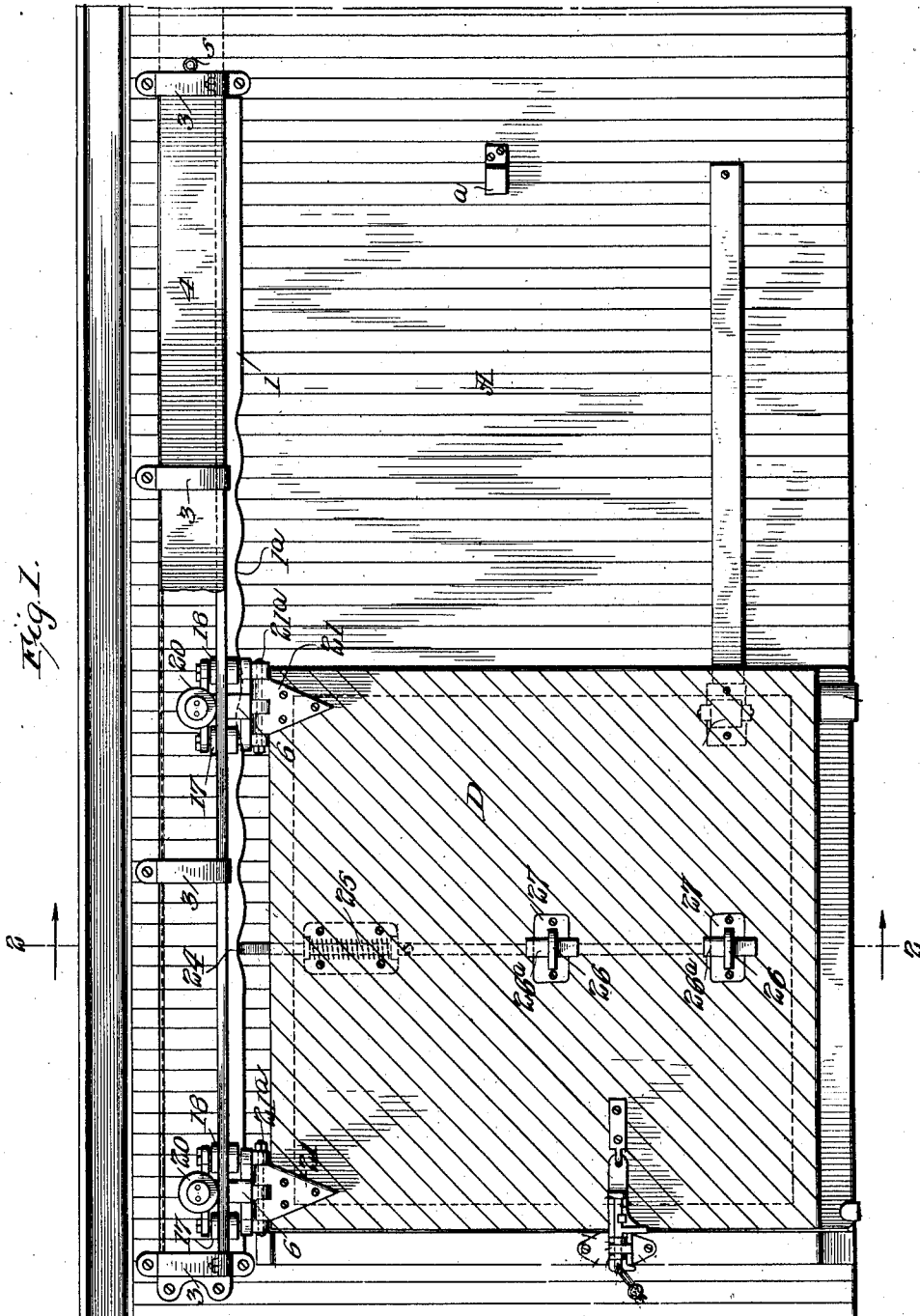


DOOR HANGER FOR CAR DOORS.
APPLICATION FILED JAN. 26, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



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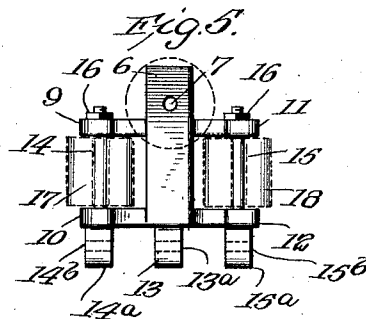
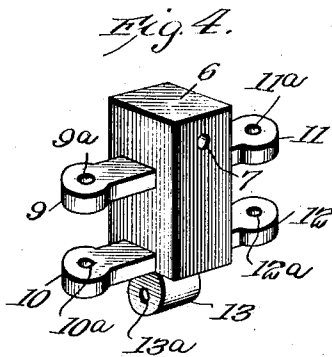
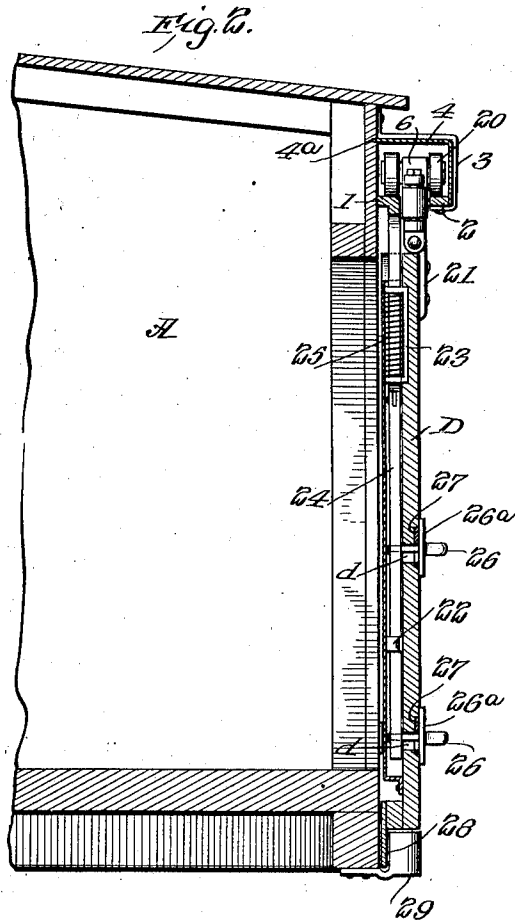
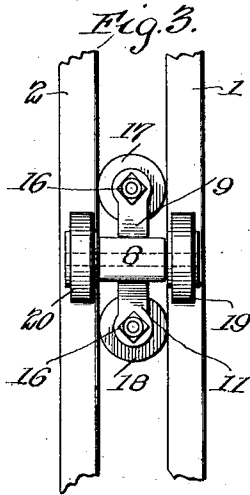
DOOR HANGER FOR CAR DOORS.

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2 SHEETS—SHEET 2.



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DOOR-HANGER FOR CAR-DOORS.

1,003,252.

Specification of Letters Patent.

Patented Sept. 12, 1911.

Application filed January 26, 1911. Serial No. 604,801.

To all whom it may concern:

Be it known that we, JOHN T. GRIMSHAW and LEE R. WELLINGTON, citizens of the United States, and residents of Rialto, in the county of San Bernardino and State of California, have made certain new and useful Improvements in Door-Hangers for Car-Doors, of which the following is a specification.

Our invention relates to improvements in hangers for car doors, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of our invention is to provide a hanger for a car door which will permit the latter to be easily opened and closed, and which will render the binding of the door impossible.

A further object of our invention is to provide a device having a novel form of adjustment for the easy opening and closing of the door, together with means for preventing wear of the attachments.

