

W. L. BLENNERHASSETT.

CAR DOOR.

APPLICATION FILED MAY 14, 1910.

982,787.

Patented Jan. 31, 1911.

3 SHEETS-SHEET 1.

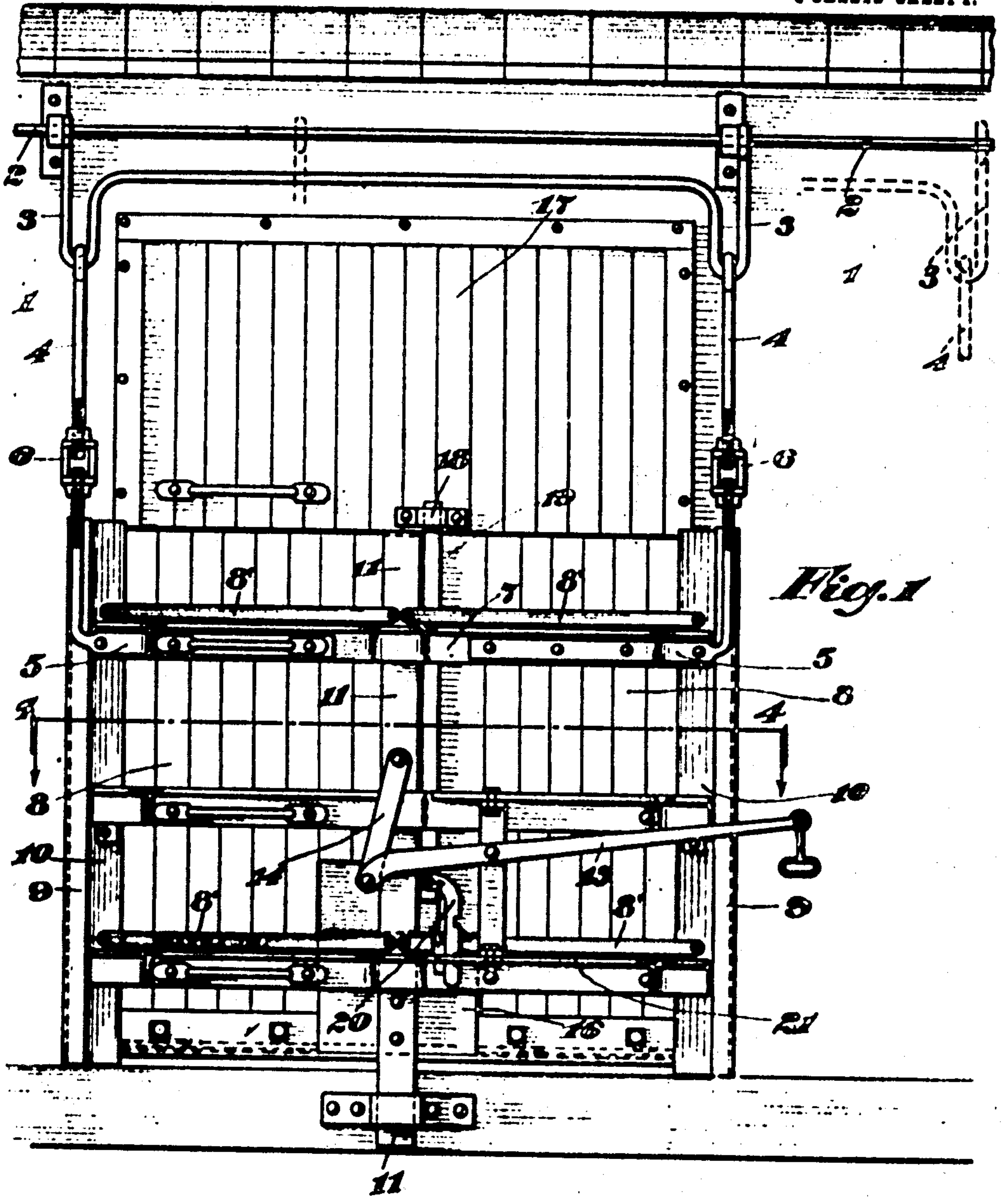


Fig. 1

Witnesses:

