

(No Model.)

J. L. WAGNER.
BOX CAR DOOR.

No. 512,074.

Patented Jan. 2, 1894.

Fig. 1.

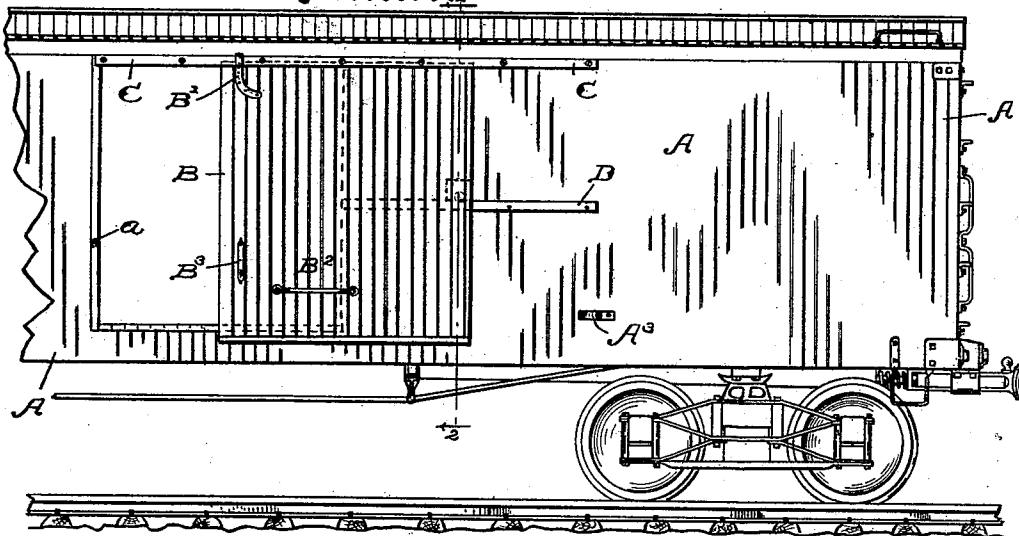


Fig. 2.

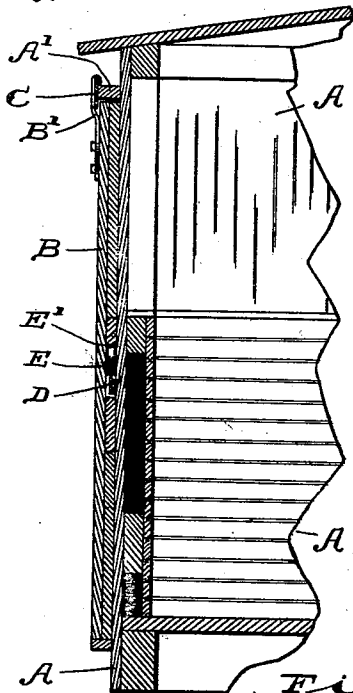


Fig. 3.

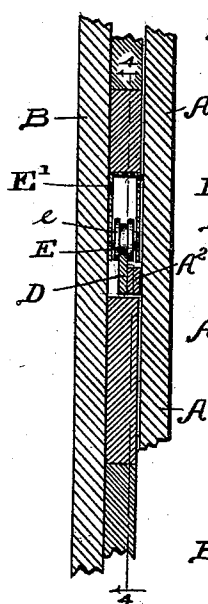


Fig. 4.

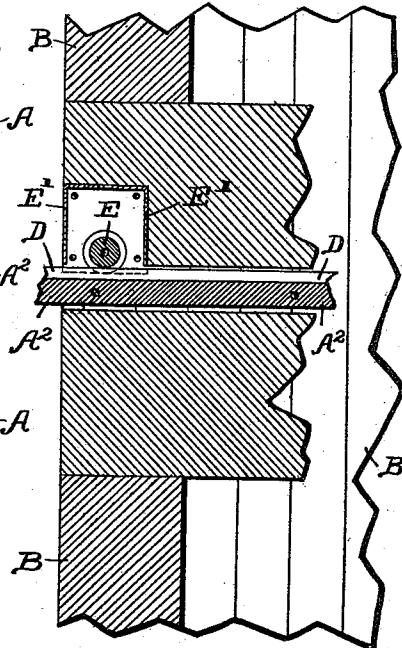
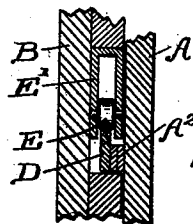


Fig. 5.



WITNESSES:

J. H. Warner.
J. A. Walsh.

INVENTOR
John L. Wagner,

BY
Chester Bradford,
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN L. WAGNER, OF TERRE HAUTE, INDIANA.

