

P. T. FARIS & D. A. NEWHALL.
CAR DOOR.

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1,059,532.

Patented Apr. 22, 1913.

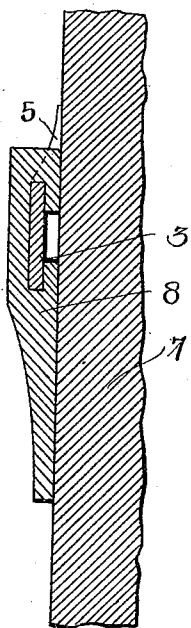
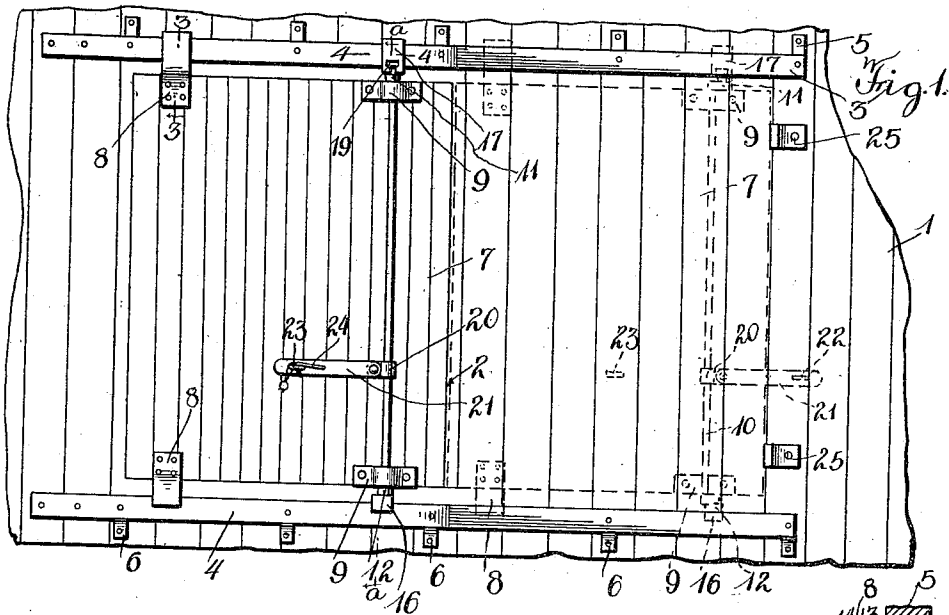


Fig. 3

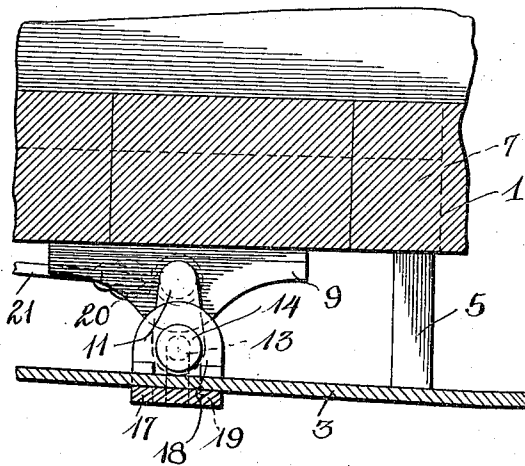


Fig. 4

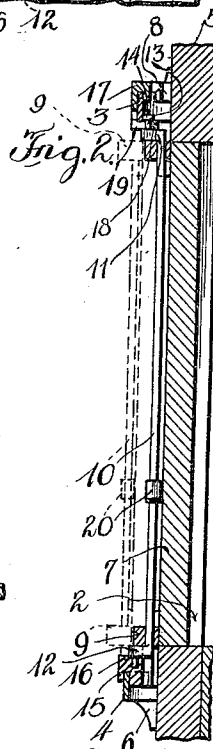


Fig. 5

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UNITED STATES PATENT OFFICE.

PHILIP T. FARIS AND DANIEL A. NEWHALL, OF BERWIND, WEST VIRGINIA.

CAR-DOOR.

1,059,532.

Specification of Letters Patent.

Patented Apr. 22, 1913.

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To all whom it may concern:

Be it known that we, PHILIP T. FARIS and DANIEL A. NEWHALL, citizens of the United States, residing at Berwind, in the county of McDowell and State of West Virginia, have invented new and useful Improvements in Car-Doors, of which the following is a specification.

