No. 705,080. Patented July 22, 1902.

J. J. HENNESSEY.

DOOR HANGER.

(Application filed Sept. 20, 1901.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

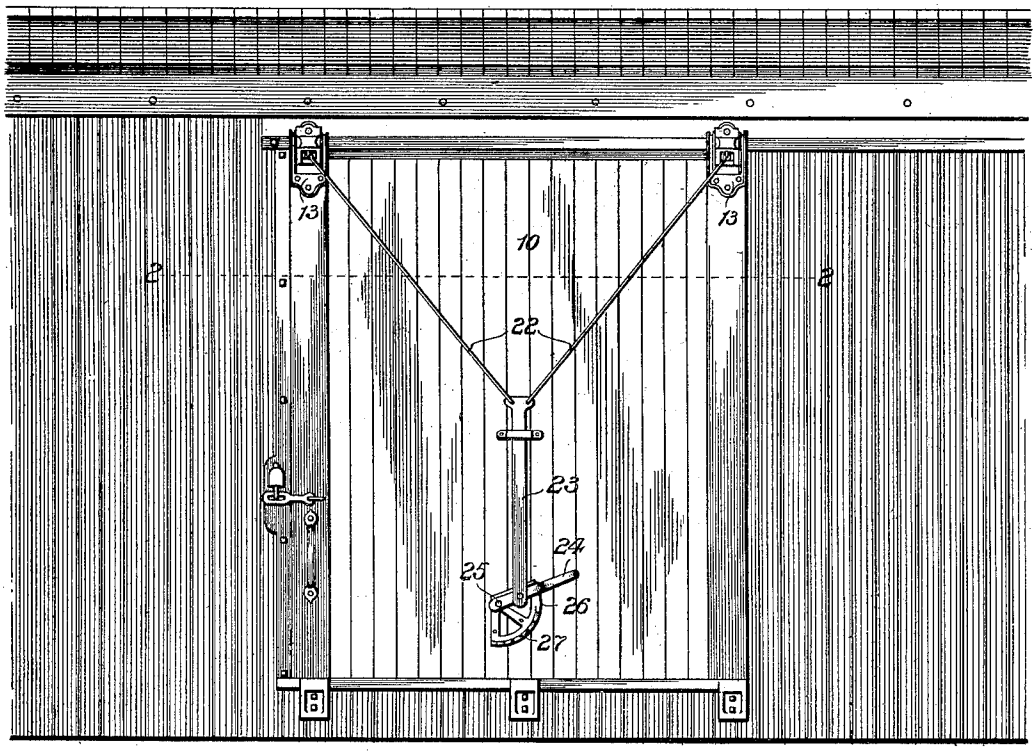


Fig. 2.

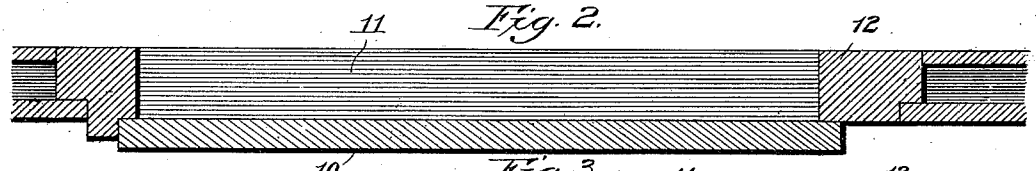
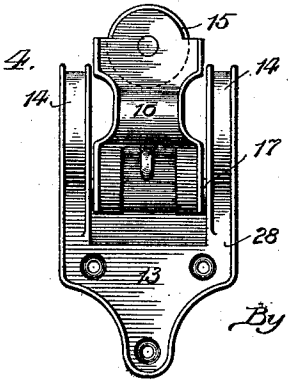


Fig. 3.



Fig. 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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(No Model.) 3 Sheets—Sheet 2.

Fig. 5.

