of a bolt 31, which passes through the upper portion of the track, as shown. Within the track I provide a saddle 32, the under side of which is formed with a curved groove 33, which fits the side of the bolt, as indicated in Fig. 4. The upper face of this saddle is flat and fits against the upper face of the track in the interior thereof, as shown. In this way the saddle supports the track at this point. The keepers 28 have substantially the same form as the keeper 7, except that a part of their lower legs is omitted; each of these keepers therefore presents a downward extension 34, which lies against the outer face of the track, and this downward extension has an inwardly projecting foot 35, which lies under the outer edge of the track and assists in supporting the same, as will be readily understood.

The foot 35 is formed with a rounded lower face 37, as indicated in Figs. 2 and 7. This form is advantageous as it assists in facilitating the trolleys passing the intermediate hanger in case the door becomes very much raised above its normal position. In this connection it should be stated that the under side of the saddle 32 is also formed with a rounded face 38, which assists in enabling the trolleys to pass the bolt 31 on the interior of the track, operating in much the same manner as the curved face 37. Special attention is called to the horizontal grooves 6 in the outer face of the left end base, and to the grooves 26 in the outer faces of the intermediate and right-hand brackets. The lower faces of these grooves form supporting shoulders for the keepers, so that the bolts which attach the keepers are not subjected to sheering strain. The lower edge of the door is guided in a lower guide rail 39 of any suitable form.

It will be understood from the above description that the right end bracket in no way obstructs the passage of the trolleys

when being introduced into the right end of the track. After the door has been hung, the right end of the track 10 is plugged by means of a block 10^a, which fills it, and this block is held in position by vertical bolts 10^b, which pass down through the rail, as shown in Fig. 7. In order to facilitate this arrangement, the right end of the rail projects slightly beyond the right-hand bracket.

While I have represented a single intermediate bracket, in practice the number of intermediate brackets used will depend upon the length of the rail and the weight of the door which it supports. Evidently there may be as many or as few of them as desired. Having thus described my invention, I claim as new and desire to secure by Letters Patent,—

1. In a door hanger, in combination, a bracket comprising a base with a transverse groove in the outer face thereof, a keeper bolted to said base and having a tongue fitting in said groove, and a hollow track supported by said keeper.

2. In a door hanger, in combination, a base, a keeper attached to said base, a hollow track held at one end between said keeper and said base said track being formed of longitudinally divided sections, and a plug within said hollow track and said keeper to hold said sections fixed.

3. In a door hanger, in combination, a base having a transverse groove in the face thereof, a keeper having a tongue received in said groove, a hollow track held at one end in the space between said base and said keeper, a plug within said hollow track opposite said keeper pressing said hollow track from the inner side, means for securing said plug within said hollow track, and means independent of said tongue for securing said keeper to said base.

4. In a door hanger, a hollow track formed of two angle bars, presenting flanges on their lower sides, projecting toward each other and forming a continuous slot therebetween, end brackets supporting said rail, and plugs in the end of said rail, attached to said bars and holding said bars fixed with respect to each other.

5. In a door hanger, in combination, a hollow track, a bolt passing through the interior of said track, and a saddle supported on said bolt and supporting said track from the inner side thereof.

6. In a door hanger, in combination, a hollow track, a bolt passing through the interior of said track in the upper portion thereof, and a saddle seated on said bolt and having a flat upper face engaging the inner upper side of said track and supporting the same.

7. In a door hanger, in combination, a hollow track, a bolt passing through the interior thereof in the upper portion, a saddle

having a curved groove to receive said bolt, said saddle also having a flat upper face engaging the upper wall of said track to support the same, and a rounded under face, said track having a longitudinal slot therein and bearing flanges at said slot, and a trolley mounted on said flanges running in said slot and adapted to be deflected downwardly by said rounded face.

10 8. In a door hanger, in combination, a hollow track having a continuous slot in the under side thereof and provided with bearing flanges, a trolley mounted on said bearing flanges and having a stirrup extending

downwardly therefrom through said slot, 15 and an intermediate bracket supporting said rail and having a foot engaging the under side of said rail, said foot being rounded on the under side thereof to facilitate the passing of said stirrup. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED JAMES SMITH MIELY.

Witnesses:

GEORGE W. MCCOY,
ORRIN W. BARTON.