D. H. Lawrence
E. J. Lawrence

WILLIAM L. BLENNERHASSETT
Inventor

By

Wm. L. Blennerhassett
Attorneys

W. L. BLENNERHASSETT.

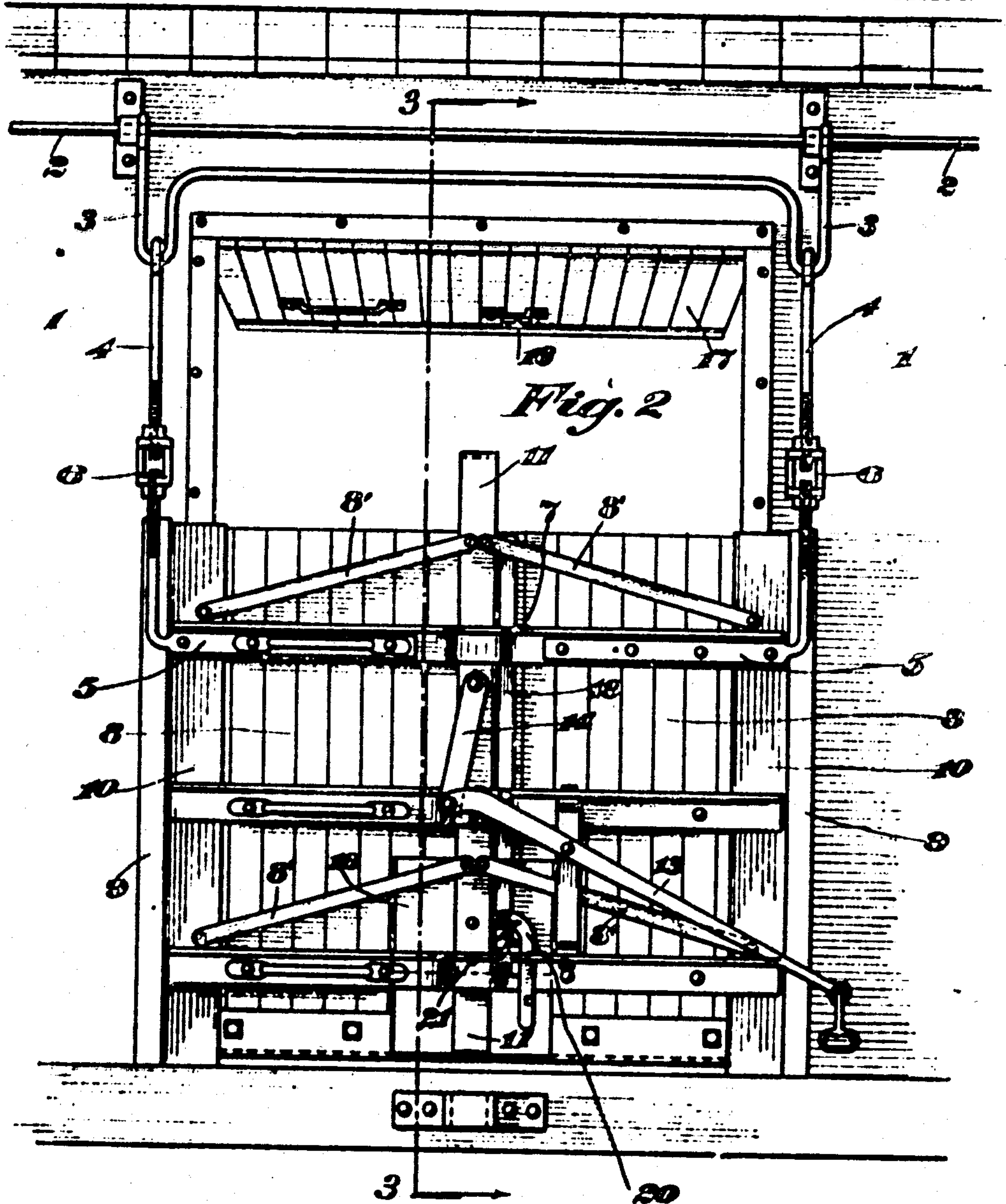
CAR DOOR.

APPLICATION FILED MAY 16, 1910.

982,787.

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3 SHEETS-SHEET 2.



