No. 803,707. PATENTED NOV. 7, 1905.

K. OSEL.

GRAIN DOOR FOR RAILWAY CARS.

APPLICATION FILED OCT. 17, 1904.

Fig. 1.

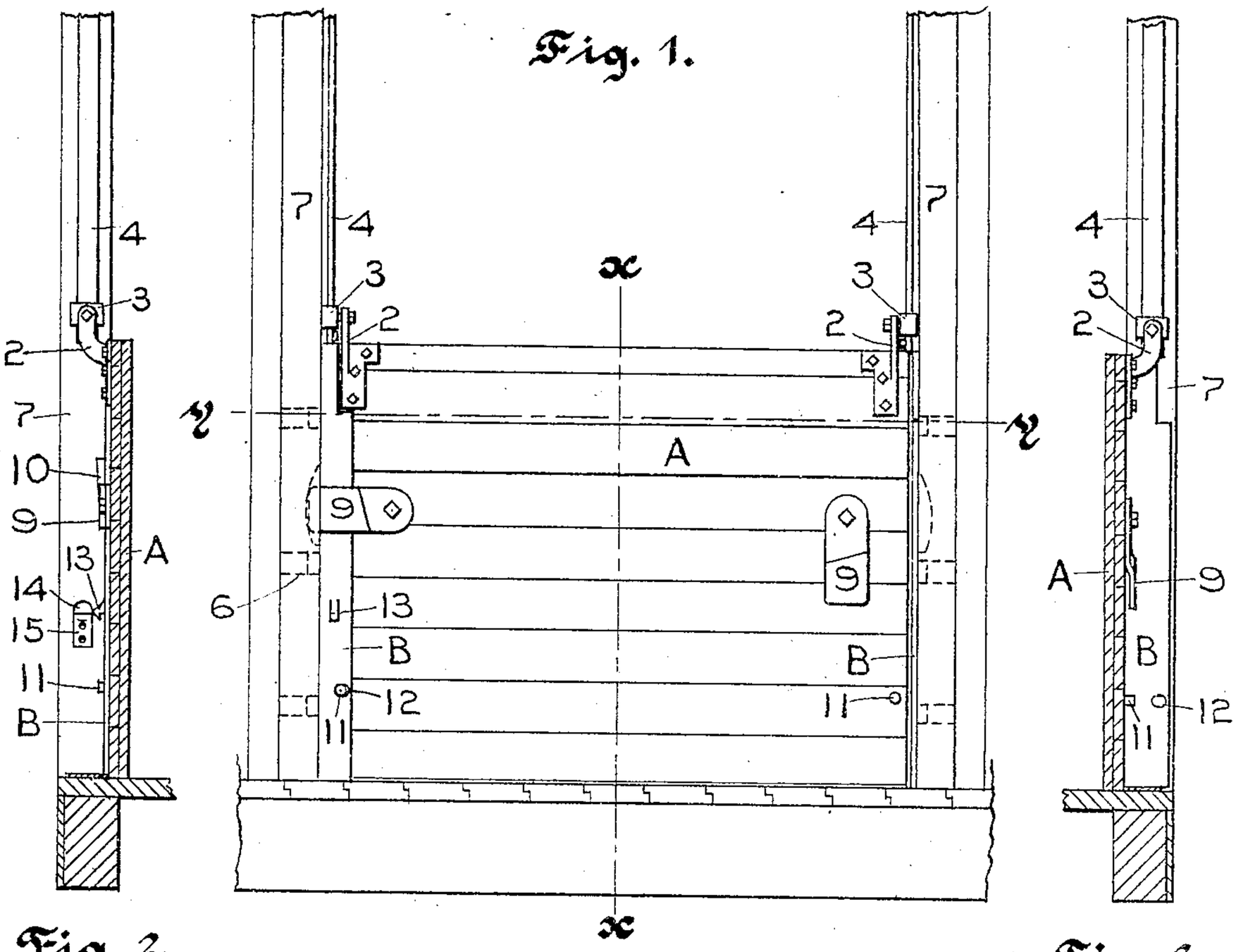


Fig. 2.

Fig. 3.

