

G. A. GLOVER.
DOOR HANGER.
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966,007.

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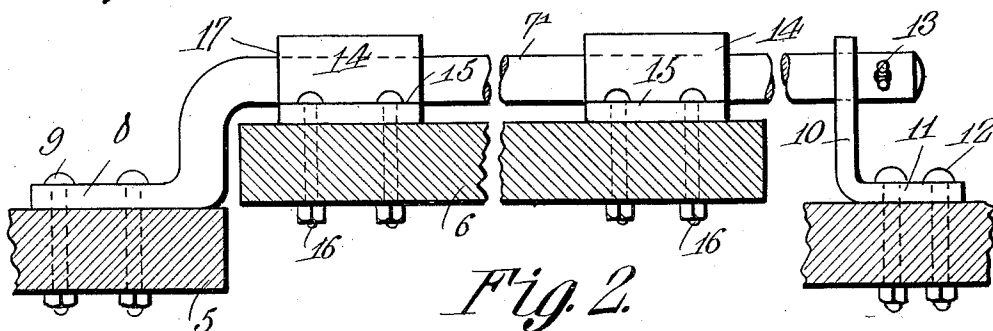
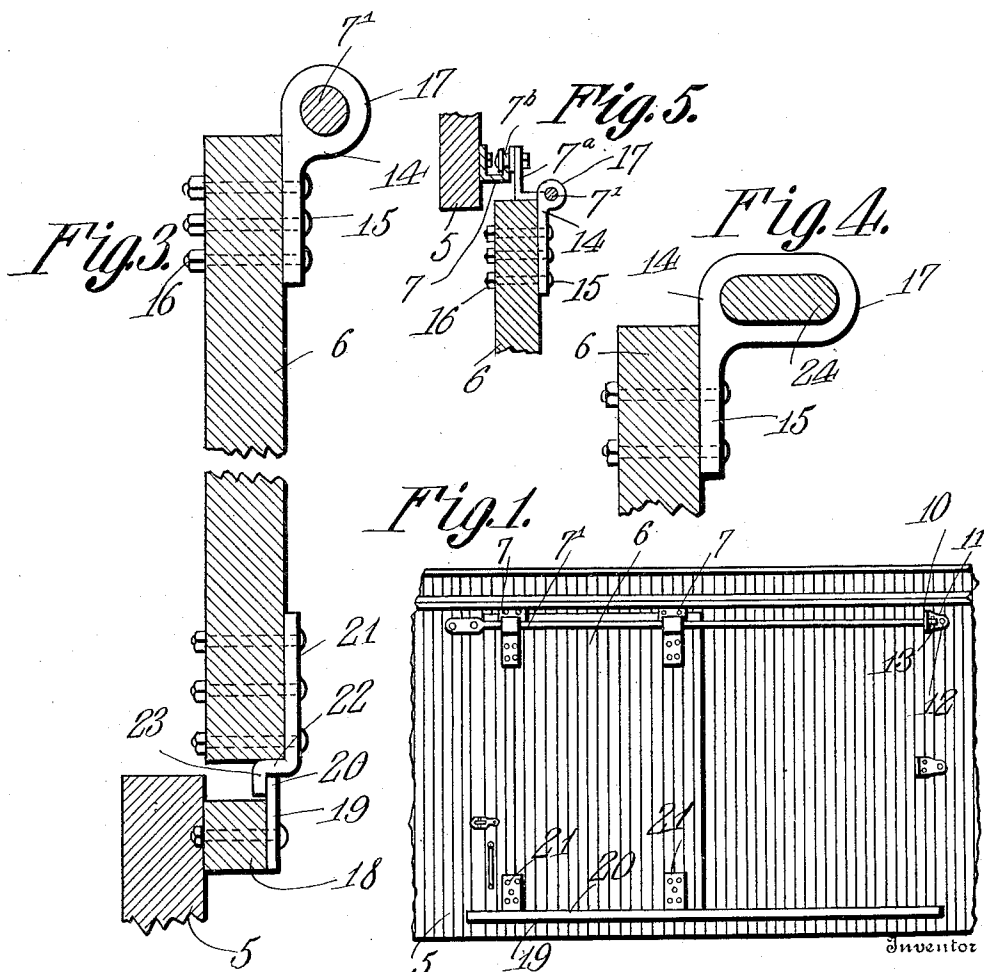


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE A. GLOVER, OF BRISTOL, TENNESSEE.