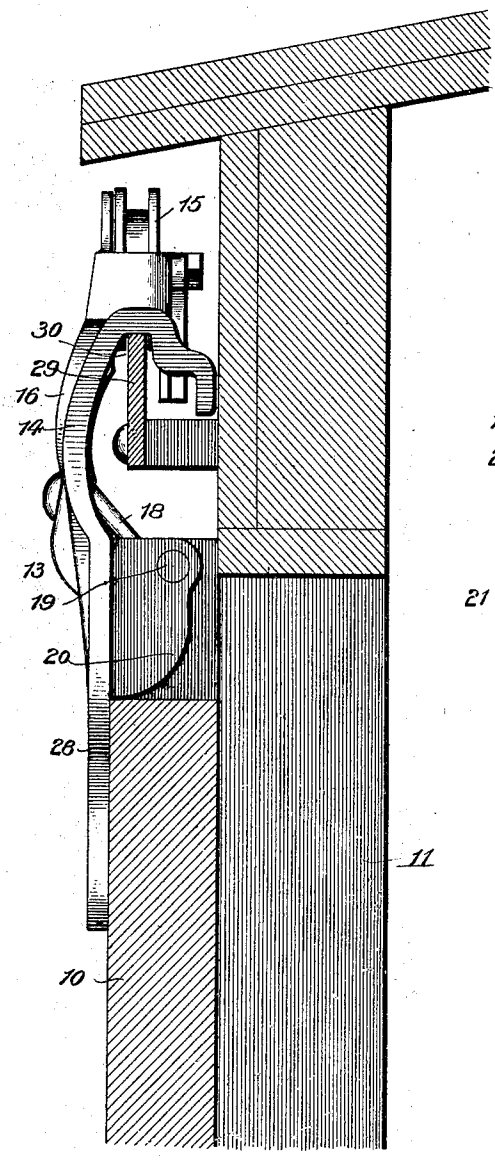
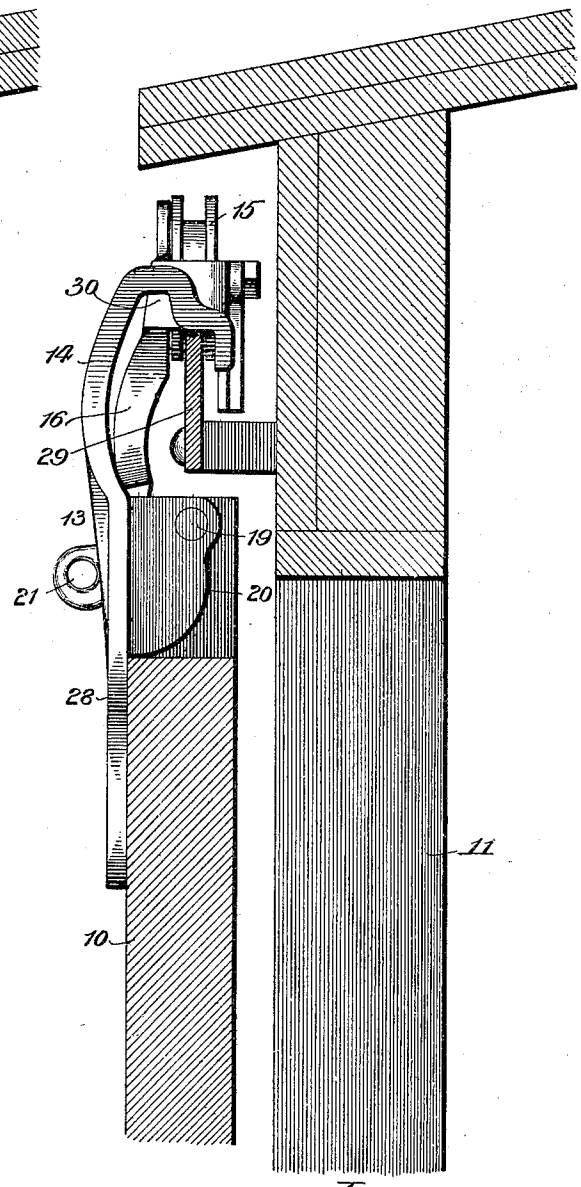


Fig. 6.



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(No Model.) 3 Sheets—Sheet 3.

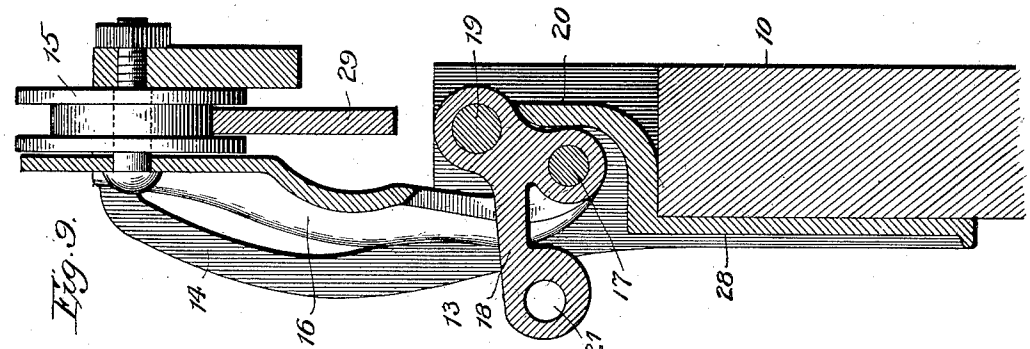


Fig. 9.