Fig. 4.

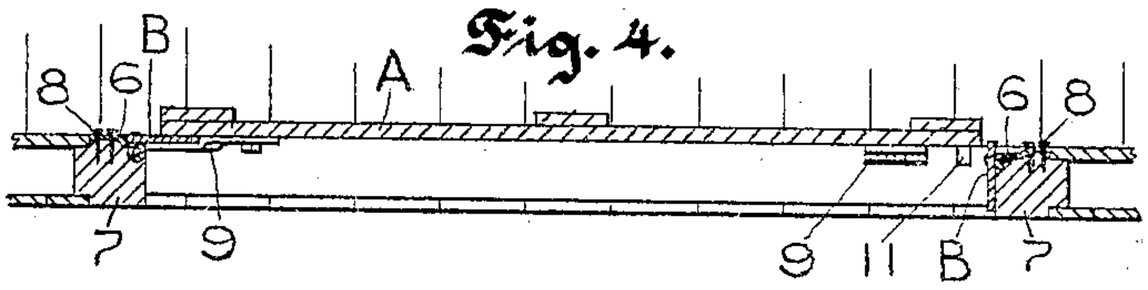


Fig. 5.

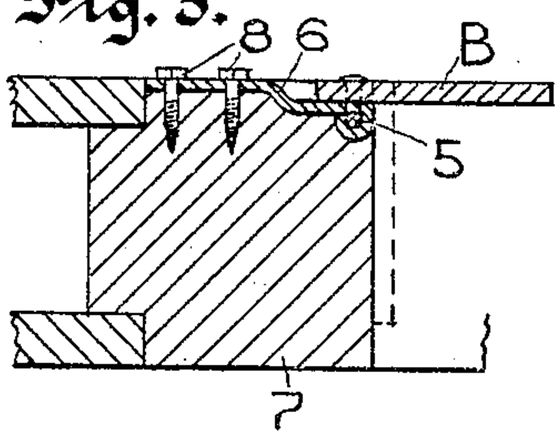


Fig. 6.

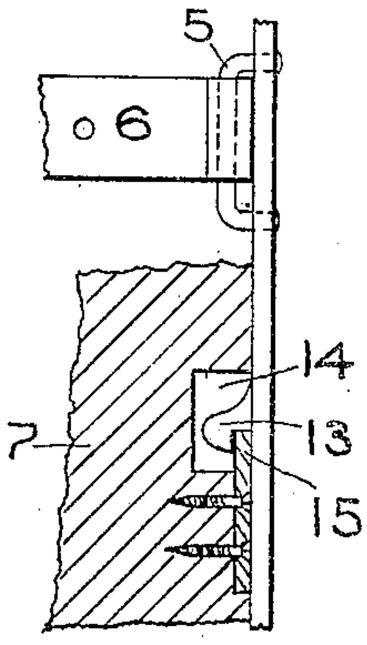
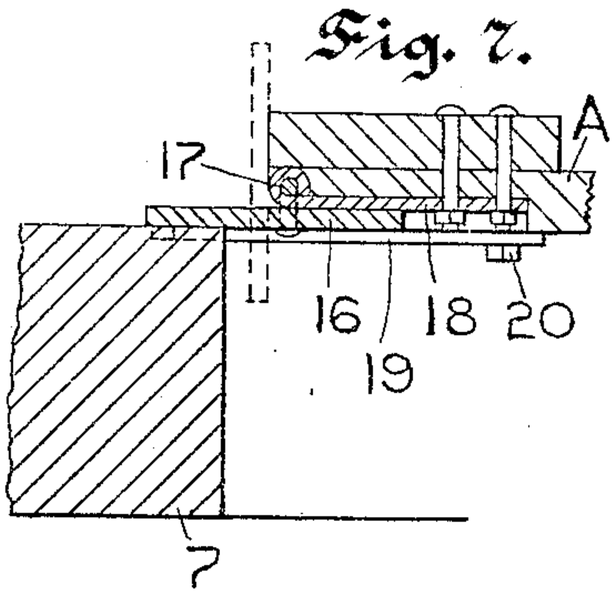


Fig. 7.