Witnesses:

W. L. Blennerhassett
E. J. Gaudin

WILLIAM L. BLENNERHASSETT

Inventor

By

Marion Main

Attorneys

W. L. BLENNERHASSETT.
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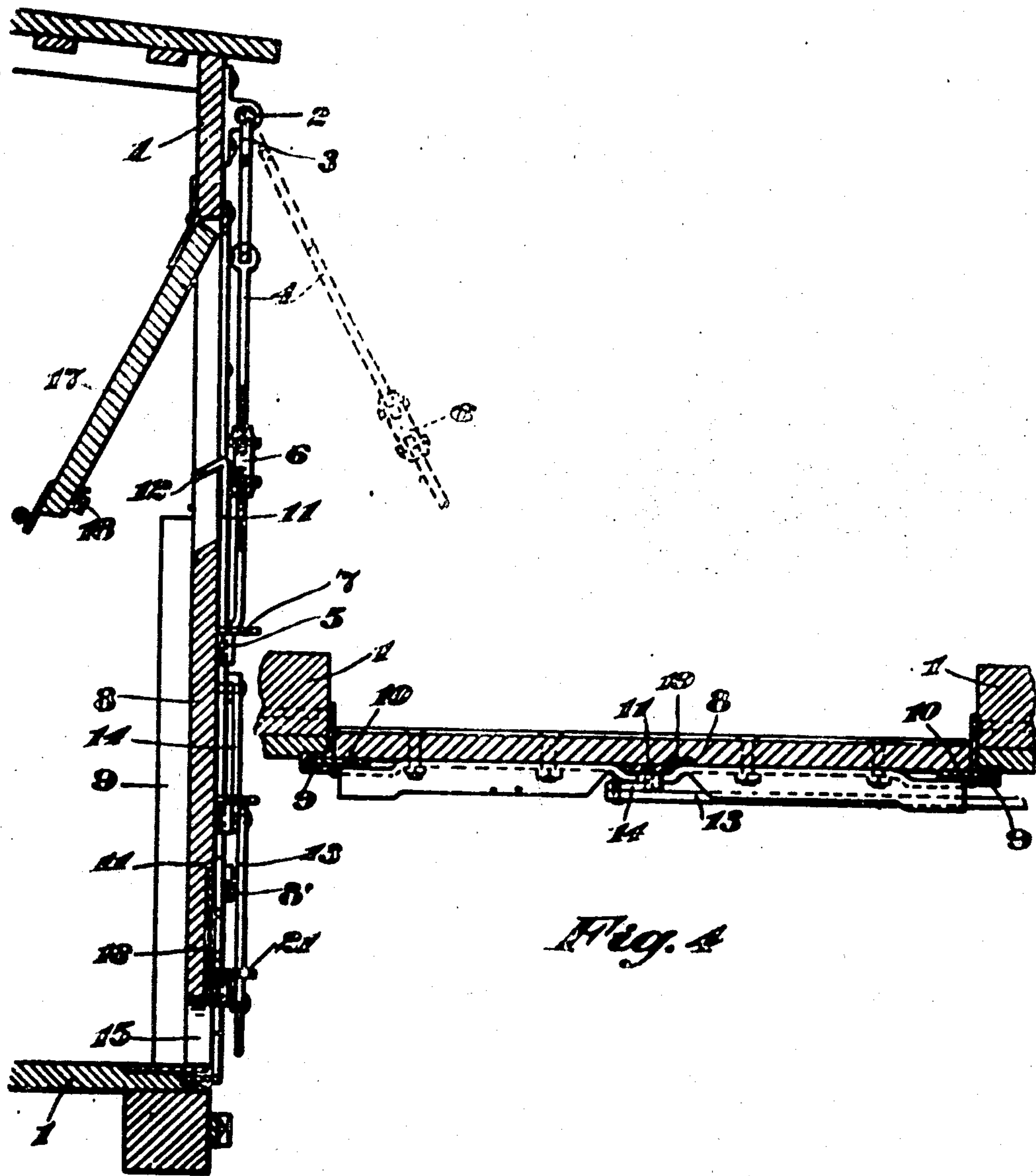


Fig. 4

Fig. 3

Witnesses:

E. J. Gaudin
E. J. Gaudin

WILLIAM L. BLENNERHASSETT
Inventor

By

Harmon & Harmon

Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM L. BLENNERHASSETT, OF FORT WILLIAM, ONTARIO, CANADA.

CAR-DOOR.

282,787.

Specification of Letters Patent.

Patented Jan. 31, 1911.

Application filed May 14, 1910. Serial No. 561,461.

