

899,909.

J. M. RUSH.
CAR DOOR CONSTRUCTION.
APPLICATION FILED JULY 19, 1907.

Patented Sept. 29, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

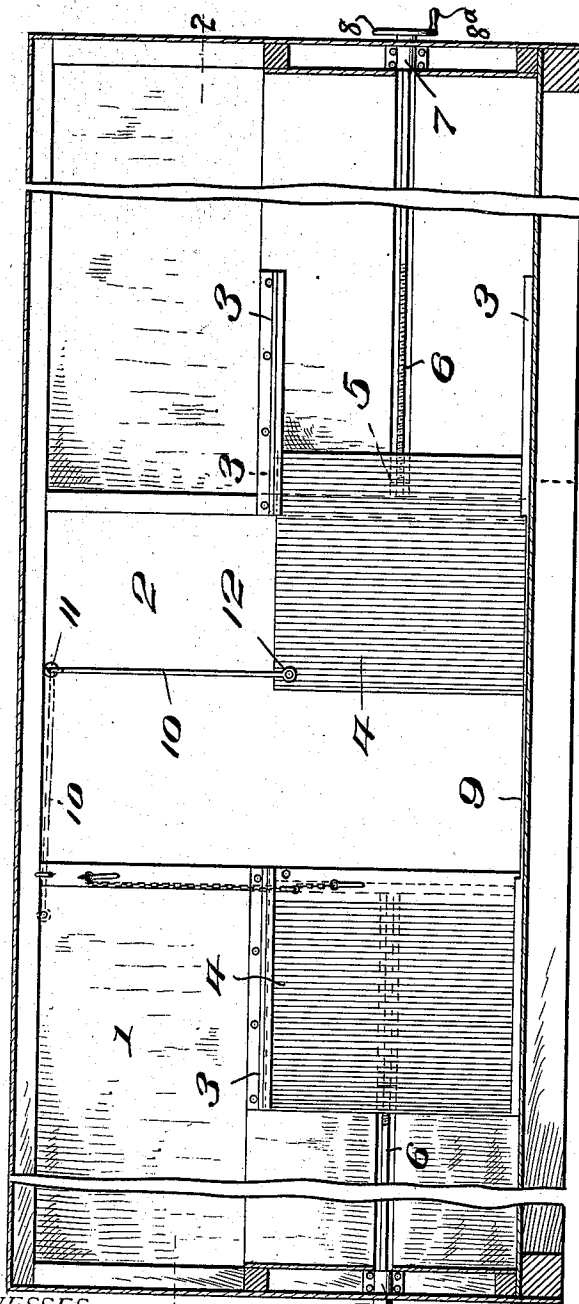
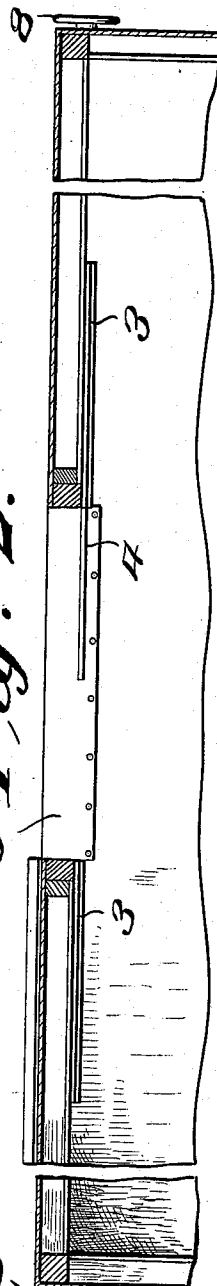


Fig. 2.



WITNESSES:

Thos. J. Kelly
W. J. Fitzgerald

J. M. Rush

BY *W. J. Fitzgerald*

Attorneys

Fig. 4.

