(No Model.) 2 Sheets—Sheet 1.

J. W. SHEWMAKER.

CAR DOOR.

No. 386,611. Patented July 24, 1888.

Fig. 3.

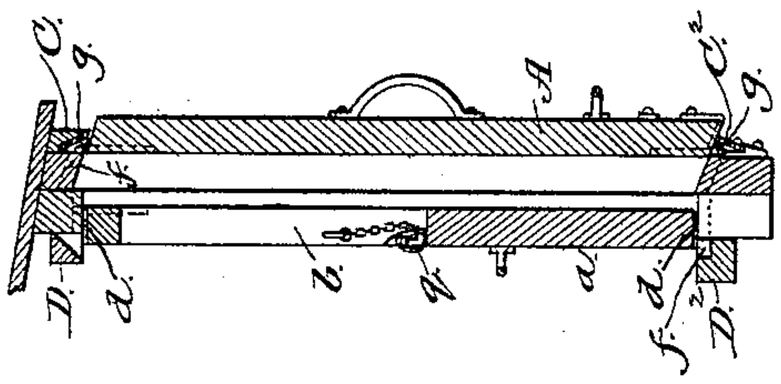


Fig. 6.

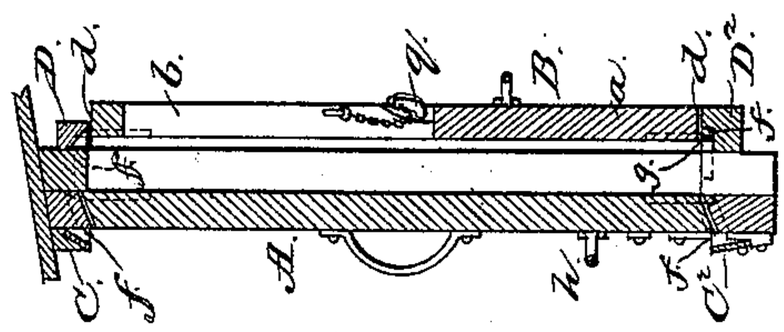


Fig. 2.

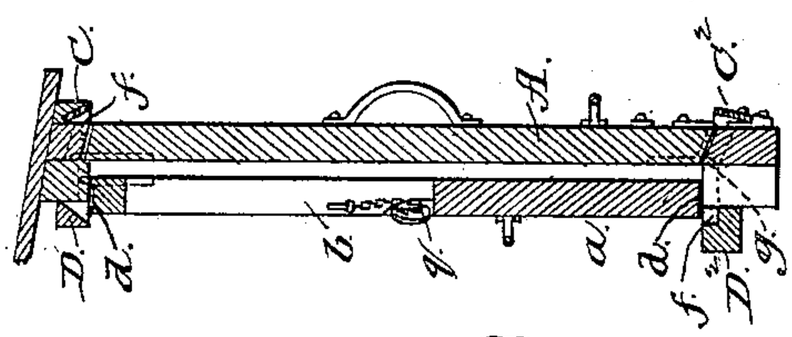


Fig. 5.

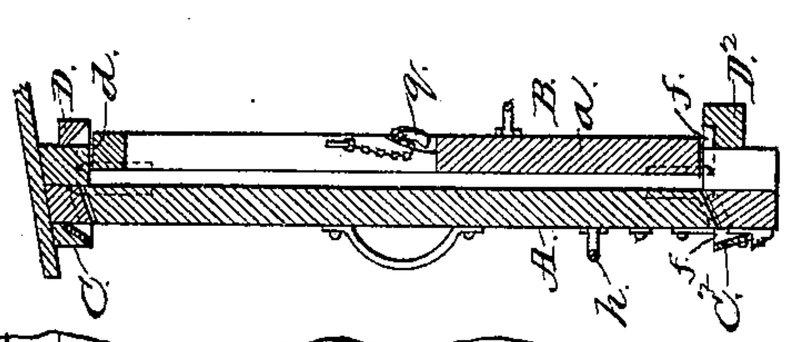


Fig. 1.

