

No. 768,799.

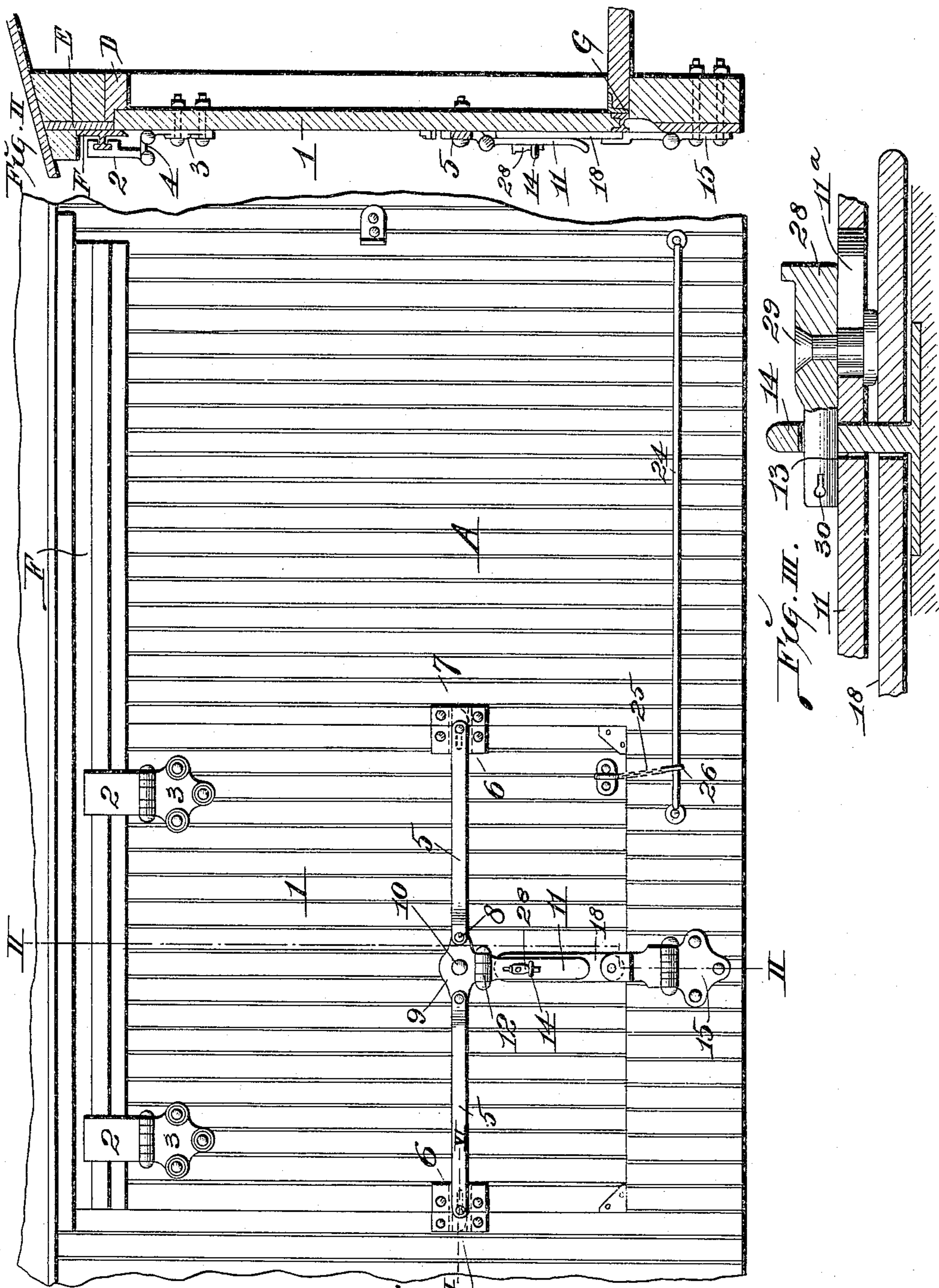
PATENTED AUG. 30, 1904.

J. R. HERNDON.
FREIGHT CAR DOOR.

APPLICATION FILED APR. 4, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



ATTEST

A. J. McCauley.
E. J. Knight

Fig. 1.

INVENTOR:-

J. R. Herndon.
BY Wright, Bro
ATTYS.

UNITED STATES PATENT OFFICE.

JOSEPH R. HERNDON, OF MARSHALL, TEXAS, ASSIGNOR OF ONE-HALF
TO EDWARD S. MARSHALL, OF ST. LOUIS, MISSOURI.

FREIGHT-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 768,799, dated August 30, 1904.

Application filed April 4, 1903. Serial No. 151,110. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH R. HERNDON, a citizen of the United States, residing in Marshall, in the county of Harrison and State of Texas, have invented certain new and useful Improvements in Freight-Car Doors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a flush door for freight-cars and means for operating said door and locking it in a closed condition.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is an elevation of the wall of a freight-car with my door shown in closed and locked position. Fig. II is a vertical section taken on line II II, Fig. I. Fig. III is a vertical section through the upper end of the door-opening lever, the bolt-lever, and the catch by which the levers are held. Fig. IV is an elevation of the car-wall with the door shown in open position. Fig. V is a vertical section taken on line V V, Fig. IV. Fig. VI is a section on line VI VI, Fig. I.

