

No. 708,914.

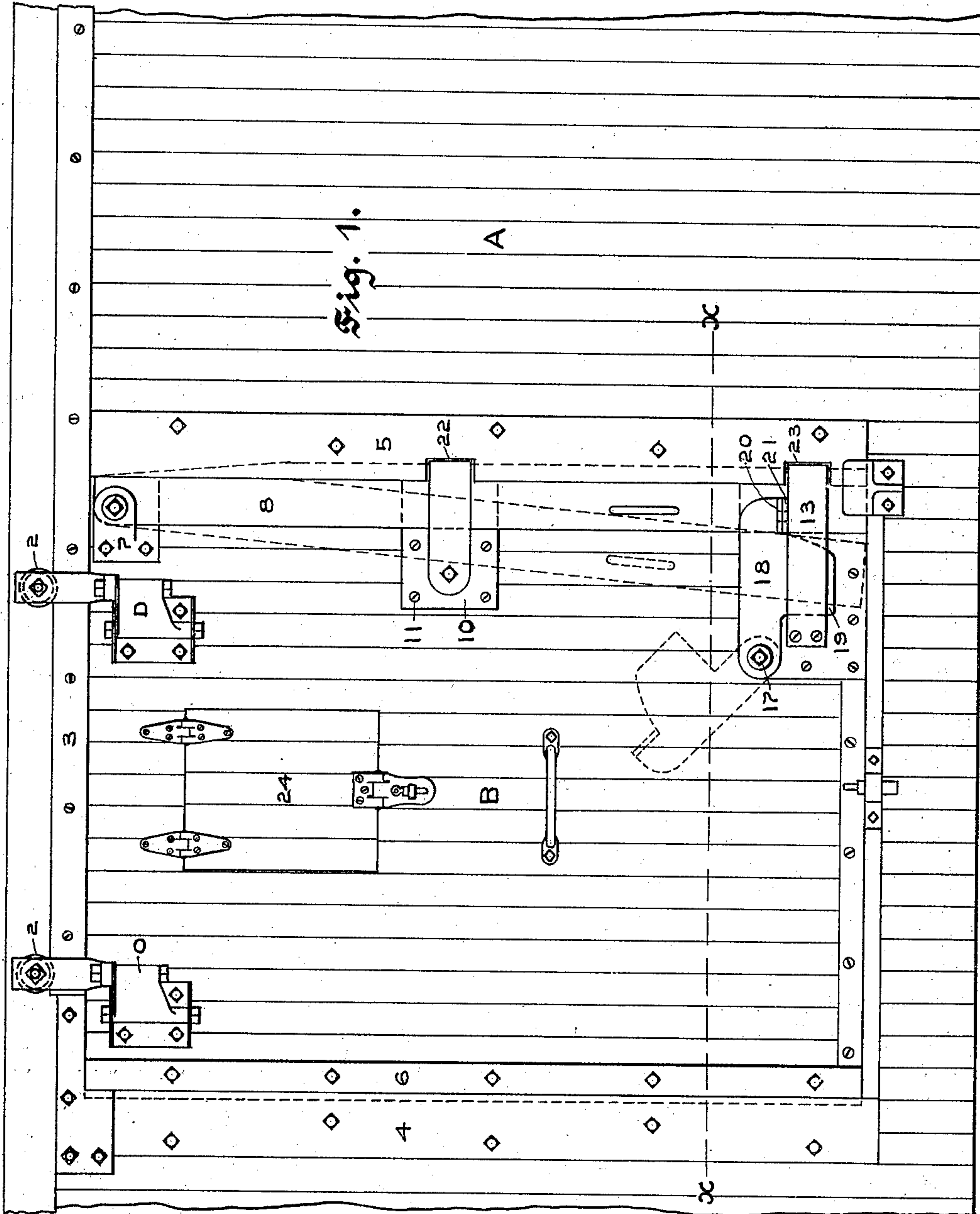
Patented Sept. 9, 1902.

K. OSEL.  
FLUSH CAR DOOR.

(Application filed Sept. 20, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses,  
W. H. Palmer.  
Emily Eastman

Inventor,  
Kistel Osel.  
by Athrop Johnson  
his Attorneys.

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2 Sheets—Sheet 2.

Fig. 2.

