

No. 817,886.

PATENTED APR. 17, 1906.

G. W. TERRELL.

DOOR HANGER FOR SLIDING DOORS.

APPLICATION FILED MAR. 11, 1906. RENEWED FEB. 21, 1906.

2 SHEETS—SHEET 1.

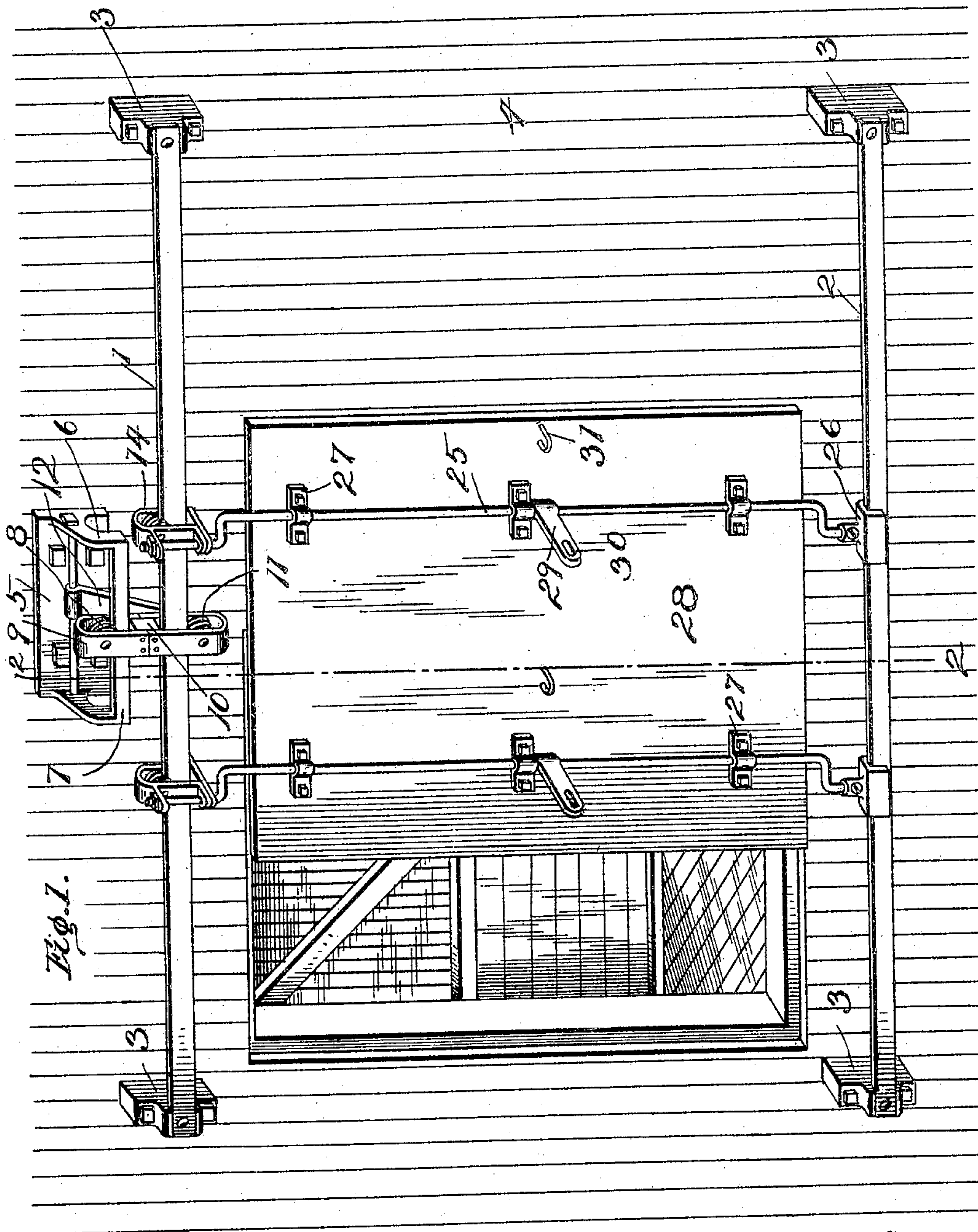


Fig. 1.

