

C. F. ALLEN.

DOOR FOR BOX CARS.

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993,744.

Patented May 30, 1911.

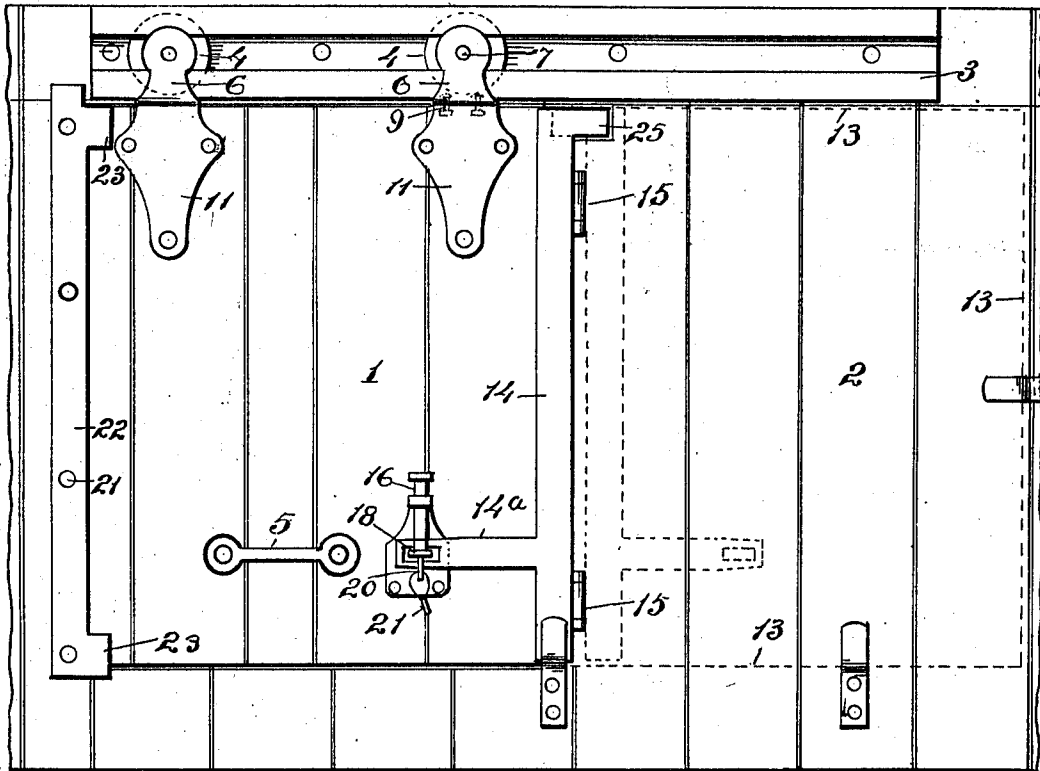


Fig. 1.

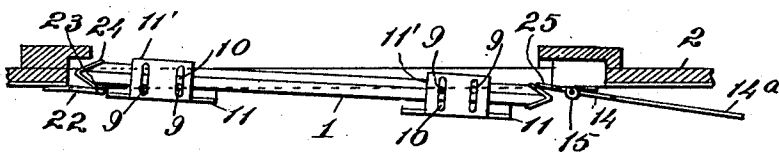


Fig. 2.

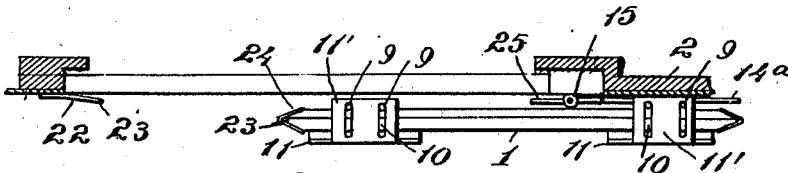


Fig. 3.

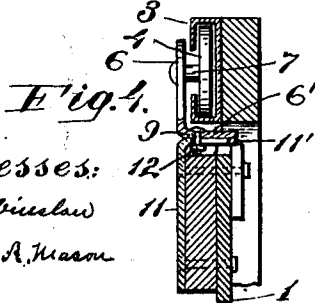


Fig. 4.

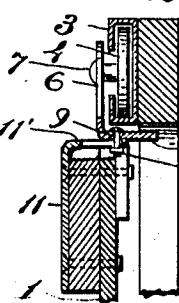


Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES FARINGTON ALLEN, OF LOS ANGELES, CALIFORNIA.

DOOR FOR BOX-CARS.

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Specification of Letters Patent.

Patented May 30, 1911.

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To all whom it may concern:

Be it known that I, CHARLES FARINGTON ALLEN, of the city of Los Angeles, in the county of Los Angeles, in the State of California, have invented a new or Improved Door for Box-Cars, of which the following is a full, clear, and exact specification, reference being had to the annexed drawings and to the figures and reference characters marked thereon.

My invention relates to new and improved construction for flush closing doors of railway box cars.

The object of the invention is to provide a means whereby the door may be suspended on a straight rail by anti-friction rollers, and still be moved laterally to and from the body of the car, in order to enable it to be moved past the opening to a point alongside the car body, or, when closed, to be moved into the door opening and thus effect a closure which is flush with the outer surface of the car body.

Another object is to effect a more positive closure when the door is locked in position.

