No. 887,167. PATENTED MAY 12, 1908.

J. W. WILKES.

CAR DOOR.

APPLICATION FILED OCT. 21, 1907.

2 SHEETS—SHEET 1.

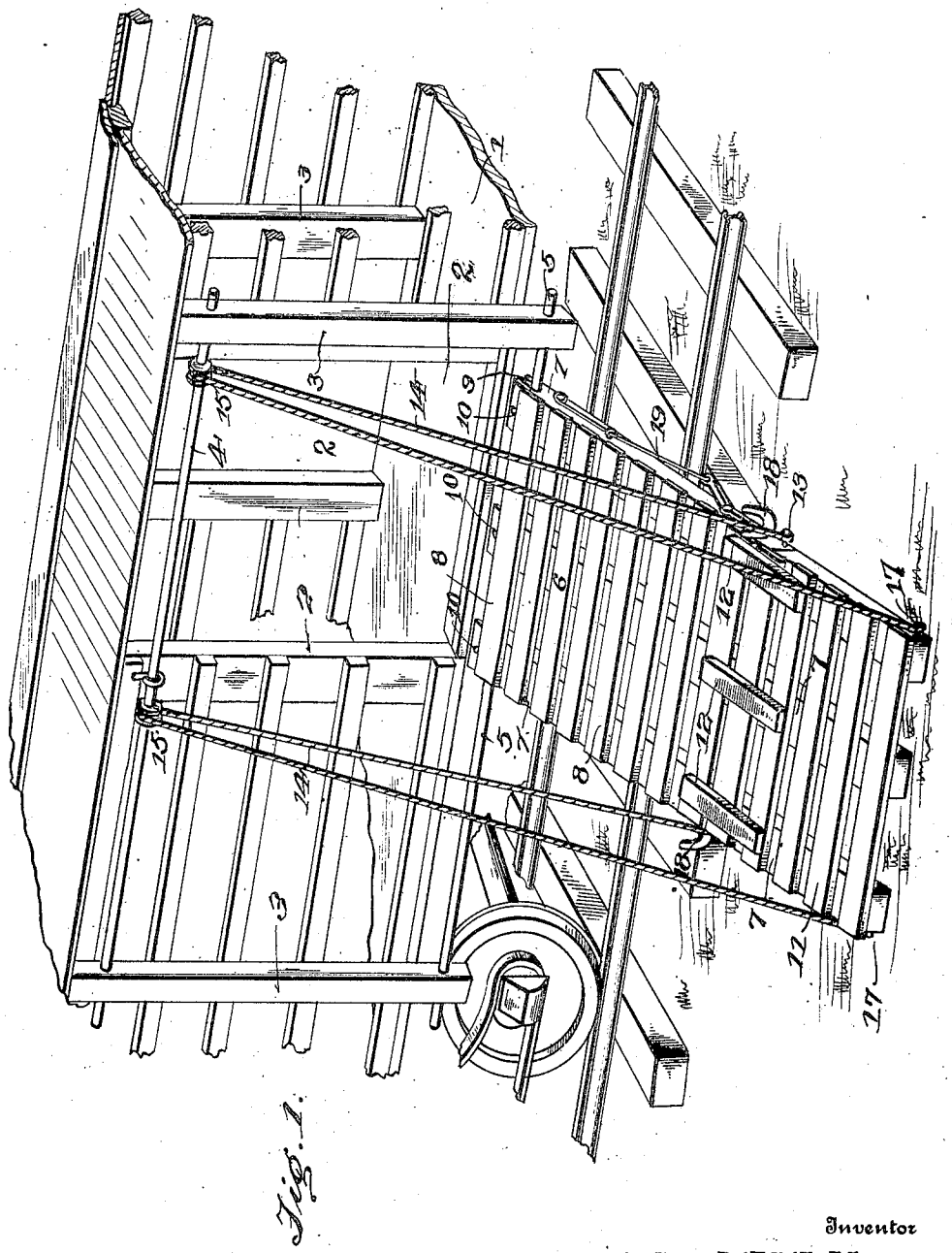


Fig. 1.

