No. 894,249. PATENTED JULY 28, 1908.

S. W. WIGNER.

CAR DOOR.

APPLICATION FILED DEC. 19, 1907.

2 SHEETS—SHEET 1.

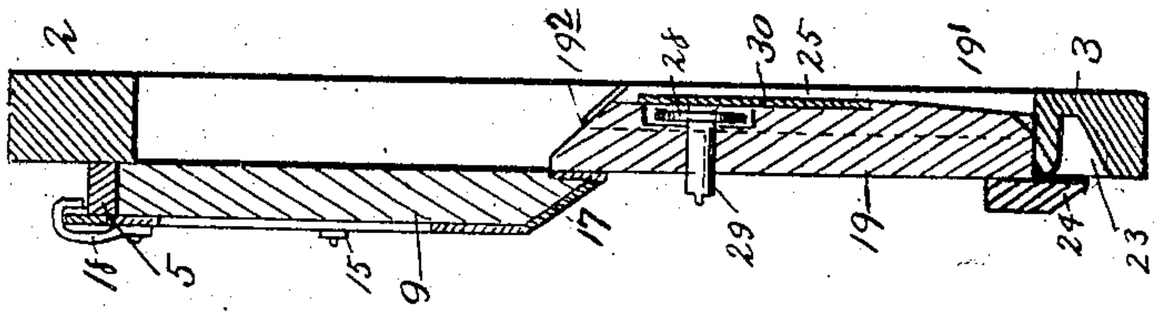

Fig. 2