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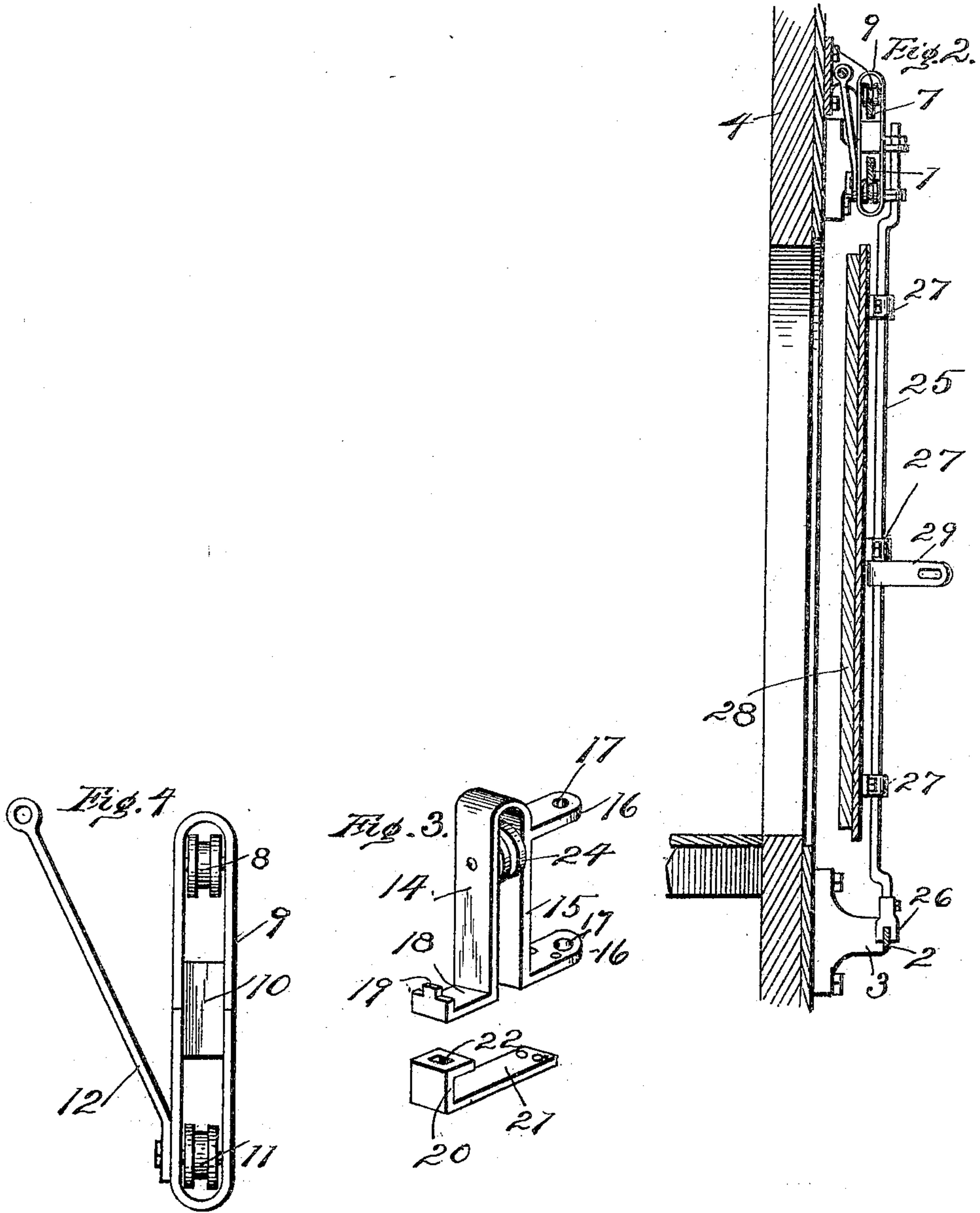
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Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON TERRELL, OF ATLANTA, GEORGIA, ASSIGNOR OF
ONE-FOURTH TO G. H. KEITH AND ONE-FOURTH TO C. G. HANNAH, OF
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DOOR-HANGER FOR SLIDING DOORS.