BOX-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 512,074, dated January 2, 1894.

Application filed September 2, 1893. Serial No. 484,674. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. WAGNER, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Box-Car Doors, of which the following is a specification.

The object of my said invention is to produce a simple, easily-operated and inexpensive door for freight cars. A car door and its attachments embodying my said invention will be first fully described, and the novel features thereof then pointed out in the claim.

Referring to the accompanying drawings, 15 which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a portion of an ordinary box or freight car provided with a door embodying my said invention; Fig. 2 a transverse vertical sectional view through the door and adjacent parts, on an enlarged scale, as seen when looking toward the left from the dotted line 2 2 in Fig. 1; Fig. 3 a detail sectional view similar to 25 a portion of Fig. 2, on a still further enlarged scale; Fig. 4 a detail sectional view as seen when looking toward the left from the dotted line 4 4 in Fig. 3, and Fig. 5 a view similar to Fig. 3, but showing a somewhat different 30 construction.

In said drawings the portions marked A represent the side and frame of the body of the car; B the car door; C the upper rail for supporting and guiding said door; D a shorter 35 rail secured to the side of the car, whereto said car door is attached at its middle portion, and E a truck or roller secured to the car door and running upon the rail D.

The car body A and door B in themselves 40 are or may be of any ordinary or desired construction. The rail C is a plain rail and extends across the top of the door opening. Said rail is shown as extending out to one side of the door opening a distance substantially equal to the 45 width of the door; but it may obviously be cut off close to the side of the door opening without destroying the utility of the device, although in this case a second stop A⁸ would preferably be provided upon the car body at a 50 point bearing about the same relation to the upper corner that the stop shown does to the

lower corner, as will be readily understood. As shown, this rail is made of a thin piece of bar iron, and is supported upon a bar or blocks of wood A' secured to the side of the car body. 55 The rail D is centrally secured to the car body, with the bar or blocks A² interposed between said rail and said body, at a point about half way between the upper and lower edges of the door, being about one-half the 60 ordinary length of the rail for this purpose. This rail like the rail C is a plain thin flat bar of iron.

The door B is suspended upon the rails C and D by means of a hanger B' secured upon 65 its upper front corner, and which hooks up over said rail C, and by the truck E secured to the central portion of its rear side, and which rests upon the rail D. Said door is provided with the usual handle B², whereby it is 70 operated, and with a lock strap B³ which is adapted to engage with a staple a at the side of the door opening in the car body. Its upper edge, as will be seen by an inspection of Figs. 1 and 2, extends up under the edge of 75 the rail C, and is thus there held in place, and it is prevented from swinging outwardly at the lower edge by means of engagement of the wheel or truck E with the rail D, as will be presently described. It is limited in its 80 movement, in opening, by the stop A⁸ upon the side of the car body, which stop also serves to hold the door, when open, from swinging away from the side of the car. Said door is shown in Fig. 1 about half way open, 85 and the positions of the parts which are hidden thereby are shown by means of dotted lines.

The roller E is mounted in a housing E' which housing is securely attached to the 90 door B from the inside. Said door being usually of two thicknesses, said housing is preferably as thick as one of the thicknesses composing the door, and a space is easily formed therefor by cutting out a corner from 95 one of the pieces comprising said door. The inner thickness of said door just below where this housing is located is divided, so that a groove extends from one side to the other, which receives the rail D and the bar or blocks 100 A² upon which it is mounted, as shown most plainly in Figs. 3 and 4. The wheel or truck

E itself is shown as flanged, with the flanges *e* extending down on each side of the rail D, and the door is thus held properly in position on said rail. Instead of flanging the truck, however, the construction of the housing may be such as to include flanges extending down over the edges of the rail D in which case the truck may be plain and without the flanges *e*, as shown in Fig. 5. In this case the housing may be thicker and heavier than is shown, and this would be for some considerations preferable.

The door, by my arrangement, as will be readily seen, is held at two points only, and by very simple and inexpensive devices, which are not liable to get out of order, and which, nevertheless, operate easily and without difficulty.

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

The combination of a car A having an ordinary door opening, a rail C secured above said door opening, a rail D secured to one side of the door opening about midway between the upper and lower sides thereof, a door B provided with a hanger B' at its upper front corner, and a truck or wheel secured within a housing let into said door about midway of its rear side, said hanger resting upon the rail C and said truck resting upon the rail D, and said door being further provided with a transverse groove to receive said rail D, said several parts being arranged and operating substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 7th day of August, A. D. 1893.

JOHN L. WAGNER. [L. s.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.