This invention relates to improvements in car doors and especially in means for mounting a car door on one side of a car to permit the door to be moved to open or closed position and prevent the door from becoming detached from the car and being lost, one object of the invention being to effect improvements in the construction of the door hangers and in the construction of the crank rod which operates in connection with the hangers to support the door and to move the same toward and from the car wall.

The invention consists in the construction and arrangement of devices, hereinafter described and claimed.

In the accompanying drawing:—Figure 1 is a side elevation of a portion of a car wall provided with a door constructed in accordance with our invention, the door being shown in closed position in full lines and indicated in open position in dotted lines. Fig. 2 is a detail vertical sectional view on the plane indicated by the line *a—*a** of Fig. 1, showing the door in place in the door opening in full lines and moved outwardly at one end from the door opening in dotted lines. Fig. 3 is a detail sectional view on the plane indicated by the line 3—3 of Fig. 1. Fig. 4 is a horizontal sectional view on the plane indicated by the line 4—4 of Fig. 1.

For the purposes of this specification, a portion of the wall of a car is indicated at 1, the door opening being indicated at 2. Track rails 3—4 are arranged on the car wall, one above and the other below the door opening. The ends of the track rails which are nearest the door opening are secured directly to the wall and the track rails then extend outwardly at an angle to the wall until they get beyond the door opening, their remaining portions, which are at the opposite side of the door opening being parallel with the wall. The upper track rail 3 is connected to the wall of the car and held in place by means of brackets 5, which also serve to space the said track rail from the car wall. The lower track rail is held in place by spaced brackets 6.

The door 7 is provided at one side at its upper and lower ends with hangers 8 which engage and operate on the upper and lower rails. Near the opposite side of the door at its upper and lower ends are bearings 9 in which a rod 10 is mounted, the said rod being provided at its upper end with a crank 11 and at its lower end with a crank 12. The crank 11 has a pin 13 which is provided with a diametrically enlarged head 14. The crank 12 has a depending pin 15 which has its bearing in a carrier 16 which is provided, in its lower side with a groove which receives the upper side of the lower track rail so that the said carrier with the door is adapted to slide back and forth in the lower track rail.

A hanger 17 is mounted on the upper track rail for longitudinal movement thereon and is provided on its inner side at its lower end with an arm 18 which has a bearing for the upper crank pin 13. The said hanger also has a T-slot 19 extending through and which communicates with the said bearing to enable the carrier to be detached from the upper crank pin. The head of the upper crank pin extends above the lower edge of the upper track rail and the said track rail also covers the head or transverse portion of the T-slot so that the lower portion of the track rail is between the inner side of the upper hanger and the head of the upper crank pin and, hence, the latter is kept in engagement with the bearing. Before the crank pin can be removed from the bearing of the hanger 17, the latter must be removed from one end of the upper track rail as will be understood. The rod 10 has an arm 20 projecting radially therefrom and provided with a pivoted member 21 which is provided near its free end with a slot 22 adapted to engage a staple 23 which projects from the door. The said member 21 also has a pivoted hook 24 to engage the staple and lock the member 21 thereto when the rod 10 is turned so as to cause its cranks to move the door laterally and inwardly from the track rails and into the door opening. By turning the said crank rod in the reverse direction its cranks in coaction with the hanger 17 and carrier 16 will move one end of the door outwardly from the door opening and the door can then be moved to one side of the door opening so as to entirely uncover the latter, the car wall being provided with stops 25 to

limit the outward opening movement of the door.

While we have herein shown and described a preferred form of our invention, we would have it understood that changes may be made in the form, proportion and construction of the several parts, without departing from the spirit of the invention and within the scope of the appended claims.

10 We claim:—

1. In combination with a track rail, a hanger having an arm extending to one side of the track rail and provided with a bearing, the said hanger also having a slot communicating with the bearing and extending to the opposite side of the track rail, a door, and a rod mounted in bearings on the door and having a crank provided with a crank pin mounted in the bearing and engaging 20 the inner side of the track rail.

2. In combination with a track rail, a hanger movable longitudinally on and removable from the track rail at one end of the latter, said hanger having a bearing at a point on the inner side of the track rail 25 and also having a slot extending from the bearing to the outer side of the hanger, and a door-operating rod having a crank provided with a crank pin mounted in the bearing and maintained in place thereon by the 30 track rail under the hanger on the track rail.

In testimony whereof we affix our signatures in presence of two witnesses.

PHILIP T. FARIS.
DANIEL A. NEWHALL.

Witnesses:

EUGENE S. THOMPSON,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."