Other objects and advantages will appear in the following specification and the novel features of the device will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawings in which similar reference characters indicate like parts in the several views, and in which—

Figure 1 is a side view of a door constructed according to our invention, Fig. 2 is a sectional view of a portion of the car along the line 2—2 of Fig. 1, Fig. 3 is a detail of the plan view of a portion of the door suspending means and track, Fig. 4 is a detail perspective view of a portion of the door suspending means, the rollers being removed, and Fig. 5 is a side view of the door suspending means showing the position of the pivot pins for the vertical rollers.

Referring now to Fig. 1, A denotes in general a box car of the usual type. Secured to the upper part of the car are the two tracks 1 and 2 (see Fig. 2), the track 1 being secured directly to the side of the car and the track 2 being suspended by means of U-shaped brackets 3. A hood 4 is provided (see Fig. 2) whose inner end is arranged to slide in a slot 4^a in the side of the car, and whose outer lower side bears on the brackets 3, as clearly shown in Fig. 2. This hood may be slid out of its supports to permit access to the door suspending device, and for this purpose a pull-ring 5 is provided, the

ring being pulled toward the right in Fig. 1 for removing the hood.

The door D is provided preferably with two suspending devices, as shown in Fig. 1. A description of one of these will suffice for both, since they are both precisely the same.