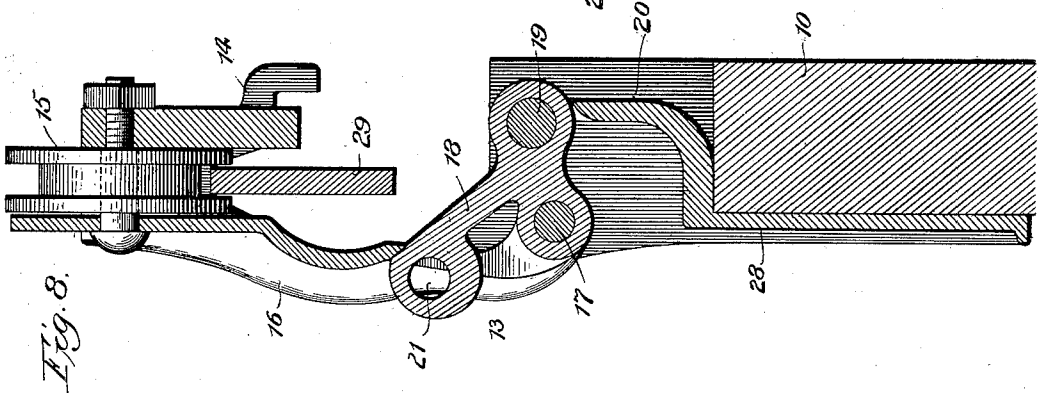


Fig. 8.

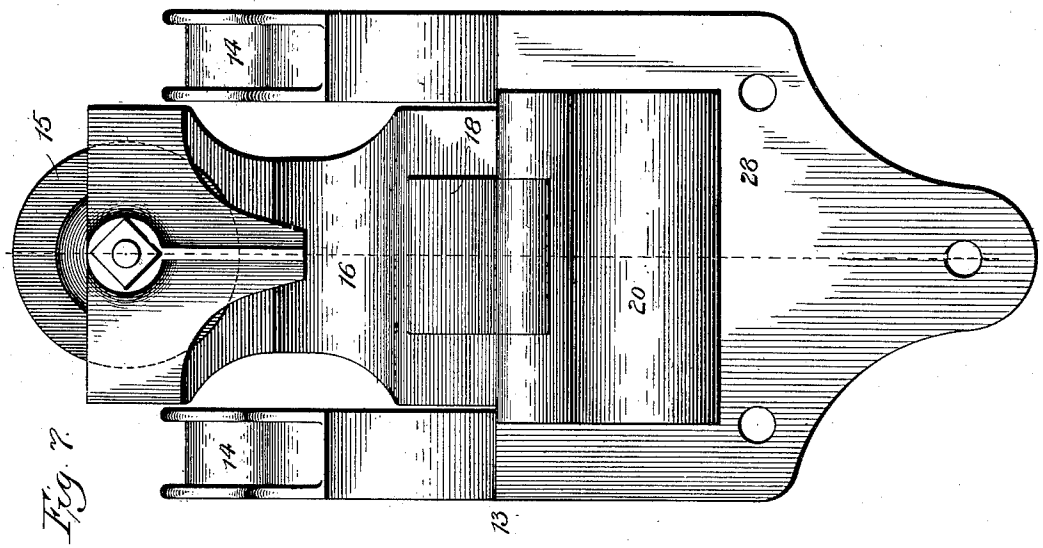


Fig. 7.

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UNITED STATES PATENT OFFICE.

JOHN J. HENNESSEY, OF MILWAUKEE, WISCONSIN.

DOOR-HANGER.

SPECIFICATION forming part of Letters Patent No. 705,080, dated July 22, 1902.

Application filed September 20, 1901. Serial No. 75,938. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HENNESSEY, a citizen of the United States of America, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in Door-Hangers, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention has reference to doors which are constructed to hang upon and slide by means of an overhead track—a construction which is common in the case of railroad-car doors.

The first object of the present invention is the provision of a hanger for a door of the type specified in which when it is desired to slide the door either open or shut the weight thereof can be transferred from the hooks with which the same is provided to a couple of rollers or wheels carried in suspension hanger-links or from the rollers or wheels to the said hooks, as the circumstances of the case may require, the hangers being so arranged that when the weight of the door is transferred to the links which are attached to the rollers the door will be swung outwardly from the opening which it covers and free of the side of the car or other wall in which the opening is, so as to more freely slide back and forth, and when the weight is transferred to the hooks the action of the lift-lever to which the hanger-links are attached brings the door in contact with the side of the car.