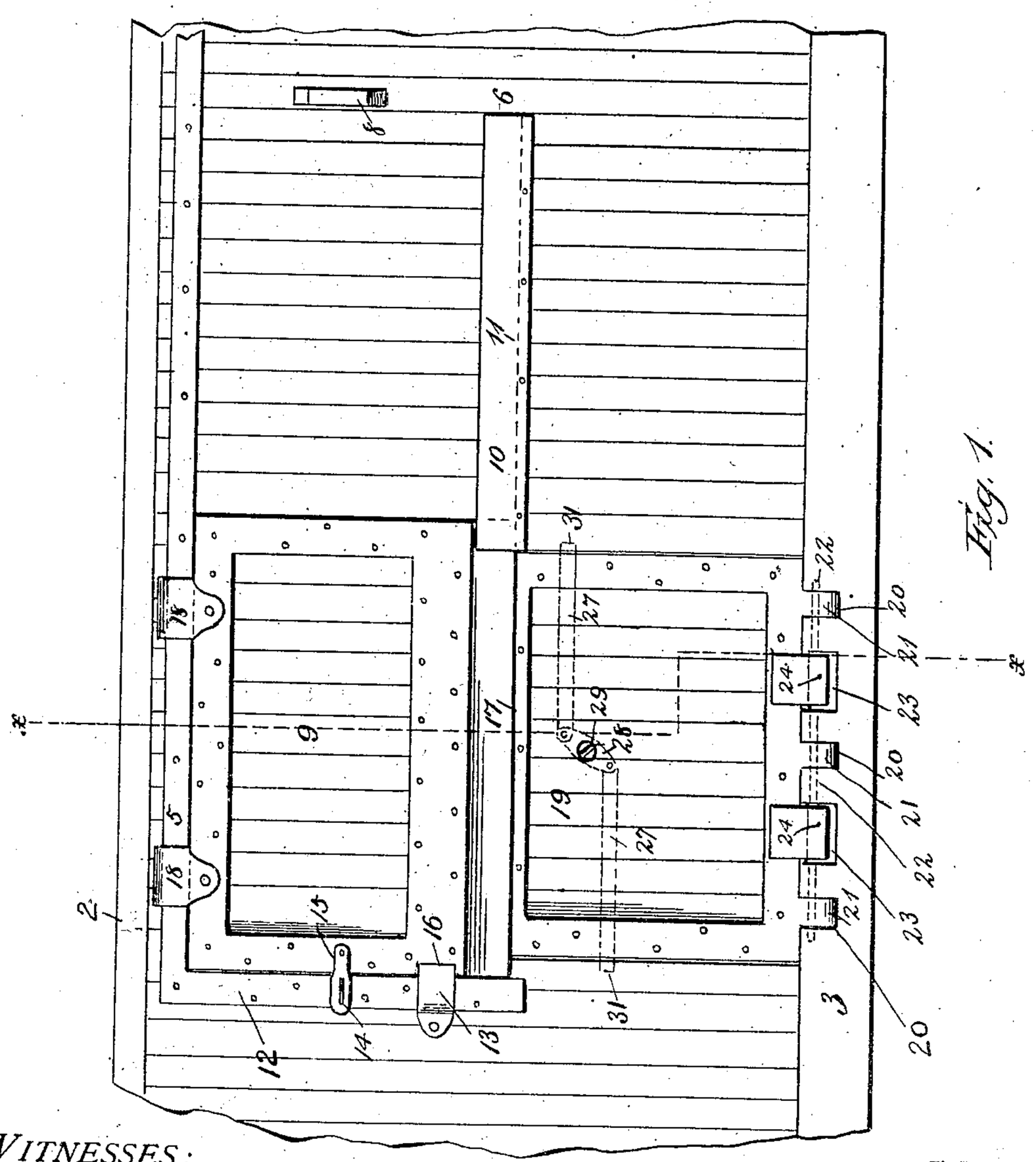

Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 4

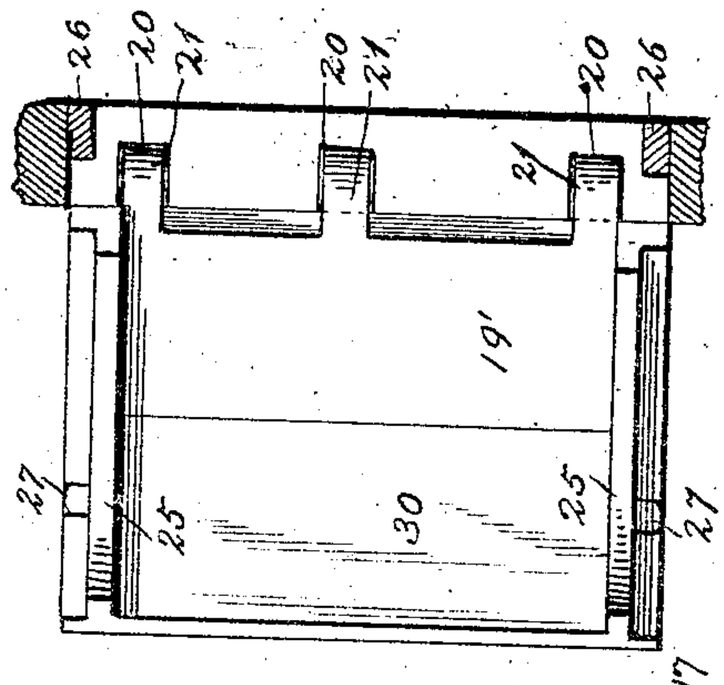

Fig. 5.

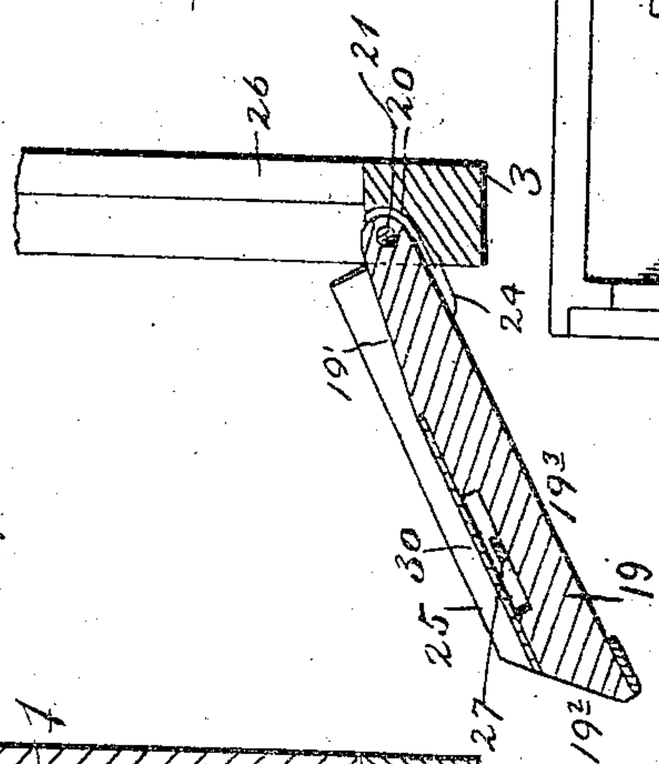

Fig. 6.