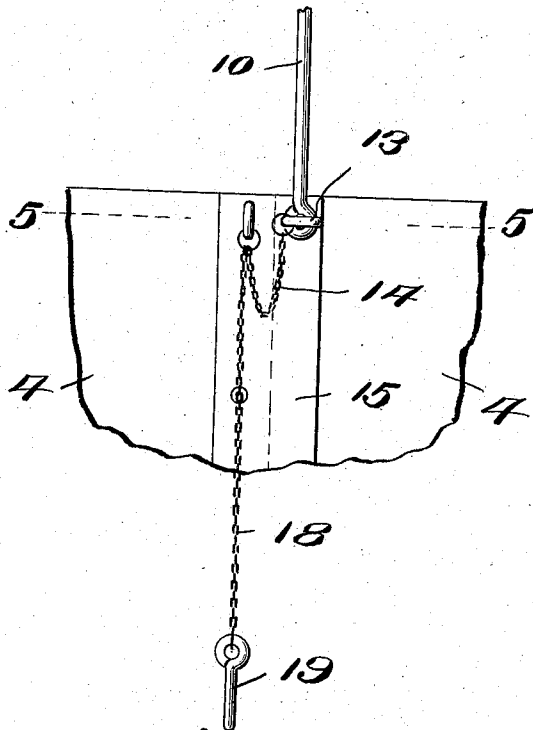


Fig. 5.

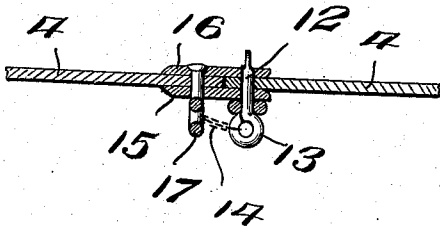
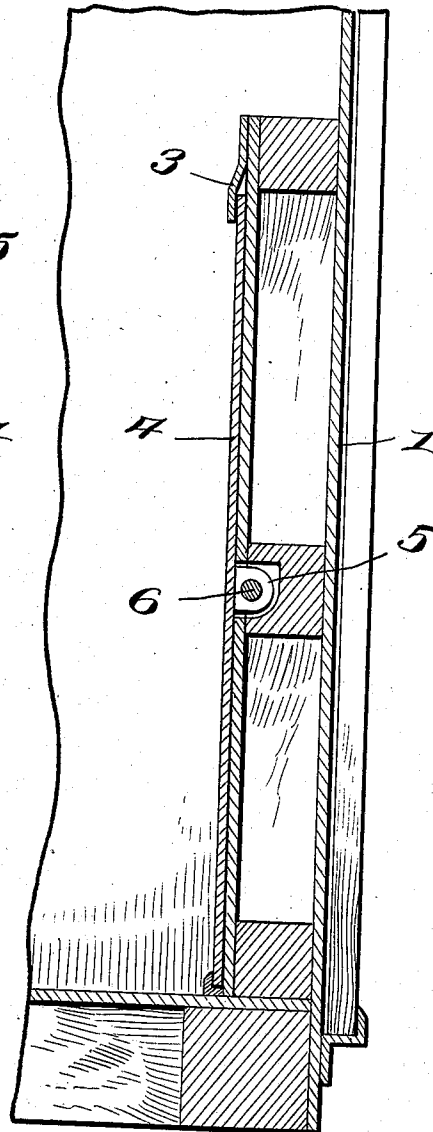


Fig. 3.



WITNESSES:
Thos. W. Riley
S. W. Fitzgerald

INVENTOR
 J. M. Rush
 BY
W. J. Fitzgerald & Co.
 Attorneys

UNITED STATES PATENT OFFICE.

JAMES M. RUSH, OF NEOSHO, MISSOURI.

CAR-DOOR CONSTRUCTION.

No. 899,909.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed July 19, 1907. Serial No. 384,590.

To all whom it may concern:

Be it known that I, JAMES M. RUSH, a citizen of the United States, residing at Neosho, in the county of Newton and State of Missouri, have invented certain new and useful Improvements in Car-Door Construction; and I do hereby declare the following to be 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.

My invention relates to the construction of railway cars and more particularly to the construction of car doors and controlling means therefor and my object is to provide car doors which may be placed under the absolute and ready control of the attendant, so that said doors may be disposed in an open or closed position in a very limited time.