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UNITED STATES PATENT OFFICE.

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GRAIN-DOOR FOR RAILWAY-CARS.

No. 803,707. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed October 17, 1904. Serial No. 228,686.

To all whom it may concern:

Be it known that I, KISTEL OSEL, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Grain-Doors for Railway-Cars, of which the following is a specification.

My invention relates to improvements in grain-doors for railway-cars; and it consists particularly in providing a sliding hinged grain-door which may be locked in position closing the door-opening, but which may be unlocked and swung outward through the door-opening.

To this end the invention consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a view of the door as seen from the outside of the car. Figs. 2 and 3 are sections on line *x x* of Fig. 1 looking in opposite directions. Fig. 4 is a section on line *y y* of Fig. 1. Fig. 5 is an enlargement of one end of Fig. 4; and Fig. 6 is an edge view of a hinged plate forming part of my invention, showing the adjacent portion of the door-frame in section; and Fig. 7 is a sectional view of a modified construction.

In the drawings, A represents a grain-door having slidable hinge-support by means of brackets 2, having pivotal connection with slides 3, engaging guides 4 in the sides of the door-opening. As shown, the door is narrower than the door-opening; and my invention consists in the following-described means for holding the door in closed position and constituting a grain-tight joint between the door and frame. As shown in Figs. 1 to 6, these means consist of plates B, carrying loops 5, slidably hinged in the ends of the straps 6, the straps 6 being secured to the inner faces of the side beams of the door-frame 7 by screws 8. The hinged ends of the straps are depressed, as shown in Fig. 5, to allow the plates B to stand flush with the inner face of the door-frame when in use. As shown in the drawings, the plates are adapted to be turned upon their hinges into the door-opening and the door to bear against the inner faces of the plates. The door and plates are held in this position by means of latches 9, hinged to the outer face of the door and adapted to be turned over the plates to project into the openings 10 in the sides of the door-frame. The door preferably carries studs 11, which project through openings 12 in the plates when the door is closed. The openings 12 are preferably larger than the studs to compensate for slight variations in the position of the door. When not in use, the plates are held against the sides of the door-frame, as illustrated in Fig. 6, by means of hooks 13, which extend into openings 14 in the sides of the door-frame and interlock with stops 15, secured in the door-frame. The loops 5 being slidable in the straps 6 allow the plates to slide upward to carry the hooks 13 over the stops 15 and also allow the plates to be lifted to disengage the hooks and stops.

In the modified form of my invention shown in Fig. 7 I show plates 16 having hinge connection 17 with straps 18, secured to the edge of the outer face of the door. The plates 16 are adapted to be locked in outturned position by means of latches 19, having pivotal support 20 upon the outer face of the door and adapted to be turned over the plates, as shown in the drawings. When the door is in closed position, the plates are adapted to be outturned and to engage with the inner face of the door-frame, as shown. When it is desired to open the door, the latches 19 may be turned out of engagement with the plates, when the door may be swung outward through the door-opening, the plates assuming the dotted-line position shown.

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

1. The combination with a car formed with a door-frame, a slidably-supported door of less width than the door-opening, a pair of plates having slidable hinge connection with straps secured in the inner faces of the sides of the door-frame, whereby said plates may be lifted to pass over a threshold, means for holding said plates extending into the door-opening, and means for holding said plates locked against the inner faces of the door-frame.

2. The combination with a car formed with a door-frame and a slidably-supported hinged door of less width than the door-opening, a pair of plates having slidable hinge connection with straps secured in the inner faces of the sides of the door-frame, and catches carried by said plates and the inner faces of the door-frame so constructed as to be interlocked by the raising of said plates.

3. The combination with a car formed with a door-frame, of a slidably-supported hinged door of less width than the door-opening, a pair of plates having slidable hinge-support in the inner faces of the door-frame, coöperating catches carried by said plates and the inner faces of said door-frame whereby the plates may be lifted to swing over the threshold or to carry the catches into interlocking position, and latches pivotally supported on the door adjacent to said plates coöperating with openings in the frame alongside said plates.

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

KISTEL OSEL.

Witnesses:
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EMILY F. OTIS.