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Witnesses

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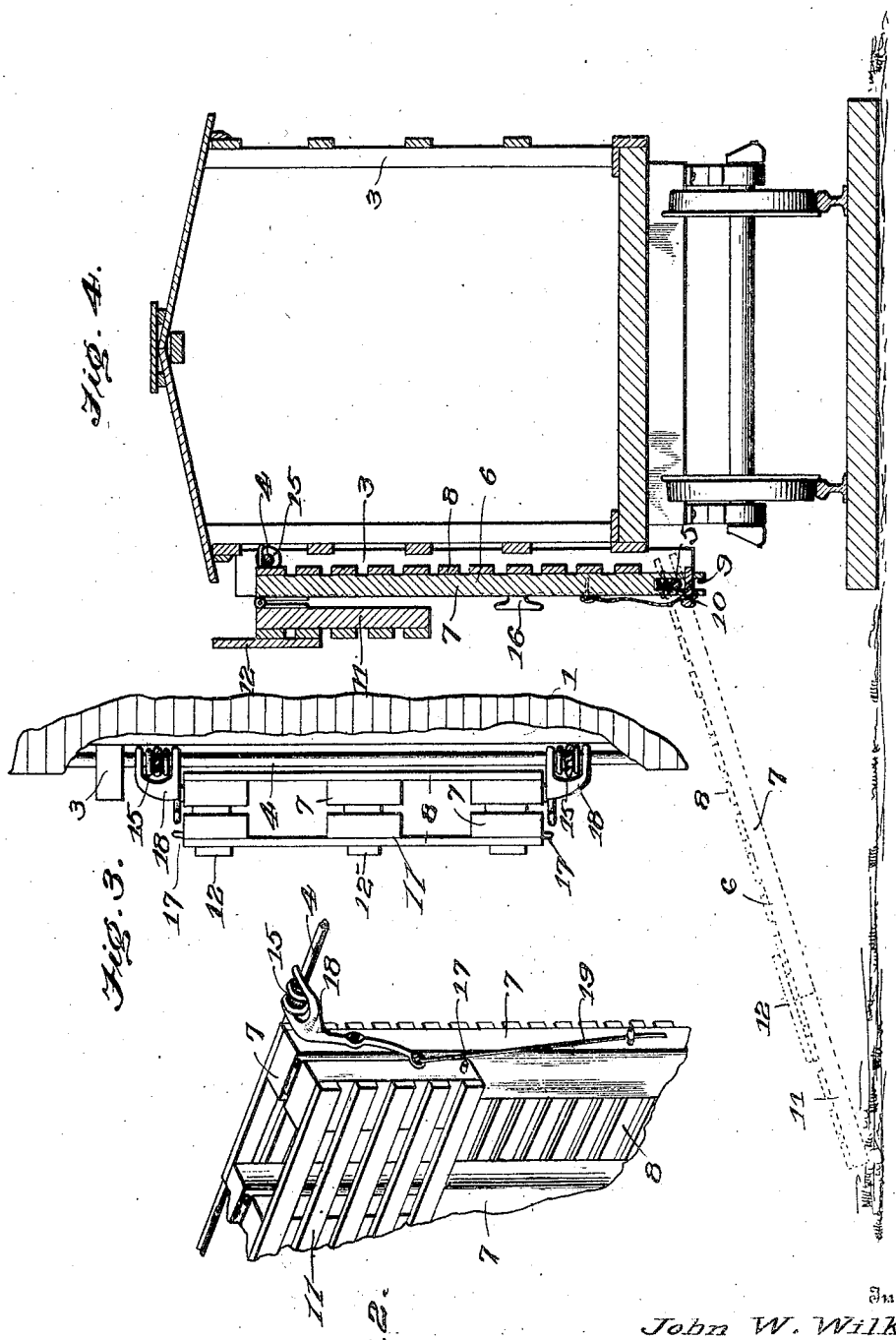


Fig. 4.

Fig. 3.

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN W. WILKES, OF BESSEMER, ALABAMA.

CAR-DOOR.

No. 887,167. Specification of Letters Patent. Patented May 12, 1908.

Application filed October 21, 1907. Serial No. 398,441.

To all whom it may concern:

Be it known that I, JOHN W. WILKES, citizen of the United States, residing at Bessemer, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Car-Doors, of which the following is a specification.

This invention contemplates certain new and useful improvements in cars and relates particularly to an improved construction of door for "stock" or other cars.

The invention has for its object an improved car door of this type that may be used not only to serve as a closure for the doorway but as a gangway up or down which cattle for instance may be driven into or from the car, and the invention consists in certain constructions arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a car door embodying the improvements of my invention, the door being illustrated in lowered position serving as a gangway. Fig. 2 is a fragmentary view of a corner of the door in raised position. Fig. 3 is a top plan view of the door, and Fig. 4 is a transverse sectional view through the car and door.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings numeral 1 designates a stock car which is provided with a doorway 2 and at opposite sides of the doorway with uprights or posts 3. Upper and lower horizontally extending rails 4 and 5 are secured in any way in the uprights or posts 3, the lower rail preferably extending in a plane below the floor of the car, and the upper rail extending on about a line with the upper side of the doorway.

