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A. L. CHAMPION.
FREIGHT CAR DOOR.

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NO MODEL.

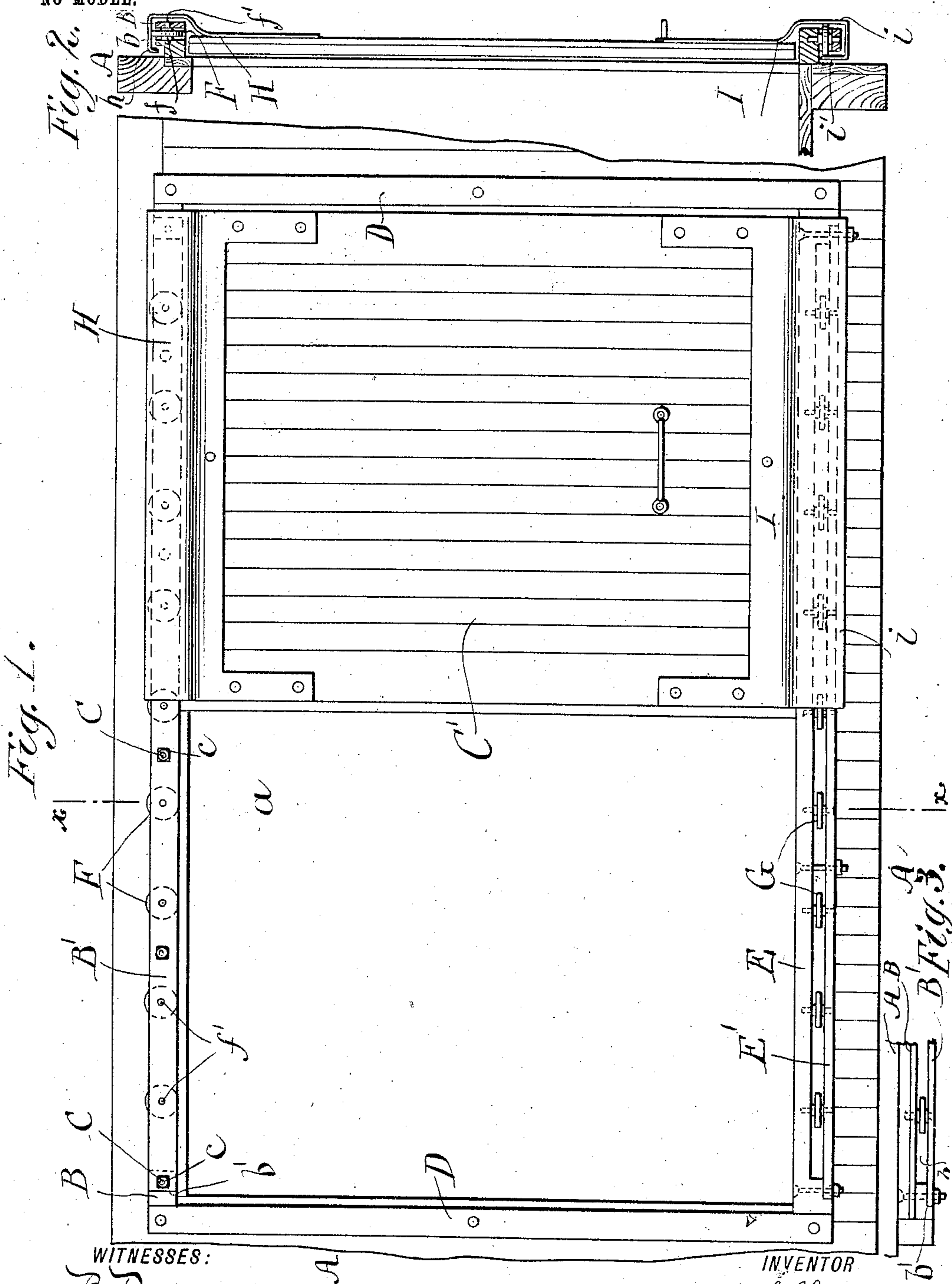


Fig. 1.

Fig. 2.

Fig. 3.

WITNESSES:
B. Patterson.
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ABRAHAM LINCOLN CHAMPION, OF MACON, GEORGIA.

FREIGHT-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 768,513, dated August 23, 1904.