No. 817,886.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed March 11, 1905. Renewed February 21, 1906. Serial No. 302,225.

To all whom it may concern:

Be it known that I, GEORGE WASHINGTON TERRELL, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Door-Hangers for Sliding Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to sliding doors especially adapted for use upon railway-cars; and its object is to provide a track having movable supporting means adjacent to the center, whereby it becomes necessary to rigidly secure the track only at the ends thereof. This movable support serves to receive most of the weight of the door, and therefore but a minimum strain is exerted upon the end supports of the track.

A further object is to provide hangers of peculiar construction which are movably mounted upon the upper track-rail and are connected to shoes upon the lower track-rail by crank-shaped rods which are secured to the door and serve to direct the same into the door-casing, thereby producing a tight fit between said door and casing.

With the above and other objects in view my invention consists of the novel construction and combination of parts hereinafter more fully described and claimed.

In the accompanying drawings I have shown the preferred form of my invention.

In the drawings, Figure 1 is a perspective view of my improved sliding-door hangers connected to the side of a car. Fig. 2 is a sectional view on line 2 2, Fig. 1. Fig. 3 is a detail perspective view of one of the door-hangers, showing the parts thereof detached. Fig. 4 is a side elevation of the auxiliary hanger.

Referring to the figures by numerals of reference, 1 and 2 are the upper and lower rails, respectively, of the track employed for supporting a sliding door, and each of these rails is fixedly secured at its ends only to brackets 3, which extend from the wall 4 of the structure upon which the door is mounted. Se-

cured to said structure 4 above the central portion of the rail 1 is a bracket consisting of a base 5, end arms 6, and a supporting-rail 7, which connects said end arms. This rail is parallel and in vertical alinement with rail 1 and serves as a track for the roller 8, which is mounted in one end of an auxiliary hanger 9. This hanger is in the form of a link consisting of oppositely-disposed similar U-shaped members secured at their abutting ends by an intermediate block 10, which lies between the rails 1 and 7 and serves to prevent longitudinal movement of the auxiliary hanger. A roller 11 is also journaled in the lower portion of the hanger 9 and is adapted to contact with the lower edge of the rail 1. A brace 12 is secured to the inner surface of hanger 9 and is slidably mounted at one end upon the rod 13, as indicated in Fig. 1, which connects the arms 6 and is parallel with rail 7.

From the foregoing description it will be seen that the auxiliary hanger 9 forms a support for the central portion of the rail 1 and at the same time is capable of moving upon said rail, the extent of said movement being governed by the length of rail 7.

Mounted upon rail 1 at opposite sides of the auxiliary hanger 9 are outer hangers 14 of novel construction. As shown in detail in Fig. 3, each hanger consists of an inverted-U-shaped body portion 15, having parallel ears 16 projecting from one side thereof and provided with apertures 17 for the purpose hereinafter described. The opposite side of said body portion has a laterally-projecting L-shaped extension 18 at its free end, which is provided with a vertically-disposed end lug 19. This extension is constructed to fit within an angular projection 20, formed at one end of a base-strip 21, said projection having an aperture 22 for the reception of the lug 19. By inclining the extension 18 and inserting it in the projection 20 the lug 19 can be brought into position beneath the aperture 22, and by drawing the base 21 against the lower ear 16 of hanger 14 the lug 19 will swing into engagement with aperture 22 and the two parts of the hanger will thus be securely interlocked, and the base 21 may then be secured

to the lower ear 16 in any preferred manner. A grooved roller 24 is mounted in the hanger and is adapted to travel upon the rail 1.