DOOR-HANGER.

966,007.

Specification of Letters Patent.

Patented Aug. 2, 1910.

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To all whom it may concern:

Be it known that I, GEORGE A. GLOVER, a citizen of the United States, residing at Bristol, in the county of Sullivan and State of Tennessee, have invented a new and useful Door-Hanger, of which the following is a specification.

It is the object of the present invention to provide an auxiliary hanger for doors, such as sliding freight car doors whereby to insure of support of the door should the ordinary suspension means therefor become broken or should the door hangers leave the tracks of the said means.

It is a further object of the invention to provide means for restraining the door against outward swinging from the side of the car or other structure with which it is associated.

A further object of the invention is to embody in a single auxiliary supporting means, means for attaining both of the objects above mentioned.

In the accompanying drawings, Figure 1 is a view in elevation of a portion of a freight or similar car showing the invention applied thereto. Fig. 2 is a horizontal sectional view taken in a plane directly below the auxiliary supporting means provided for the door of the car or other structure. Fig. 3 is a vertical sectional view with parts broken away, showing both the auxiliary supporting structure or means and also the means for preventing outward swinging movement of the door with respect to the structure with which it is assembled, and Fig. 4 is a view similar to Fig. 3 showing a form of the invention in which the door is provided with an auxiliary support in addition to being prevented from swinging outwardly from the structure with which it is assembled and in which both means are embodied in a single device. Fig. 5 is a vertical sectional view through the upper portion of the door and the upper portion of the door frame illustrating the ordinary and the auxiliary supporting beam for the door.

As hereinbefore stated, it is the object of the present invention to provide, in connection with a door of the type specified, means for supporting the door in addition to the

ordinary track and hanger now used. The object in providing an auxiliary support is to prevent the wheels of the ordinary door hanger, leaving the ordinary tracks now employed for supporting such a door, this jumping of the wheels from the track being extremely liable to occur especially on freight cars where the doors are subjected to considerable jolting.

In the drawings, the numeral 5 indicates the side of a freight or similar car, or in fact any structure with which there is associated a sliding door, similar to the ordinary freight car door, and the door is indicated by the numeral 6 and is suspended from the usual track which is indicated by the numeral 7, by the usual form of hangers 7^a in which are journaled rollers 7^b.

As hereinbefore stated, an auxiliary support is provided for the door 6 or in other words a support is provided in addition to the usual support or hangers which, as at present constructed, are extremely liable to become broken and permit the fall of the door from the structure and such auxiliary support is illustrated, in the present instance, as embodied in a bar 7' which at one end is bent inwardly at right angles and then laterally at right angles as at 8 to afford an attaching portion, through which attaching portion there are engaged bolts or suitable securing devices 9 by means of which the said end of the bar 7' is firmly secured to the side of the car or other structure, the point of such attachment being had or located at or immediately adjacent one edge or side of the doorway as is clearly shown in Fig. 2 of the drawings. The bar 7' extends in a right line direction throughout its entire length, beyond its attaching portion above described, across the doorway of the structure and beyond the other side thereof to a distance equal to or slightly greater than the width of the door 6, and this other end of the bar 7' is supported firmly in position through the medium of a bracket which includes a supporting or outstanding portion 10 and an attaching portion 11 which latter is firmly secured upon the side of the structure through the instrumentality of bolts or other suitable se-

curing devices 12 engaged therethrough and through the said side of the structure.