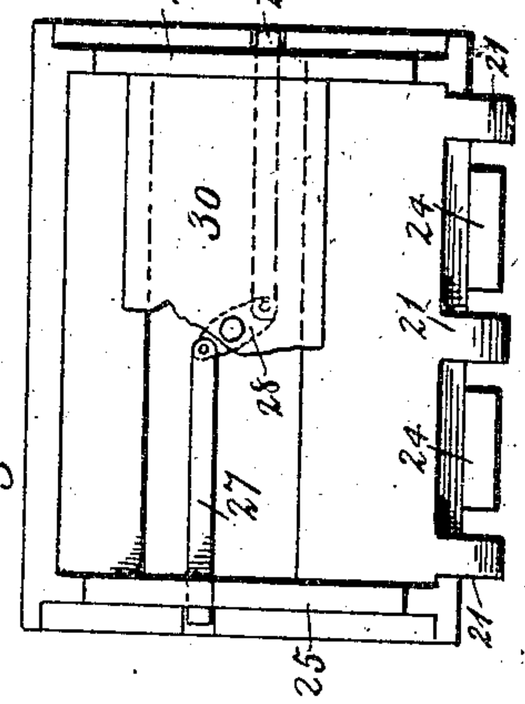

Fig. 7

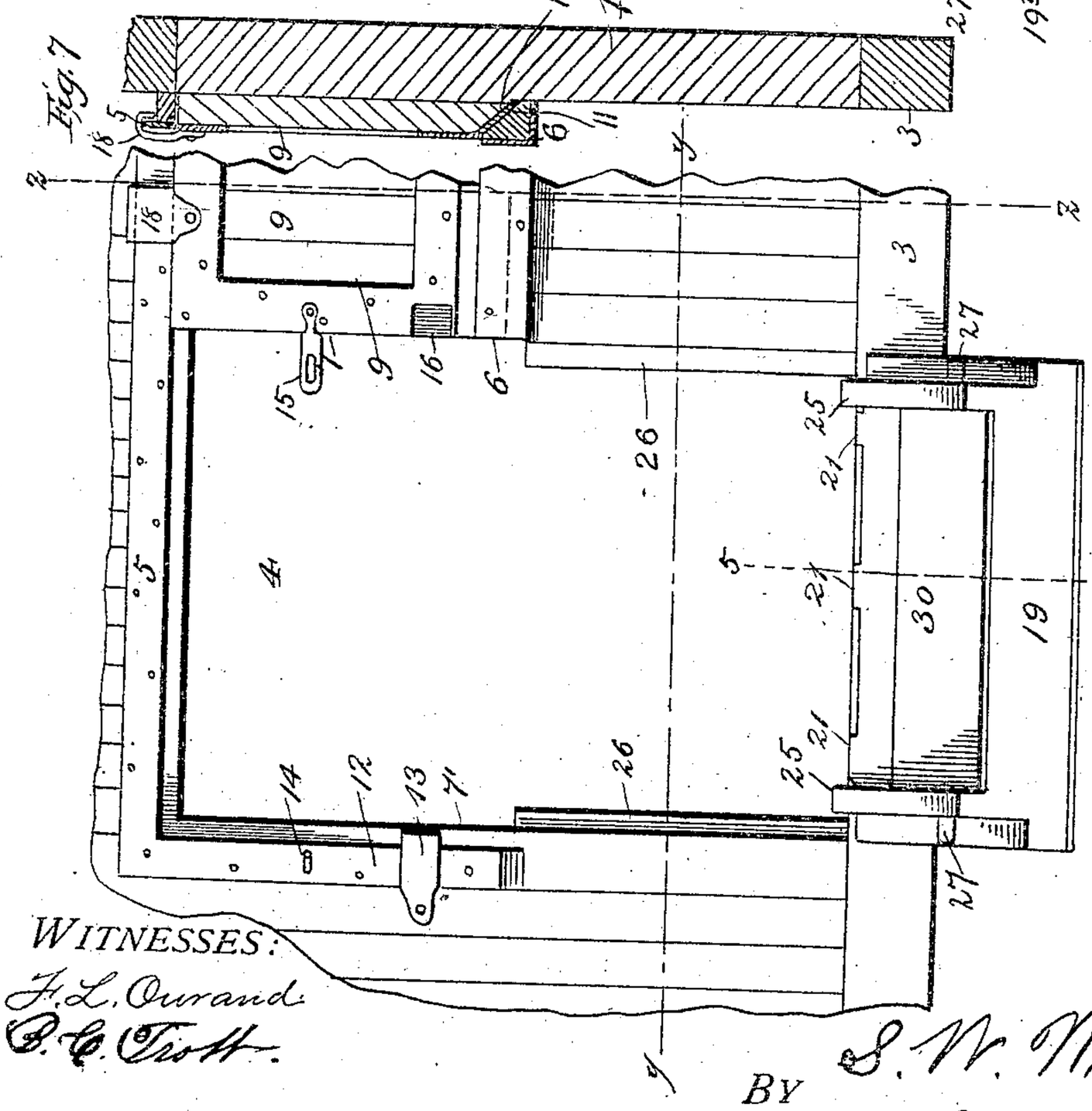

Fig. 3.

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UNITED STATES PATENT OFFICE.

SIRENOUS W. WIGNER, OF DOUGLAS, ARIZONA TERRITORY.

CAR-DOOR.

No. 894,249. Specification of Letters Patent. Patented July 28, 1908.

Application filed December 19, 1907. Serial No. 407,151.

To all whom it may concern:

Be it known that I, SIRENOUS W. WIGNER, a citizen of the United States, residing at Douglas, in the county of Cochise and Territory of Arizona, have invented certain new and useful Improvements in Car-Doors, of which the following is a specification.

My invention is a car-door, and has reference more particularly as applied to freight-cars, and while it is primarily intended for freight-cars hauling goods of various kinds, it may also be used on cars transporting grain or fruits in bulk, and by making the doors of slats, or lattice work it may be used in the transportation of horses, cattle or other live stock.

In the accompanying drawings, Figure 1, is a side elevation of a freight-car broken away at each end, showing my car-door attached and closed. Fig. 2, is a vertical cross-sectional view, taken on the line *x x*, of Fig. 1, the door closed. Fig. 3, is a side elevation, showing both doors open, both ends of the car broken away. Fig. 4, is a horizontal sectional view, on the line *y y*, looking downwardly. Fig. 5, is a horizontal sectional view of Fig. 3, on the line 5 5. Fig. 6, is an inside view of the lower door, showing the lugs and locking mechanism. Fig. 7, is a vertical sectional view, on the line *z z*, of Fig. 3.

Similar numerals refer to similar parts throughout the several views.

In describing my invention I read the drawings from left to right.

My invention is described as follows:—

The numeral 1, represents the side of a freight box-car; 2, represents the lintel and 3 the sill. Said box-car is provided with a door-opening 4. Running parallel with the said lintel, and a little below the same, is an upper track-bar 5; this bar extends above and the full width of the door-opening, and the width of the door-opening to the right. Parallel with said track-bar 5, is a lower track-bar 6, which extends from the right-hand wall 7, of the door-opening, to the right on a line immediately under the right-hand end of the upper track-bar. Secured to the wall of the car, and immediately between the two ends of the said bars, is a bumper 8, for the purpose of keeping the sliding-door from sliding too far to the right.

