

(No Model.)

T. C. ALLEN.
CAR DOOR.

No. 534,940.

Patented Feb. 26, 1895.

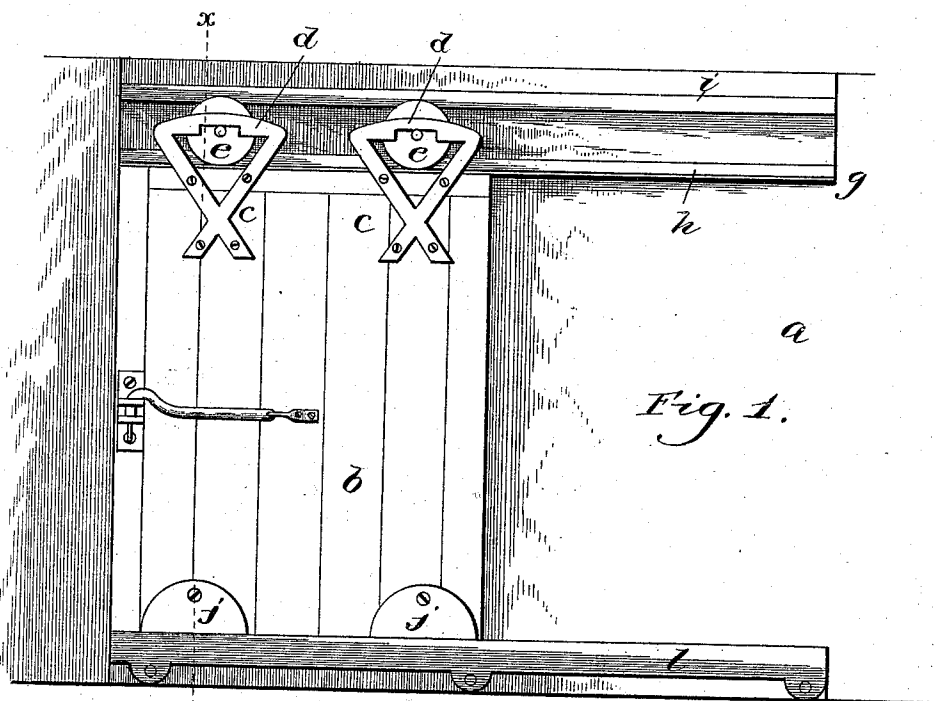


Fig. 1.

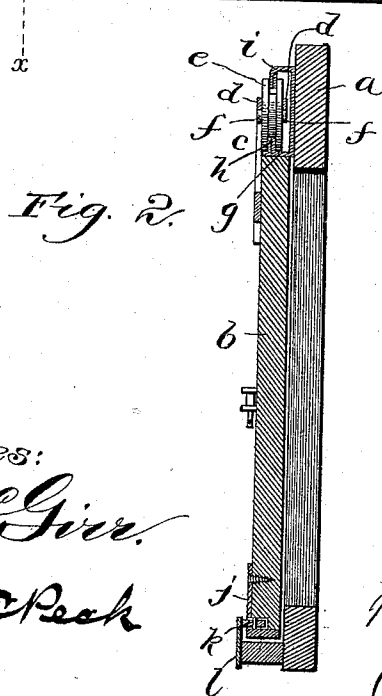


Fig. 2.

Witnesses:
J. B. McGirr.
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Inventor:
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per O. E. Duff
Att'y.

UNITED STATES PATENT OFFICE.

THOMAS C. ALLEN, OF DALLAS, TEXAS.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 534,940, dated February 26, 1895.

Application filed April 25, 1894. Serial No. 508,972. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. ALLEN, of Dallas, in the county of Dallas and State of Texas, have invented certain new and useful
5 Improvements in Car-Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it
10 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in freight car doors and supporting
15 means therefor.

The object of the invention is to provide an improved freight car door so supported that it will not be shaken or jarred off and can be easily opened and closed at all times no matter
20 how heavily loaded the car may be.

The invention consists in certain novel features of construction and in combination of parts more fully and particularly pointed out hereinafter.

25 Referring to the accompanying drawings:— Figure 1, is a side elevation of the improved freight car door showing a portion of the car. Fig. 2, is a vertical sectional view through a portion of the car and through the door taken
30 on the line X X, Fig. 1.

In the drawings the reference letter *a*, indicates a freight car provided with the sliding door *b*, to close the opening into the car. This door is carried by hangers *c*. Each
35 hanger consists of a frame secured to the door and extending upwardly from the same. This frame at its upper end is provided with the two parallel horizontal bars *d*, located a distance apart and preferably formed integral
40 with the upright portion of the hanger frame. On their under sides these bars can be provided with elongated ways of suitable length having stops at the ends. A supporting wheel *e*, is located between said bars and is
45 provided with the end studs or pintles *f*, extending beneath said bars and into said ways so that the door is hung from the pintles of said wheels and the wheels freely travel between the said bars of the hanger frames.
50 Each wheel has two bearing surfaces or treads separated by the central groove or depression.

Above the opening in the car the track *g*, is rigidly and horizontally secured. This track extends outwardly and horizontally and is formed of any strong, suitable material and
55 is provided with the two tracks or ways to respectively, receive the two treads of each wheel of the hanger and said two tracks are separated by the vertical wall or ridge *h*, extending up into the central groove between
60 the treads of each wheel. This central wall guides the hangers and holds them in the proper position and in alignment.

The guard track *i*, is provided above the wheels of the hanger and parallel with the
65 supporting track just mentioned. This guard track is provided with the depending flange extending between the two treads of each hanger wheel. The guard track prevents the
70 hanger wheels from jumping from the supporting track. The guard track of the supporting track can be formed integral in cross section if desired, or they can be formed separately and separately secured if desired.

It should be noted that the supporting track
75 extends outwardly and directly over the upper edge of the car door, and guides said door, the hangers having the two bars resting on the axles or studs of the supporting
80 wheels directly over the two ways of the supporting track distributing the weight equally on said supporting track.

The outer face of the lower portion of the door is provided with a suitable number of casings *j*, provided with the horizontal pulleys
85 *k*, projecting through the outer faces of the casings and arranged to engage the inner surface of the rail *l*, located outside of the door and rigidly and suitably secured to the car
90 beneath the door. Said casings are preferably formed angular with a portion extending beneath the edge of the door and a portion located on the outer face of the door and the rollers are journaled in openings in said
95 casings so as to project a short distance beyond the casing. This arrangement enables the door to slide easily no matter how much weight there may be located within the car pressing
100 outwardly against the door as often happens in heavily loaded freight cars by reason of the shifting of the load when the cars are in motion.

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

5 A freight car having the horizontal track composed of the single inclosing track iron provided with the upper depending flange, the lower treads having the central vertical flange, the car door having its upper edge traveling along the under edge of said track iron, the
10 door hangers having the double wheels in said track iron straddling said flanges, the rigid guard rail arranged at the outer face of

the lower side of the door, the angle casings secured in the lower edge of the door and provided with the horizontal rollers to travel against said guard rail, substantially as described. 15

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOMAS C. ALLEN.

Witnesses:

E. B. BARGE,
J. R. BLEWETT,