A designates the wall of a freight-car, provided with a doorway B, that extends from the car-floor C to a top bar D. Above the doorway at the exterior of the car-wall is a strip or plate E, to which a hanger track-rail F is secured. The door-frame is rabbeted to receive the door that fits therein, the lower rabbet forming a shoulder G, upon which the door rests. (See Figs. II and V.)

1 designates the door, which is supported from the track-rail F by hangers consisting of rail-engaging leaves 2 and door-carried leaves 3, that are connected by links 4, so that the door may be raised and lowered to seat it in the rabbets of the door-frame to rest upon the lower rabbet-shoulder G, as seen in Fig. II, when closed.

5 designates locking-bolts, the outer ends of which are loosely fitted in guides 6, set into the door 1, and which are adapted to enter keepers 7, set into the side wall A of the car when the door is closed, as seen in Figs. I and

VI. Each guide 6 has a slot 6^a in its front or outer wall. 5^a designates pins seated in the outer ends of the locking-bolts 5 and arranged for movement in the slots 6^a of the guides 6. These pins carry fingers 5^b, that reciprocate in the guides 6 and are adapted to enter the keepers 7. By this construction provision is made for the engagement of the locking-bolts with the keepers and at the same time stops for the bolts are provided. The inner ends of the locking-bolts 5 are pivoted at 8 to a swivel 9, that is rockingly mounted on a pivot-bolt 10, by which the swivel is connected to the door 1.

11 is a hand-lever hinged to the swivel 9 at 12 and provided with a transverse aperture 13. (See Figs. III and IV.) The hand-lever 11 is adapted for service in rocking the swivel 9 to operate the locking-bolts 5 for the purpose of effecting connection between said bolts and the keepers 7 and the disconnection of such parts. The aperture 13 in the hand-lever is adapted to receive an apertured stud 14, projecting outwardly from the car-door when the lever is swung inwardly to said stud, as permitted by its hinge connection with the swivel 9.

15 designates a bracket secured to the exterior of the car-wall beneath the doorway therein. This bracket has hinged to it at 16 a door-operating lever consisting of an inner member 17 and an outer member 18, united by a pivot-pin 19, the outer member being provided with a transverse slot 20. The inner lever member 17 carries a boss 21, that is adapted to enter a socket-block 23, secured to the lower edge of the door. (See Figs. II, IV, and V.)

24 is a guide-rod mounted upon the car-wall, and 25 is a guide-chain secured to the door 1 and carrying a ring 26, that rides upon said guide-rod and directs the travel of the lower end of the door as it rides to and fro in the travel of the hangers on the track-rail F.

In the practical use of my door the parts are operated as follows: When the door is in the open position, (seen in Figs. IV and V,) it hangs suspended to the full extent permitted by its supporting-hangers, and its lower edge oc-

cupies a position below the shoulder G at the bottom of the doorway. When the door is to be closed, the operating-lever, consisting of the members 17 and 18, is swung upwardly, 5 so that the boss 21 on its inner member will enter the socket 22 in the lower wall, and at the same time the lower edge of the door is swung outwardly to permit said boss to enter the socket-block 23 at the bottom of the 10 door. The operating-lever is then swung inwardly toward the door, in which movement the door is lifted, so that its lower edge is raised to the level of the shoulder G at the bottom of the doorway and will ride thereon 15 into the position seen in Fig. II, its upward travel being permitted by reason of the flexible form of the door-hangers. When the parts have been moved into the position stated, the aperture 20 in the door-operating lever 20 receives the stud 14 and fits thereover, as seen in Figs. II and III. The bolt-operating lever 11 is then rocked to throw the bolts 5 into engagement with the keepers 7 by rocking the swivel 9, and the lever is moved inwardly 25 to the stud 14, which passes through the aperture 13 in said lever. After the levers have been fitted to the stud 14 they are secured by a sliding pin 28. The pin 28 is carried by the bolt-operating lever 11 and connected 30 thereto by a slide-bolt 29. The slide-bolt 29 operates in a slot 11^a in the lever 11. The point of the pin 28, which passes through the aperture in the stud 14, is preferably provided with a seal-wire aperture 30.

35 It will be understood that when the door is to be opened it is only necessary to disconnect the sliding pin 28 from the stud 14, when the bolt-operating and door-operating levers

may be moved reversely from that in which they were moved in closing and locking the 40 door, and in so doing the door will first be unlocked and then unseated from its position flush with the car-wall and may be moved along the wall to unclosethe doorway by the 45 hangers riding upon their supporting track-rail.

The door-operating lever is composed of the two parts 17 and 18, united by the pivot-bolt 19, so that the outer member of said lever may swing laterally with respect to the 50 inner member when the door is open and the lever is hanging downwardly, as seen in Figs. IV and V, thereby preventing the lever from being broken by striking against any object encountered thereby. 55

What I claim is—

1. In a car-door of the character described, the combination with jointed hangers, the door hung thereon, and a track for said hangers; of a door-raising lever, a number of locking-bolts, a lever for operating same, and one 60 lock for locking simultaneously both the door-raising lever and the bolt-operating lever.

2. In a car-door of the character described, the combination with jointed hangers, the 65 door hung thereon, and a track upon which said hangers travel; of a door-raising lever, a swivel, locking-bolts pivoted to said swivel, locking-fingers pivoted to said bolts, a lever for rocking said swivel, and a lock which locks 70 simultaneously both the door-raising lever, and the swivel-rocking lever.

JOSEPH R. HERNDON.

In presence of—

SAMUEL R. BURNETT,
WILLIAM P. JARBOE.