A further object is to provide a car door especially adapted for grain cars, as wheat, shelled corn, oats and the like, whereby the car doors may be opened or closed at will, and that the doors will fit so tightly and securely as to prevent all loss of grain by leakage beneath the doors or around the openings.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings which are made a part of this application, Figure 1 is a longitudinal section view of my car doors, one of them in a closed position and the other open. Fig. 2 is a section view of Fig. 1, as taken on dotted line 2—2. Fig. 3 is a vertical, sectional view of one of my car doors, as taken on line 3—3, but on an enlarged scale. Fig. 4 is a detail view of a portion of the upper edge of the two doors joined together and also showing locking means therefor. Fig. 5 is a sectional view of Fig. 4 on dotted line 5—5.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the side walls of a freight car of the usual or any preferred form, provided with an opening 2, as usual and also provided upon each side of the opening 2 with the cleats or guide-ways 3, in which the doors 4 are adapted to reciprocate from a closed to an open position in the manner hereinafter set forth.

In order that the doors may be readily opened and securely closed, as desired, I

provide upon the inner side of each door a suitable lug or lugs 5, within which the threaded shaft 6 is adapted to turn in either direction, and as said shaft is secured against longitudinal movement, as by passing through a suitable bearing seat 7, or other means, it is obvious that by rotating said shaft in the proper direction, as by means of the hand wheel 8, the doors may be forced open or closed at will.

The doors are so formed as to fit snugly down upon the threshold or floor extension 9, so as to prevent loss of grain beneath the doors and in order to insure that the doors will be held firmly downward upon the threshold, I provide the brace arm 10 connected to the upper part of the door opening 2 in any preferred way, as by the eye-bolt 11, while the lower end is secured to the upper edge of the door in any preferred way, as by the pin 12, preferably having the controlling handle or eye-section 13, while the chain 14 is connected thereto to prevent casual displacement and loss of the pin.

One of the doors is provided with the edge plates 15, disposed upon the outer side of the door and complementary edge plate 16, upon the inner edge thereof, whereby the edge of the other door section will fit between or be received by the plates 15 and 16 and thereby prevent an opening to permit the loss of grain between the doors.

It will be observed that the pin 12 upon the eye section or handle 13 is designed to pass entirely through registering apertures in the door section 4 and the plates 15 and 16, and when said pin is entered in position, the doors will be securely locked together until said pin is removed. I also provide the eye-bolt 17 and a chain 18 having a locking pin 19 and said chain is of sufficient length to reach across the car to the opposite doors, which are similarly constructed and said pin 19 is designed to serve the same purpose upon said opposite doors, as served by pin 12, just referred to.

The chain 18 is for the purpose of holding the two pairs of doors against spreading incident to the strain placed thereon by the grain in the car and any suitable means may be provided for properly adjusting the length of the chain 18, so that the requisite support will be afforded.

It will be understood that the arm 10 is of sufficient length to hold the doors closely down upon the threshold and thereby guard

against the tendency of the doors to rise upwardly during the closing process.

It will thus be seen that I have provided reliably efficient means for forcing the doors
5 in a closed position or opening said doors, even against the strain of a load of grain, inasmuch as great force may be brought to bear by simply rotating the hand wheels 8, which, in some instances, may, if desired, be
10 provided with the controlling handle 8^a for rapid and convenient rotation.

My improved locking and controlling means for grain doors for railway cars will be found reliable and easily controlled,
15 either to open the doors or to close the same, and, while I have described the preferred combination and construction of parts, I desire to comprehend all features that fall fairly in the scope of my invention.

20 What I claim is:

In combination with a car having a door

way; a door formed in two sections movable in opposite directions, means for imparting movement to the sections, plates carried by one of the sections to overlap the second section when the sections are in closed position, 25 said plates having alining openings, the second section having an opening to register with the alining openings when the sections are in a closed position, a bracing arm piv- 30 oted to the car above the doors and terminating in an eye, said arm being of such length as to bring the eye in register with the openings of the plates and section, and a pin insertible through the eye and openings. 35

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES M. RUSH.

Witnesses:

LEE D. BELL,

ELSIE M. BRADLEY.