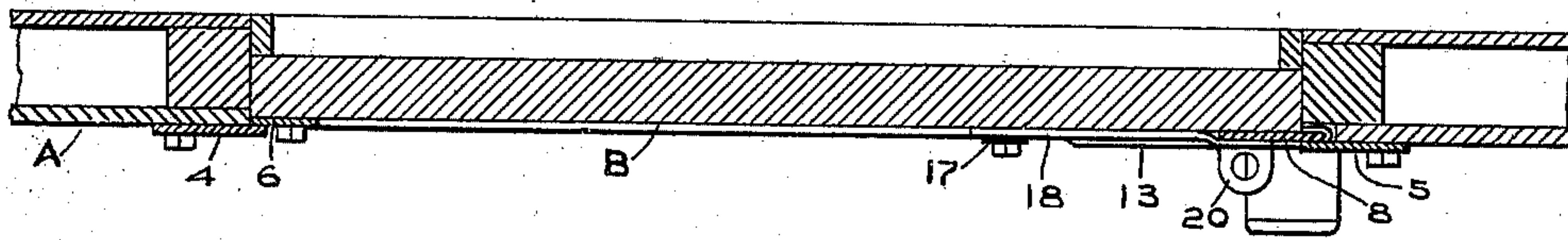


Fig. 3.

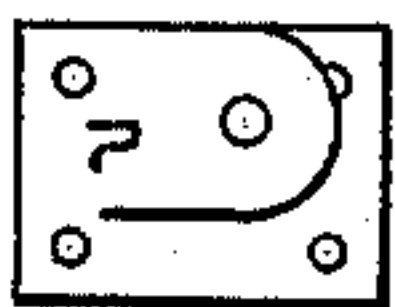


Fig. 5.

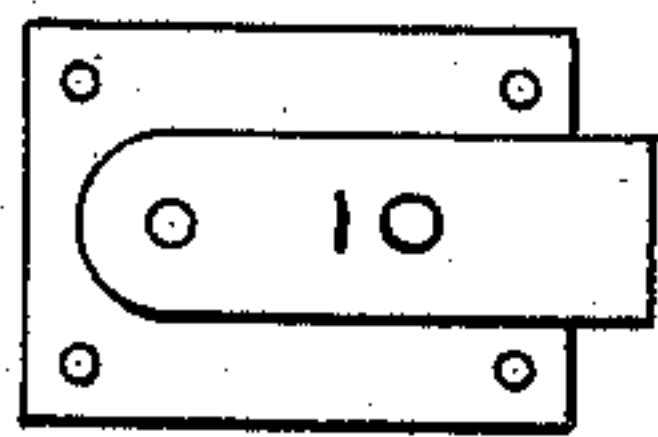


Fig. 7.

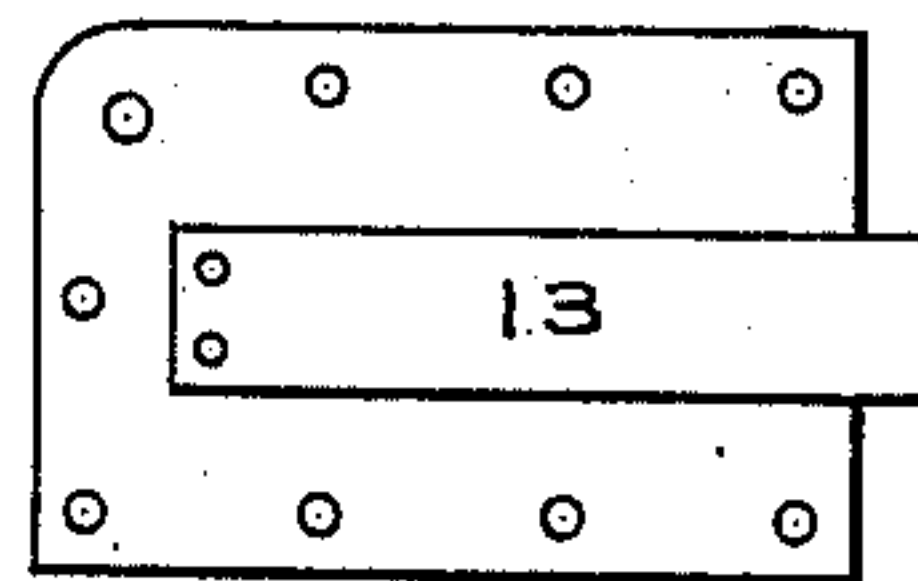


Fig. 4.