The supporting portion 10 of the bracket just described is formed with an opening 5 through which the bar 7' projects and in order to positively prevent disengagement of the end of the bar from its position in the opening, due to contraction of the bar or expansion of the structure upon which it is 10 mounted, a suitable stop pin 13 is passed through the bar at the said end thereof and between its extremity and its point of engagement with the bracket 10. While the pin 13 serves this function, it will be readily 15 understood that should it be desired to dismount the door 6, in a manner which will be presently explained, the bracket 10 may be removed from the structure, subsequent to removal of the stop pin 13, and then dis- 20 engaged from the car whereby the door will be free to slide along the bar until free therefrom. The means of connection between the bar and the door is in the nature of brackets 14 each of which includes an 25 attaching portion 15 secured to the door 6 by means of suitable bolts 16, and a bearing portion 17 which is substantially in the form of a sleeve which is slidably mounted upon the bar, whereby it may be readily 30 moved along the bar 7' without interfering with the ordinary and usual supporting means for the door.

As has been before stated, means is provided for preventing outward swinging of 35 the door with respect to the structure with which it is associated and this means is embodied in a cleat 18 which is secured upon the side of the structure and extends in a plane immediately below the plane of the 40 lower edge of the doorway of the structure and not only throughout the entire width of the said doorway but beyond one edge thereof and substantially to a distance equal to the distance of extent of the bar 7' beyond 45 the same edge or side of the doorway, and to this cleat there is secured a flat bar 19 which is of a width greater than the thickness of the cleat whereby its upper edge will project above the upper edge or face of the 50 cleat to afford a flange 20 and secured upon the door at the lower edge thereof is a strip or bar 21 having its lower edge portion bent to extend beneath the said lower edge of the door as at 22 and then downwardly at 55 right angles as at 23 and engaged behind the flange 20 afforded by the bar 19 upon the cleat 18. From the foregoing description of this feature of the invention, it will be readily understood that any tendency toward outward swinging movement of the 60 door with respect to the structure upon which it is mounted, will be arrested by reason of the engagement of the flange 23 with the flange 20.

In Fig. 4 of the drawings, there is shown 65 an auxiliary supporting structure or means in which all of the advantages accruing from the two features of the invention as hereinbefore described are apparent, the same comprising in its construction a flat 70 supporting bar 24 disposed in a substantially horizontal plane. The brackets 14 for supporting this bar 24 are provided with slots instead of the openings with which the sleeve portions of the brackets of the form 75 of the invention shown in Figs. 2 and 3 are provided and the fact will be readily appreciated that owing to the peculiar cross sectional shape of the bar 24 and the openings 80 in the bearings not only will any tendency toward outward swinging movement of the door with respect to the structure upon which it is mounted, be prevented, but, in event of breaking or accidental disengagement of the hangers for the door, from their 85 trackways, the bar 24 will support the door as will the bar 7'.

From the foregoing description of the invention, it will be apparent that whereas in Figs. 2 and 3 of the drawings, there are 90 shown two separate structures or devices for attaining two separate results, related however in a general way, in Fig. 4 of the drawings there is shown a single structure for attaining both results and while it may in 95 some instances be preferable to employ the structure shown in Figs. 2 and 3 and may in other instances be preferable to employ the structure shown in Fig. 4, it will nevertheless be apparent that the objects in view are 100 identical in either instance.

What is claimed is:—

1. The combination with a structure having a doorway, a door, a track above the doorway, and brackets upon the door supported upon the track, of an auxiliary supporting bar secured to the structure at one end and extending across said doorway, from a point adjacent one side thereof, to a point removed from the opposite side 110 thereof, a bracket supporting the last mentioned end of the bar, and hangers carried by the door and slidably mounted on the bar.

2. The combination with a structure having a doorway, a door, a track above the doorway, and brackets upon the door supported upon the track, an auxiliary supporting bar secured to the structure at one end and extending across said doorway, from a point adjacent one side thereof, to a 120 point removed from the opposite side thereof, a bracket supporting the last mentioned end of the bar, hangers carried by the door and slidably mounted on the bar, and means including a pin carried by the bar at its 125 said last mentioned end preventing disengagement of said supporting means.

3. The combination with a structure hav-

ing a doorway, a door, a track above the doorway, and brackets upon the door supported upon the track, of a bar secured upon the structure and extending across the doorway, said bar being flat and disposed horizontally, and brackets upon the door having sliding engagement with the said bar.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE A. GLOVER.

Witnesses:

H. G. LAVINDER,
W. D. STUMP.