To all whom it may concern:

Be it known that I, WILLIAM L. BLENNERHASSETT, a subject of Great Britain, and resident of Fort William, Ontario, Canada, have invented certain new and useful Improvements in Car-Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to box cars and more particularly to box car doors.

Broadly speaking, it comprises a door proper, an over head rail, means for hanging the door from the rail, means for adjusting the door vertically on its supports, retaining plates slidably mounted on the door, angle plates mounted on the car body and adapted to cooperate with the retaining plates to hold the door in position, and means for moving the sliding plates to and from operative position.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a side elevation of the door, from the outside of the car; Fig. 2 is a view similar to Fig. 1, with the swinging door section raised; Fig. 3 is a vertical cross section on line 3-3 of Fig. 2, looking in the direction of the arrow; and Fig. 4 is a horizontal cross section on line 4-4 of Fig. 1, looking in the direction of the arrow.

The main objects of the invention are to provide a simply constructed car door which may be swung outward and travel longitudinally of the car, together with means for clamping or securing the door in operative position.

Referring to the drawings in detail, 1 indicates a car body provided with the usual door way above which is mounted the supporting rail 2. On this rail is slidably and revolvably mounted a hanger 3 from which depend the links 4 adjustably connected to plates 5 by turn buckles 6. These plates are

rigidly secured to angle irons or beams 7 bolted or otherwise secured to a door 8. At the edges of the door way are secured vertical channel iron plates 9 adapted to cooperate with plates 10 slidably mounted on the door beneath the ends of the beams 7. These plates are operated by links 8' pivotally connected at their opposite ends respectively to the plates 10 and to a slide bar 11.

The bar 11 is slidably mounted at about the center of the door and between the door and beams 7. Movement of this bar, of course, operates the links 8 and causes movement of the plates 10. It is necessary, of course, to prevent downward movement of the bar 11 beyond a certain predetermined point. Accordingly, a hook 12 is formed on the upper end of the bar and is adapted to engage the upper edge of the door as the bar reaches a predetermined point in its downward movement. In its lowermost position, the bar will move the links 8' into alignment and force the plates 10 to operative position. As the bar is raised, the plates 10 will be withdrawn from beneath the channel irons and the door will be free to swing outward. In order to raise the bar and retract the plates, a lever 13 has been provided. This lever is pivoted either directly on the door or on a strip or bar secured to the door. It is connected by a link 14 to the bar 11. Movement of the lever, therefore, effects movement of the bar.

The lower end of the door 8 may be provided with an auxiliary opening 15 closed by a plate 16. The plate is slidably mounted in a counter sink of the door and is connected to the lower end of the bar 11. Consequently, when the bar is moved to its lowest position to force plates 10 beneath channel irons 9, the plate 16 will also be moved to cover the opening 15 and vice versa.

The upper part of the door way is closed by a swinging door 17, provided with a loop or strap 18 adapted to receive a bar 19 slidably mounted on the door 10 adjacent to the bar 11. In this way, the door 17 may be held in closed position, when desired. The bar 19 may be held in either raised or lowered position by means of a notched arm 20 pivotally connected to the lower end of the bar 19 and adapted to cooperate with the horizontal flange of the lower angle iron or beam 7.

It is thought that the operation and use of the invention will be clear from the preceding detailed description.

Changes may be made in the construction, arrangement, and disposition of the several parts of the invention without in any way departing from the field and scope of the same and it is meant to include all such within this application wherein only a preferred form has been disclosed.

Having thus fully described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In combination, a car body provided with a door way having retaining grooves formed in its vertical walls, a door proper provided with an auxiliary door opening, means for supporting said door adjacent said door way, retaining plates slidably mounted on said door and adapted to be seated in the aforesaid grooves, a bar slidably mounted on said door, links connecting said bar and said retaining plates, a plate

secured to said bar and adapted to close the aforesaid auxiliary door opening, and means for operating said bar.

2. In combination, a car body provided with a door way having retaining grooves formed in its vertical walls, a door proper provided with an auxiliary door opening, means for supporting said door adjacent said door way, retaining plates slidably mounted on said door and adapted to be seated in the aforesaid grooves, a bar slidably mounted on said door, links connecting said bar and said retaining plates, a plate secured to said bar and adapted to close the aforesaid auxiliary door opening, means for operating said bar, and means for limiting the downward movement of said bar.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

WILLIAM L. BLENNERHASSETT.

Witnesses:

T. B. HARRIS,
S. KING.