The above, as well as such other objects as may hereinafter appear, I attain by means of a construction which I have illustrated in preferred form in the accompanying drawings, in which—

Figure 1 is a side elevation showing a car having my improved door-hanger mechanism applied thereto. Fig. 2 is a section taken on the line 2 of Fig. 1, showing the door tightly closed. Fig. 3 is a like section showing the door swung outward ready to be slid open. Fig. 4 is a side elevation of the improved form of hanger which I employ. Fig. 5 is an elevation, partly in section, showing the engagement with the suspension-rail of the hanger-hook. Fig. 6 is a like view to that shown in Fig. 5, but having the hooks out of engagement with the rail and the weight of the door carried by the wheels. Fig. 7 is a side elevation, on a larger scale, taken upon the inside of my improved hanger. Fig. 8 is a section on the line 8 of Fig. 7, showing the rail and door in position when the weight of the door rests upon the hooks; and Fig. 9 is a like section showing the position of the parts when the weight of the door is carried by the rollers or wheels.

Referring now more particularly to Figs. 1, 2, 3, and 4, it will be seen that at each side of a door 10, which closes an opening 11 in the side wall 12 of a car, I have provided a hanger 13, having a hook or hooks 14 and a roller 15, the latter being journaled in a link 16, pivotally secured at 17 (see Figs. 5 to 9, inclusive) to a lift-lever 18, which is fulcrumed at 19 in the casting 20, which is secured to the upper side or edge of the door 10. Each of the lift-levers is provided with an eye 21, in which is secured the upper end of a rod 22, the lower end whereof is attached to a sliding plate or strap 23, adapted to be moved up and down by means of a hand-lever 24, which is fulcrumed at 25 and slides upon a quadrant 26, having locking-notches 27 therein, as shown on Fig. 1. If preferred, the lever 24 and quadrant 26 can be dispensed with and the mechanism operated by a direct pull on the strap 23. The hooks 14 are preferably integral with the base portion 28 of the bracket-casting, to which the lift-lever is pivoted at 19.

Referring especially to Figs. 8 and 9, it will be seen that the link-levers 18 are so disposed that as the weight of the door is shifted from the hooks 14 to the rollers 15 the door will be moved outwardly, and vice versa. When the strap 23 is released, the lift-lever 18 assumes the position shown in Fig. 8, when the door comes against the side of the car and the weight thereof is carried by the hooks 14, the recesses 30 thereof engaging the rail, as shown in Fig. 5, whereby outward as well as longitudinal movement is avoided.

The operation of my invention is as follows: Assuming the parts to be in closed position, the door will be as shown in Fig. 1, and, as shown in Fig. 2, will be tight against the opening 11, the weight thereof resting upon the hooks 14, as shown in Figs. 5 and

8, the lift-lever 18 having carried the door inward into close contact with the side of the car. To open the door, the lever 24 is pulled downward until it catches in the notch 27, and this action, by the rods 22, which are secured in the eyes 21, operates the lift-levers 18, so as to pull upon the links 16 and move the door by means of the pivotal connection of the lift-levers 18 with the bracket-casting 20, so that the weight of the door is transferred from the hooks to the rollers 15, the hooks being raised free from the rail 29 and the door at the same time by the action of the lift-lever 18 swung outward away from contact with the side of the car, the movement of the lift-lever 18 being as shown in Figs. 8 and 9, from which it is evident that since the rail and the wheels cannot move inward the door, when the weight thereof is transferred to the links 16 and the wheels 15, will move outward to the position shown in Figs. 9 and 3. The weight of the door being now carried by the rollers 15 and the door being swung free from contact with the side of the car, it can be readily moved to open it without injuring the side of the car and without the exercise of material force. In order to close the door, it is moved back over the opening and the lever 24 then released from the catch 27, so as to allow the door to be supported by the hooks 14.

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

1. A door-hanger comprising a bracket adapted for fixed attachment to a door, a hook portion attached to said braket, a roller, a link carrying said roller, and a lift-lever, whereby the weight of the door is transferred from the hook portion to the roller, or vice versa, substantially as described.

2. A door-hanger comprising a bracket for fixed attachment to a door, a link secured thereto, means carried thereby for supporting the door therefrom in its open position, a lift-lever connecting said bracket and link, means for supporting the door in its closed position, and means for actuating said lift-lever, whereby the weight of the door is transferred from said link to said other supporting means, substantially as described.

3. A door-hanger comprising a bracket for fixed attachment to a door, a hook, a link secured to said bracket, means carried thereby for supporting the door in position to be opened, a lift-lever connecting said bracket and link and means for actuating said lift-lever to transfer the weight of the door from said hook to said link, or vice versa, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN J. HENNESSEY.

In presence of—
N. E. OLIPHANT,
B. C. ROLOFF.