Referring now to Fig. 4, it will be seen that we have provided a main body portion 6 having a transverse opening 7 for the reception of the pivot pin 8 (see Fig. 3). The body portion 6 is provided with laterally extending lugs 9 and 10 on one side and similar lugs 11 and 12 on the other. It is also provided with a downwardly extending lug 13. The lugs 9 and 10 are provided with the alined perforations 9^a and 10^a respectively; the lugs 11 and 12 are provided with similar alined perforations 11^a and 12^a and the lug 13 is provided with a perforation 13^a. In Fig. 5 we have shown the pivot pins 14 and 15, the former passing through the perforations in the lugs 9 and 10, and the latter passing through the perforations in the lugs 11 and 12. The upper ends of these pins are secured by nuts 16. The pin 14 has a head 14^a, provided with an opening or perforation 14^b, and the pin 15 has a similar head 15^a, provided with an opening 15^b. The openings 14^b, 13^a and 15^b are in alinement. A roller 17 is mounted on the pivot pin 14, while a similar roller 18 is mounted on the pivot pin 15. These rollers, as will be seen from Fig. 3, fit between the tracks 1 and 2. Upon the transverse pin 8 are mounted the wheels 19 and 20 respectively, the former bearing upon the track 1 and the latter upon the track 2. The main body portion 6 extends downwardly between these tracks. The lugs 14^a, 13 and 15^a form pivotal supports for the hinge straps 21 (see Fig. 1), the latter being secured by means of the pivot pins 21^a.

On the inside of the car door D are secured guide brackets 22 and 23 for the reception of a friction rod 24. In the bracket 23 is a spring 25, which is secured to the rod 24, and which tends to keep the upper end of the rod in engagement with the bottom of the inner track 1, which, as will be seen by Figs. 1 and 2, projects down below the bottom of the outer track 2. This track is provided with a series of scallops 1^a, as shown in Fig. 1.

Rigidly secured to the rod 24 are the hand-holds 26. These hand-holds have portions extending through slots *d* in the door

D, and are provided with guide plates 26^a arranged to bear on wear plates 27.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. When the door is unlocked it is only necessary to take hold of the hand-holds 26 and pull downwardly thereon at the same time to pull toward the right, as shown in Fig. 1 to cause the door to open. The ordinary car door is slammed back in order to open it quickly and the momentum given the door will cause such a jar that in a short time the door attachments are completely worn out and have to be renewed. In our device if the door is opened suddenly, the moment the hands are taken off from the hand-holds the friction rod 24 engages the track 1, thereby preventing the sudden throwing back of the door and instead bringing the door to a stop gradually. The rollers 17 and 18 relieve the lateral friction, while the rollers 19 and 20 relieve the friction on the tracks 1 and 2. The hinges suspend the door so that the strain is evenly divided.

It will be seen that we have provided a car door which may be easily manipulated, and yet which is not subject to the wear of the ordinary door. We are aware that other devices based upon the same general principle might be made, but we consider as our own all such modifications as may fairly fall within the spirit and the scope of the invention.

We claim:

1. The combination with a suspending device for car doors comprising a main body portion having a pair of laterally extending lugs on each side thereof, each pair of lugs being provided with alined perforations, a bottom perforated lug secured to the main body portion, a pivot pin arranged to enter the alined openings in each pair of laterally extending lugs, said pivot pin terminating in a lug having a perforation arranged to register with the perforation in the lug on the bottom of the main body portion, a roller carried by each of said pins, wheels rotatably mounted on said body portion, the axis of said wheels being at right angles to the axis of said rollers, of a hinge strap

adapted to be secured to a door pivotally supported by the lug on the bottom of said body portion and the lugs on the ends of said pins.

2. The combination with a pair of rails, of a suspending device for doors, said suspending devices comprising a main body portion disposed between said rails and having a pair of laterally extending lugs on each side thereof, each pair of lugs being provided with alined perforations, a bottom perforated lug secured to the main body portion, a pivot pin arranged to enter the alined openings in each pair of laterally extending lugs, said pivot pin terminating in a lug having a perforation arranged to register with the perforation in the lug on the bottom of the main body portion, a roller carried by each of said pins, wheels rotatably mounted on said body portion and movably supported on said rails, the axis of said wheels being at right angles to the axis of said rollers, and a hinge strap pivotally supported by the lug on the bottom of said body portion and the lugs on the ends of said pins, said rollers being arranged to bear on the sides of said rails and said wheels being arranged to bear on the tops of said rails.

3. The combination with a pair of tracks, of means for movably suspending a door on said tracks, and means carried by the door and arranged to frictionally engage one of said tracks for controlling the movement of the door.

4. The combination with a pair of tracks, of means for movably suspending a door on said tracks, means carried by the door and arranged to frictionally engage one of said tracks for controlling the movement of the door, said means comprising a spring pressed rod slidably secured on the inside of the door, and hand holds disposed outside of the door and arranged to extend there-through and secured to said rod for manipulating the latter.

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