The improved door 6 is composed of longitudinal beams 7 to which a series of preferably spaced transverse beams 8 is secured as shown. The longitudinal beams 7 are forked at one end as indicated at 9 and straddle the lower rail, pins 10 being preferably inserted through the members of the forks and being detachably held therein in any desired way, so as to prevent the door from slipping off the supporting rail when the door is lowered. The improved door is provided with a hinged extension section 11 which is adapted to project outwardly therefrom when the door is lowered so as to produce a gangway up or down which goods may be carried or cattle driven, said hinged extension section 11 being arranged folding downwardly preferably on the outer side of the main portion of the door when the door is swung upwardly and held in vertical position. The hinged section 11 is formed with longitudinally extending cleats 12 extending over the adjoining edge of the main portion of the door when the two parts are extended so as to relieve the strain from the hinges.

In order to swing the door upwardly, the door is provided at opposite sides and preferably at the outer end of its main portion with pins 13. Ropes or chains 14 are secured at one end to the respective pins 13 and extend over spools or pulleys 15 mounted to turn and freely slide on the upper supporting rail 4. The other ends of these ropes or chains are secured to pins 17 projecting out from the outer ends of the hinged section 11 of the door. By this means, the attendants may stand out from the car and by pulling upon the ropes or chains, may raise the door from the lower to the upper position, and the rope or chain may then be attached to the cleats 16 that are secured to the outer side of the main portion of the door.

The main portion of the door 6 is provided at its outer end with forked and hooked latches 18 that are adapted to extend over and engage with the supporting rail 4 when the door is swung to the upper position and which then embrace the spools 15 as shown. In order to release the latches from the supporting rail when it is desired to open or lower the door releasing rods or cords 19 are secured to the rear ends of the latches and extend along the outer sides of the door, being mounted in suitable parts thereof so that attendants standing on the ground may pull on the rods or cords 19 and thereby release the latches from the supporting rail when it is desired to swing the door outwardly.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a very simple, durable and efficient construction of door for stock and other cars which may be securely held over the doorway to close the same,

which may be readily slid along the supporting rails while in a vertical position as the latches merely take over the rail 4 and embrace the spools 15, the pins 10 being preferably removed during such movement of the door in order to permit the forked ends of the beams 7 to pass the supports for the lower supporting rail; and that the door may be easily swung downwardly and away from the doorway of the car and in alinement therewith, with the hinged section extended so as to form a continuous gangway or platform. As best seen in Fig. 4, the forked ends of the beams 7 are provided with rollers or wheels by which they are supported on the lower supporting rail, so that the door may be slid to one side with ease.

While I have illustrated my invention as applied particularly to a stock car, it is, of course, understood that the door can be used on any freight car and will be useful in unloading goods from the car to the platform, or in loading the car.

Having thus described the invention, what is claimed as new is:

1. The combination with a car provided with a doorway, of a lower supporting rail secured to the car and extending along the doorway, a door mounted at its lower end to turn and slide on said rail, an upper supporting rail secured to the car and extending over the doorway, spools mounted to turn and slide upon the said upper rail, ropes secured to said door and adapted to raise the same on the lower supporting rail, said ropes extending over the spools, and the door being provided with cleats for the attachment of the ropes thereto.

2. The combination with a car provided with a doorway, of a lower supporting rail secured to the car and extending along the door-way, a door mounted at its lower end to turn and slide on said rail, an upper supporting rail secured to the car and extending over the doorway, spools mounted to turn and slide upon the said upper rail, ropes secured to said door and extending over the spools and adapted to raise the door on the lower supporting rail, and latches secured to the door and adapted to engage with the upper rail to hold the door in a vertical position, said latches being arranged for engagement with the spools, whereby to carry the spools along the upper rail when the door is slid in a vertical position.

3. The combination with a car provided with a doorway, of a door hinged at its outer end to swing downwardly and outwardly upon the doorway, a lower supporting rail secured to the car and extending along the doorway, the door being mounted to turn and slide on said rail, an upper supporting rail secured to the car and extending over the doorway, spools mounted to turn and slide upon said upper rail, ropes secured to said door and adapted to raise the same on said supporting rail, said ropes extending over the spools, and forked latches secured to the door and adapted to engage the upper rail and embrace the spools, as and for the purpose set forth.

4. The combination with a car provided with a doorway, of a door hinged at its lower end to swing outwardly and downwardly from the doorway, means for supporting the door for such movement, the door being provided with a hinged extension adapted to fold downwardly on the outer side of the main portion of the door, an upper supporting rail extending over the doorway, and ropes secured at one end to the outer end of the door extension and extending over the said supporting rail, the other end of the ropes being secured to the main portion of the door and the door being provided with cleats for the attachment of the ropes thereto, whereby to hold the door in raised position.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. WILKES. [L. S.]

Witnesses:
A. DAVIDSON,
J. A. ESTES.