The lower track-bar 6, is beveled on its inner face, from the dotted lines 10, upwardly and outwardly, leaving a recess 11, between the upper edge of said bar 6, and the outer face of the car wall. Secured, vertically, to the outer face of the wall of the car, and running down a little below the lower edge of the sliding-door 9, is a stop-bar 12, nearer the lower end of which is firmly secured a keeper 13, the right-hand end of which extends to the edge 7^1, of the left-hand wall of the door-opening, leaving a space between the two. About midway the said stop-bar 12, is a staple 14, and on a line with said staple, and hinged to the left-hand edge of the sliding-door 9, is a hasp 15. The left-hand edge of said door has a beveled recess 16, and the door, at this point, slides in under the keeper 13. When this is done, the hasp may be secured to the staple 14. The lower edge of the door is provided with a bevel 17, which enables it to slide back and forth in said recess 11. Secured to the upper edge of said sliding-door 9, are hangers 18, which overlap the upper edge of the upper track-bar 5; these hangers may be provided with rollers, if desired. Thus it will be seen that said sliding door 9, may be slipped to the left, close the door-opening and be securely locked. Immediately under the said sliding-door is a hinge-door 19, which fills the lower part of said door-opening. Said door is hinged as follows:—The lower sill of the car is provided with notches 20, and extending from the lower edge of said hinge-door, are hinge-projections 21, and running through the walls of said notches, and through said projections, are hinge-bolts 22. Between the walls of the notches 20, are recesses 23, and secured to the sill of said hinge-door 19, are projections 24, which, when said door is open, catch into said recesses and relieve the strain on the hinge projections 21. The said hinge-door 19, opens back on the platform near the side of the car, which platform is on a line with the floor of the car, and when said hinge-door 19, is opened back, the inner face of said door is on a line with the floor of the car, and in this position the hinge-projections 21, are on a line with the upper surface of the sill of the car, and are therefore not in the way and not liable to be injured by the moving of the freight or the tread of animals. The lower edge and inner face of said door 19, is beveled (see 19^1), so as to provide an easy ascent for the freight or truck. When said door 19, is opened back, it forms a bridge from the car to the platform, and on each side of said door is a rail 25, to guard truck