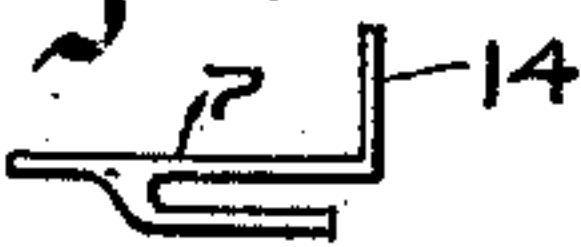


Fig. 6.



Fig. 8.



Fig. 9.

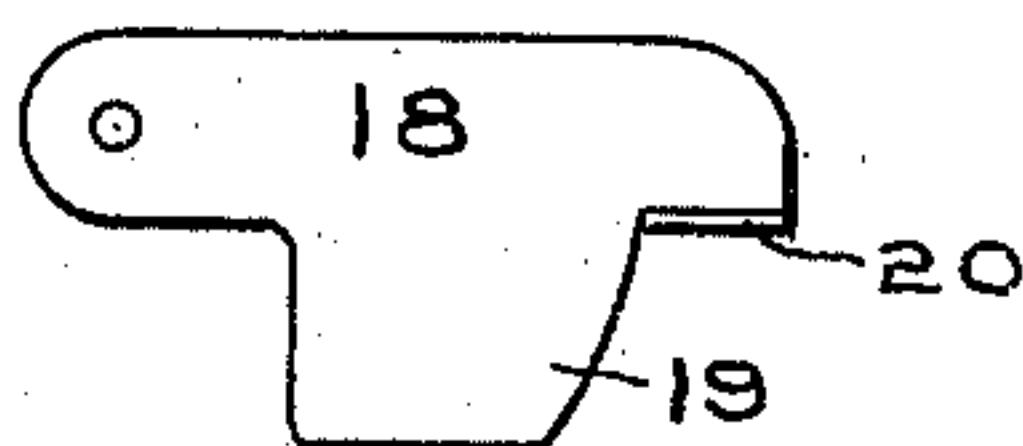
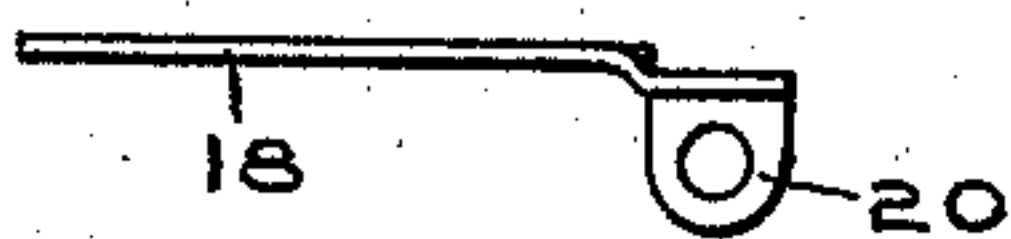


Fig. 10.



Witnesses,  
W. H. Palmer.  
Emily Eastman

Inventor,  
Kistel Osel.  
by *Bothrop Johnson*  
his Attorneys.



# UNITED STATES PATENT OFFICE.

KISTEL OSEL, OF ST. PAUL, MINNESOTA.

## FLUSH CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 708,914, dated September 9, 1902.

Application filed September 20, 1901. Serial No. 75,823. (No model.)

*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 Flush Car-Doors, of which the following is a specification.

My invention relates to improvements in flush doors for freight-cars, &c., its object being to provide means for making a tight joint along each side of the car-door when the same is closed and for holding and locking the door in closed position.

To this end my invention consists of the features of construction and combination hereinafter specifically described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a partial side elevation of the car, showing the door in closed position. Fig. 2 is a section on line *x x* of Fig. 1. Figs. 3 and 4 are details of a support for the locking-strip. Figs. 5 and 6 are details of a guide through which the locking-strip passes. Figs. 7 and 8 are details of another guide for the lower end of the locking-strip, and Figs. 9 and 10 are details of a locking-dog arranged in connection with the guide in Figs. 7 and 8.

In the drawings, A represents the car, and B the side door thereof. The door is supported by means of hangers C and D, provided with carrying-wheels 2, running upon the horizontal rail 3, secured to the side of the car underneath the overhanging roof. The hangers C and D have hinged connection with the car-door, as shown in Fig. 1, so that the car-door can first be pulled out of the car-door opening and then moved along the side of the car to open position. The hangers C and D form no part of the present invention, and any construction may be used to support the door. Secured to the side of the car at the opposite sides of the car-door opening are the strips 4 and 5, the strip 4 projecting inward over the car-door opening and the inner edge of the strip 5 being spaced from the adjacent door-jamb, as shown in Fig. 2. Along one side of the door is secured a strip 6, adapted to fit underneath the strip 4 when the door is closed, as shown. Pivoted in a bracket 7 at the top of the opposite side of the door is a strip 8. The strip 8 passes through the open-