The first of these objects is attained by making a pair of anti-friction roller hangers, each of which is in two members, one member having the roller therein to run on the rail, and the other member being attached to the door, and in so connecting the two parts of the hanger that the lower or door part will have a lateral movement, independently of the upper part, and thus provide for an in and out movement of the door itself.

The second object is provided for by having the operating bar which swings out one end of the door from its seat in the opening, made in the form of a cleat, which, when closed, covers the joint between the door and jamb, and thus prevents tools from being forced through the joint, all of which will now be set forth in detail.

In the drawings, Figure 1 is a front elevation of a part of a box car, showing that portion thereof where the flush door is located, the open position of the door, and the rocking cleat being shown in dotted lines. Fig. 2 is a horizontal section of a portion of the car looking down on the top of the door. Fig. 3 is a horizontal section of a portion of the car looking down on the top of the door which is drawn out of its closed position. Fig. 4 is a vertical section of the anti-friction roller hanger showing the position of the two

members of the hanger when the door is in position, and, Fig. 5 is a vertical section of the hanger, when the door is open.

The flush sliding door is marked 1, and the portions of the sides of the box car containing the opening which the door closes and opens, and the portion of the side of the car over which it slides when open, are marked 2. At the top of the side of the car is secured a rail 3, of the sectional form shown in Figs. 4 and 5. In the hollow of the rail 3 the anti-friction rollers 4, by which the flush-opening door is suspended, roll when the door is opened, the handle 5 being used for opening and closing the same.

The two hangers for the anti-friction rollers which carry the door, are each made of two members, an upper and a lower, the upper member 6 having therein the anti-friction wheel 4, which is mounted on a bearing axle or pintle 7. Each member 6 has its lower end bent inwardly forming horizontal part 6', shown more particularly in section in Figs. 4 and 5, and in this portion are secured two bolts 9 9, the lower threaded ends of which project below a sufficient distance to pass through the horizontal part 11' of the lower member 11, and to receive the nut 12 thereon.

The lower member 11 serves as a plate for securing the door 1 thereto, and the upper inturned horizontal part 11' has transverse slots 10, through which the bolts 9 9 pass, so that when the nuts 12 are in position the lower member 11, carrying the door, has a lateral or in and out motion which does not affect the movement of the upper member within which the anti-friction roller is mounted.

In order to provide an effectual means for sealing the door when in a closed position, and also to afford an easy manner of opening the door, I provide a flat metallic cleat 14, which is hinged to the car body, as at 15, so that it will rock, and in such a position that when the door is closed and the cleat is in its normal position, it will cover the joint between the door and the jamb. This cleat has an arm 14^a integral therewith, at the end of which is a slot through which a bracket 18 passes, and a bolt 16 serves to hold the arm in a secure position. A wire passed through a hole, at 20, in the lower end of the bolt 16, and a seal 21 serve to lock the same as a security against tampering.

The upper end of the rocking cleat 14 has

a finger 25 so arranged, with relation to the edge of the door, that as the cleat is turned or rocked by swinging the arm 14^a away from its locked position, the finger will move 5 behind the door and draw the door out of its seat, or from its flush position, as shown in Fig. 2, and the attendant can then slide the door along into the position indicated in Fig. 3, to its open position as shown by the dotted lines 13, Fig. 1, as the lower member 11 of the bracket moves outwardly for 10 this purpose, as hereinbefore explained.

In order to insure that the door 1 shall be closed flush with the guides or edges against 15 which it is pressed into contact when closed, a rigid cleat 22, as shown at Fig. 1, is fastened to the side of the box car by bolts 21, and this bar is formed with inclined projections 23, at the upper and lower ends thereof, 20 as shown at Figs. 1, 2 and 3, against which the end of the door 1 comes into contact when closed. The door may be clothed with a metallic sheathing 24 at the ends, as shown.

It is obvious that the two cleats thus provided will effectually seal the joint between 25 the door and jamb and thus prevent opening or springing of the door by the usual method where such cleats are not provided.

What I claim as new, is;

30 1. A car body having a door slidably mounted therein and adapted to rest flush within the door opening, provided with a flat metallic cleat, one end of which is hinged 35 to the car body adjacent one jamb of the door opening, and adapted to rock over or uncover the entire vertical joint between the door and jamb, and means for locking said cleat in position.

2. A car body having a door slidably 40 mounted thereon, and adapted to rest flush within the door opening, provided with a flat metallic rocking cleat hinged to the car body adjacent one jamb of the door opening, said cleat having at one end a finger engag- 45 ing with the door, whereby the rocking of this cleat will draw out the door from its flush position, and an arm integral with the rocking cleat whereby the latter may be operated, and locked and sealed.

3. A car body having a door slidably 50 mounted thereon, and adapted to rest flush within the door opening, provided with a flat metallic cleat, one edge of which is hinged to the car body alongside one of the door jambs, and adapted to rock over or 55 uncover the entire vertical joint between the jamb and door, a fixed cleat at the other vertical edge of the door to cover the entire joint, one edge of which is secured to the car body and the other edge overlapping 60 the door edge, in combination with a sliding door suspended on a pair of anti-friction roller hangers, each of which has an upper and a lower member, the lower member of 65 which is capable of moving to or from the car a limited distance.

In testimony whereof, I, the said CHARLES FARINGTON ALLEN, have hereunto set my hand and seal at the city of Los Angeles aforesaid, in the presence of two subscribing 70 witnesses.

CHARLES FARINGTON ALLEN. [L. s.]

Witnesses:

ST. JOHN DAY,
IDA M. DASKAM.