One end of a crank-shaped rod 25 is mounted in the apertures 17 (see Fig. 3) of each hanger 14, and the other ends of these rods are swiveled within shoes 26, which are slidably mounted upon the lower rail of the track. The shoes 26 are grooved longitudinally in their lower faces, so as to engage the rail 2. Straps 27 extend over the rods 25 and are fastened to the door 28, thereby serving to secure the rods 25 and the door together. The two rods are preferably located adjacent and parallel with the ends of the door. Outwardly-extending arms 29 are rigidly secured to the rod 25 and each of said arms so located as to contact with one of the straps 27, whereby the door is held and supported in proper position to enter the doorway. Slots 30 are formed in the arms 29 for the reception of staples 31, which extend from the face of the door.

By providing supporting mechanism such as hereinbefore described it will be seen that the rails 1 and 2 may be of any desired lengths without necessitating the employment of any rigid supports excepting those provided at the ends thereof. The auxiliary hanger 9 serves to hold the central portion of the upper rail only, and as this hanger is disposed at all times between the door-hangers 14 it will be understood that most, if not all, of the weight of the door is supported by the auxiliary hanger and its supporting-bracket. When the door is opened, the hanger 14, which is near the door-opening, will press against the auxiliary hanger 9 and cause it to travel longitudinally along the rails 1 and 2 until said auxiliary hanger contacts with one of the arms 6. When in this position, it will be seen that the weight of the door is equalized between the hanger 9 and one of the end brackets 3.

To close the door, the same is slid upon the rails 1 and 2, and the rear hanger 14 will press against the auxiliary hanger 9 until the door arrives in position opposite the door-opening. The rods 25 are then rotated by means of the arms 29, and as the door is mounted thereon eccentrically in relation with the end bearings of the rods it will be understood that such rotation will cause the door to swing into the door-opening. At the same time the arms 29 will take positions upon the staples 31, and they may be securely fastened thereto by placing padlocks or other securing device upon the ends of the staples.

I attach considerable importance to the employment of a movable auxiliary hanger, for the reason, as above stated, that the

greater portion of the weight of the door is supported thereby no matter what may be the length of the rails 1 and 2.

While the supporting mechanism has been shown in connection with an inwardly-movable door, it will be understood that the same may be utilized in connection with any form of sliding door.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications can be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination with an upper track-rail; of a supporting-rail thereabove and parallel therewith, an auxiliary hanger surrounding and movably mounted upon said rails.

2. In a device of the character described, the combination with an upper track-rail; of a supporting-bracket thereabove and having a rail parallel therewith, an auxiliary hanger surrounding and movably mounted upon said rails, and a bracing device connected to the auxiliary hanger and to a fixed guide-rod in said bracket and movable thereon.

3. In a device of the character described, the combination with an upper track-rail; of a supporting-rail thereabove, a guide adjacent thereto, an auxiliary hanger surrounding and movably mounted upon the rails, and a brace secured to the hanger and movably mounted upon the guide.

4. In a device of the character described, the combination with an upper track-rail and securing means at the ends thereof; of a bracket above and adjacent the center of the rail, and having a supporting-rail, and an auxiliary hanger surrounding and movably mounted upon the rails, said hanger comprising a spacing-block and oppositely-disposed sections secured to the block.

5. In a device of the character described, the combination with an upper supporting-rail and securing means at the ends thereof; an auxiliary support intermediate said ends and comprising a bracket having a rail integral therewith and parallel with said supporting-rail and a hanger surrounding the rails and movably mounted thereon.

6. In a device of the character described, the combination with an upper track-rail and securing means at the ends thereof; of an auxiliary support for said rail intermediate the ends thereof and comprising a bracket having a rail thereon, and a guide-rod above

said rail and a hanger surrounding and movable on the rails, and a brace extending from the hanger and mounted upon the guide.

7. The combination with a track-rail and
5 securing means at the ends thereof; hangers
upon said rail and a door supported upon the
hangers; of an auxiliary support for the rail
at a point between the hangers, comprising
a bracket, a rail supported thereby and an
10 auxiliary hanger surrounding and movably

mounted upon the rails between the door-hangers.

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

GEORGE WASHINGTON TERRELL.

Witnesses:

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E. H. BARNETT.