ing 9 in the bracket 10, which bracket is secured to the door by screws 11 or other suitable means. The lower end of the strip 8 passes through the opening 12 of the guide 13, which is secured to the lower corner of the door. The brackets 7, 10, and 13 are preferably provided, respectively, with flanges 14, 15, and 16, which are set in flush in the edge of the door to hold said brackets in secured position. Having pivotal support 17 upon the lower bracket 13 is a dog 18, provided with a tongue 19, which is adapted to project through the opening 12 of the bracket 13 alongside the strip 8, as shown in Fig. 1. The free end of the dog 18 is provided with an outwardly-projecting lug 20, adapted to abut against a similar lug 21, carried by the strip 8, said lugs being formed with coinciding openings (indicated by dotted lines in Fig. 1) through which a seal or other securing means may be passed. The strip 5 is provided with openings 22 and 23, through which the ends of the brackets 10 and 13 pass when carrying the door to closed position.

As shown in the drawings, a small door 24 is hinged in an opening in the large door. This is not an essential feature of the car-door construction, and my features of invention may be used with any construction of flush car-door.

In operation, with the parts as shown in full lines in Fig. 1, the door may be securely locked and sealed by attaching a seal to the lugs 20 and 21. In this position of the parts the strips upon the opposite sides of the door and the adjacent strips upon the car form a tight joint along each side of the door to securely hold the door in closed position.

When it is desired to open the door, the dog 18 and pivoted strip 8 are turned into the dotted-line position shown in Fig. 1. The door can then be carried out of the opening and into open position in the usual manner.

Among the objects of my improved construction are to prevent leakage of grain or other contents around the door, to prevent warping of the door, and to prevent fire getting at the contents, as in the case of cotton, &c.

I claim—

1. The combination with a car formed with a door-opening, and a door slidably supported



in connection therewith, of a strip fixedly secured to the outside of the car along one side of said opening, said strip projecting inwardly over the door-opening, and a strip secured to the corresponding edge of the door, said strips overlapping when the door is closed, a strip secured to the outside of the car along the opposite edge of the door, a locking-strip movably secured to the adjacent edge of the door in position to be carried under said fixed strip, guides for said locking-strip, and a dog supported alongside said locking-strip, as and for the purpose set forth.

2. The combination with a car formed with a door-opening and a door slidably supported in connection therewith, of a strip fixedly secured to the car along one side of the door-opening, and a strip having pivotal support at the upper corner of the corresponding edge of the door in position to be carried beneath said fixed strip when the door is closed.

3. The combination with a car formed with a door-opening, and a door slidably supported in connection therewith, of a metal strip fixedly secured to the car along one side of the door-opening, a strip pivoted to the upper portion of the adjacent edge of the door in position to be carried under said fixed strip when the door is closed, and means for holding said pivoted strip under the edge of said fixed strip.

4. The combination with a car formed with a door-opening, and a door slidably supported in connection therewith, of a strip fixedly secured to the outer face of said car along one side of the door-opening, a strip having pivotal support at the upper portion of the corresponding edge of the door in position to be carried under said fixed strip, guides for said pivoted strip, and means for holding said piv-

oted strip underneath the edge of said fixed strip.

5. The combination with a car formed with a door-opening, and a door supported in connection therewith, of strips secured to the outside of the car along each side of said opening, a strip secured along one edge of the door, a locking-strip pivotally secured to the opposite upper corner of the door in position to be carried under the adjacent strip when the door is closed, a guide secured to the corresponding lower corner formed with an opening to receive the end of said locking-strip, and a dog for holding said locking-strip under the adjacent strip.

6. The combination with a car formed with a door-opening, and a slidable door arranged in connection therewith, of a metal strip secured to the car at one side of the door-opening and projecting inwardly beyond the edge of the same, a strip secured to the car along the opposite edge of the door-opening, a locking-strip having pivotal support at the upper corner of the corresponding edge of the door in position to be carried under the adjacent strip when the door is closed, a guide secured to the corresponding lower corner of the door, said guide being formed with an opening to receive the end of said locking-strip, and a dog having pivotal support upon said door and formed with a tongue projecting into the opening in said guide alongside said strip to hold said strip under the edge of the adjacent strip.

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

KISTEL OSEL.

Witnesses:

H. S. JOHNSON,  
EMILY EASTMAN.