Application filed April 9, 1902. Renewed February 15, 1904. Serial No. 193,554. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM LINCOLN CHAMPION, a citizen of the United States, and a resident of Macon, county of Bibb, and State of Georgia, have invented certain new and useful Improvements in Freight-Car Doors, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to improvements in freight-car doors and means for hanging them, the object thereof being to provide an efficient and durable device of this character which is adapted to freely slide back and forth on a straight line with but a minimum of friction and which is durable and efficient in general operation.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a part of a car-body having my improvements attached thereto. Fig. 2 is a vertical sectional elevation taken on a line xx of Fig. 1, and Fig. 3 is a plan view of a part of the upper supporting-rail.

In the practice of my invention I secure to the side A of the car-body by bolts, rivets, or other suitable means and located over the doorway a a longitudinal rail B, which is provided with a recess b throughout nearly its entire length. Upon each end of the rail B is a short recess b' , which recesses engage a longitudinal plate B', the parts being secured together by means of the bolts C and nuts c , the outer surface of the plate B' being even with the end parts of the strip B. The rail B is of sufficient length to allow the door to entirely clear the doorway when said door is opened, and vertical stops D are located at each end to limit the sliding movement of the door. Beneath the doorway, running parallel with the rail B, is a similar rail, which comprises the recessed part E and outer plate E', the parts of this rail being set at right angles to the rail B. Located between the two sections of the rail B is placed a series of rollers

F, which are each provided with an integrally-formed hub f and spindle or shaft f' , which are journaled in openings in the parts B and B' and which register with each other, whereby the rollers may freely revolve upon horizontal axis. A set of rollers G, having integral hubs and spindles similar to the rollers F, are journaled between the two parts E and E' of the lower rail, and these rollers revolve upon vertical axis.

Secured to the door C' at the top thereof is a hanger H, which bears upon the rollers F and slides freely thereon. Lateral displacement of this hanger is prevented by the downwardly-extended flange h upon the back thereof. A similar hanger I, but which is in inverted position, is placed upon the bottom of the door, and this hanger bears upon the rollers G at its vertical part i , an upwardly-extended flange i' being formed at the back to prevent lateral displacement.

By the use of this door and novel means for hanging same it is obvious that the door will slide back and forth freely without catching and lateral pressure either from the inside or outside will not tend to in any way displace the hanging mechanism.

Any suitable fastening devices may be employed in connection with the door, and it is readily adaptable for attachment to the ordinary car-body.

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

1. The combination with the body of a car of rail E, E', recessed as specified, attached to the said car below the doorway thereof, so that the said recess will be at right angles to the surface of said body, a plurality of rollers G, formed with hubs and spindles integral therewith, and journaled in the parts E, and E', of said rail so that the said spindles will be vertical, and said rollers will revolve in said recess, of a door, for said car, an inverted hanger I fastened to the bottom thereof, bearing upon the rollers G, and sliding thereon, an upwardly-extending flange on the back of said hanger, arranged to prevent lateral displacement of said door, and means for guiding and moving the upper end of said door.

2. The combination with the body of a car the rail B, formed with the recesses *b* and *b'*, and fastened to said car over the doorway thereof, the plates B', engaging the recesses *b'*, a plurality of rollers F, formed with hubs *f*, and spindles *f'*, integral therewith horizontally journaled in the parts B and B', and revolving in the recess *b*, the rail E, E', formed with recess as specified, fastened to said car
10 beneath said doorway parallel to said rail B, and with its recess at right angles to the surface of the body of said car, a plurality of rollers G, formed with hubs and spindles integral therewith and journaled in parts E, E',
15 of said last-named rail, so that their spindles will be vertical and that said last-named rollers will revolve in the recess of the said rail E, E', of a car-door the hanger H fastened to

the top thereof, bearing upon the rollers F, and sliding thereon, the downwardly-extending flange *h*, upon the back of said hanger and arranged to prevent lateral displacement of said door, the inverted hanger I fastened to the bottom of said door bearing upon the rollers G, and sliding thereon, and the upwardly-extending flange *i*, upon the back of said hanger I, arranged to prevent lateral displacement of the bottom of said door. 20 25

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 15th day of February, 1902. 30

ABRAHAM LINCOLN CHAMPION.

Witnesses:

TITUS DE LOACH,
WM. H. JOHNSON.