from running off of the bridge, when trucks are used. The upper edge and inner face of said door is beveled backwardly until it meets the inner face of said sliding-door when both doors are closed. (See numeral 19^2).

Secured against the inner faces 7 and 7^1, of the walls of the door-opening, are abutment strips 26, against which the hinge-door closes. Said hinge-door is also provided with locking-bars 27, operated by an eccentric 28 and a bolt 29. These bars, eccentric and bolt are protected by a plate 30. When said hinge-door is locked, the end of said bolt enters recesses 31, in the walls of the car. When the said hinge-door is closed, it is held closed by said bolts and the lower edge of the sliding-door, which overlaps the upper edge of said hinge-door.

Although I have specifically described the combination, construction and arrangement of the several parts of my invention I do not confine myself particularly to such specific combination, construction and arrangement, as I may exercise the right to make such changes and modification therein as may clearly fall within the scope of my invention, and which may be resorted to without departing from the spirit, or sacrificing any of my patentable rights therein.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In combination with a freight-car, having a door-opening, an upper track-bar 5; a lower track-bar 6, leaving a recess 11, between said track-bar and the wall of the car; a bumper 8, secured between the right-hand ends of said bars; hangers 18, adapted to run on said upper track-bar; a sliding-door 9, suspended from said hangers, its lower edge beveled, and adapted to slide in said recess 11; a stop-bar 12, secured to the left-hand side of the door-opening; a keeper 13, secured near the lower end of said stop-bar 12, the lower corner of said sliding-door adapted to slide under said keeper, the lower sill 3, of said car, provided with notches 20, and recesses 23; a hinge-door, provided with hinge-projections 21, fitting in said notches 20; bolts 22, hinging said hinge-projections in said notches; projections 24, extending outwardly from the face of the sill of said door, and adapted to fit in said recesses 23, when the door is open; locking-arms 27, adapted to enter recesses 31, in the walls of said car and bolt said door, the upper edge of said door fitting under the under edge of the sliding-door, and a plate 30, fitting against the inner face of said hinge-door, leaving a space above and below the upper and lower edges of said plate, which spaces are beveled, substantially as shown and described and for the purposes set forth.

2. In combination with a freight-car, an upper track-bar 5; a lower track-bar 6; hangers 18, adapted to run on said track-bar; a sliding-door suspended from said hangers and adapted to slide back and forth between said bars; a stop-bar 12, secured to the left-hand side of the door-opening; a keeper 13, secured near the lower end of said stop-bar, the lower end of said sliding-door adapted to slide under said keeper; abutment strips 26, secured against the inner faces of the walls of the door-opening; a door 19, hinged in the door-opening to the sill of the car, said sill provided with recesses 23; projections 24, extending downwardly from the lower edge of the door, and adapted to fit in said recesses 23, when the door is open, and rails 25, one secured to each side and inner face of said door, said door adapted to be held in position by any suitable means, substantially as shown and described and for the purposes set forth.

3. In combination with a freight-car, having a door-opening, an upper track-bar 5, above said opening and extending to the right; a lower track-bar 6, extending to the right; a sliding-door 9, suspended from said track-bar 5; a door, 19, hinged to the sill of said car, and projections 24, extending downwardly from the lower edge of said door 19, and adapted to enter recesses 23, in the sill of the car when the door is open, said doors adapted to be closed and locked in place by any proper means, substantially as shown and described and for the purposes set forth.

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

SIRENOUS W. WIGNER.

Witnesses:

BRUCE STEPHENSON,

JOHN HANINGER.