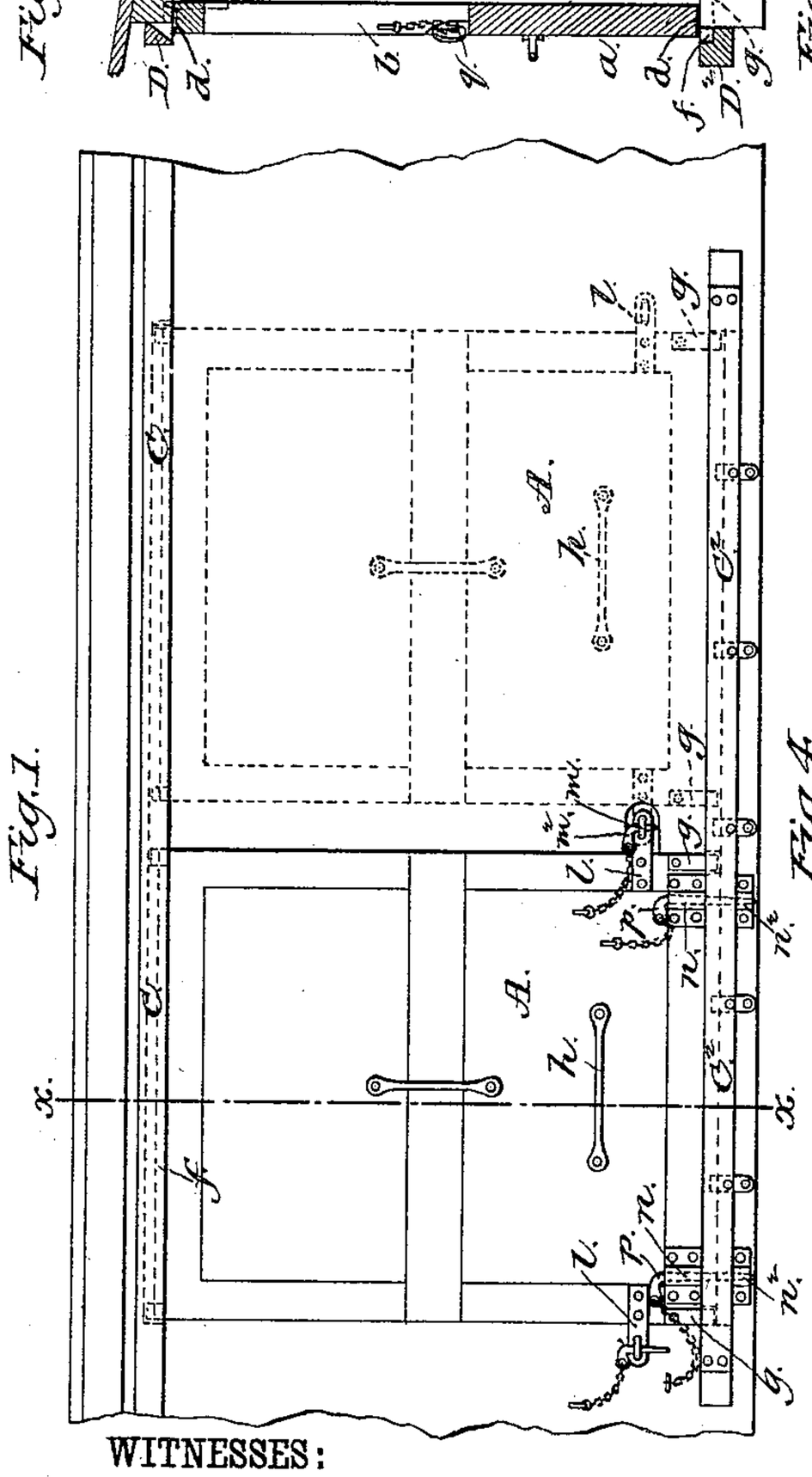
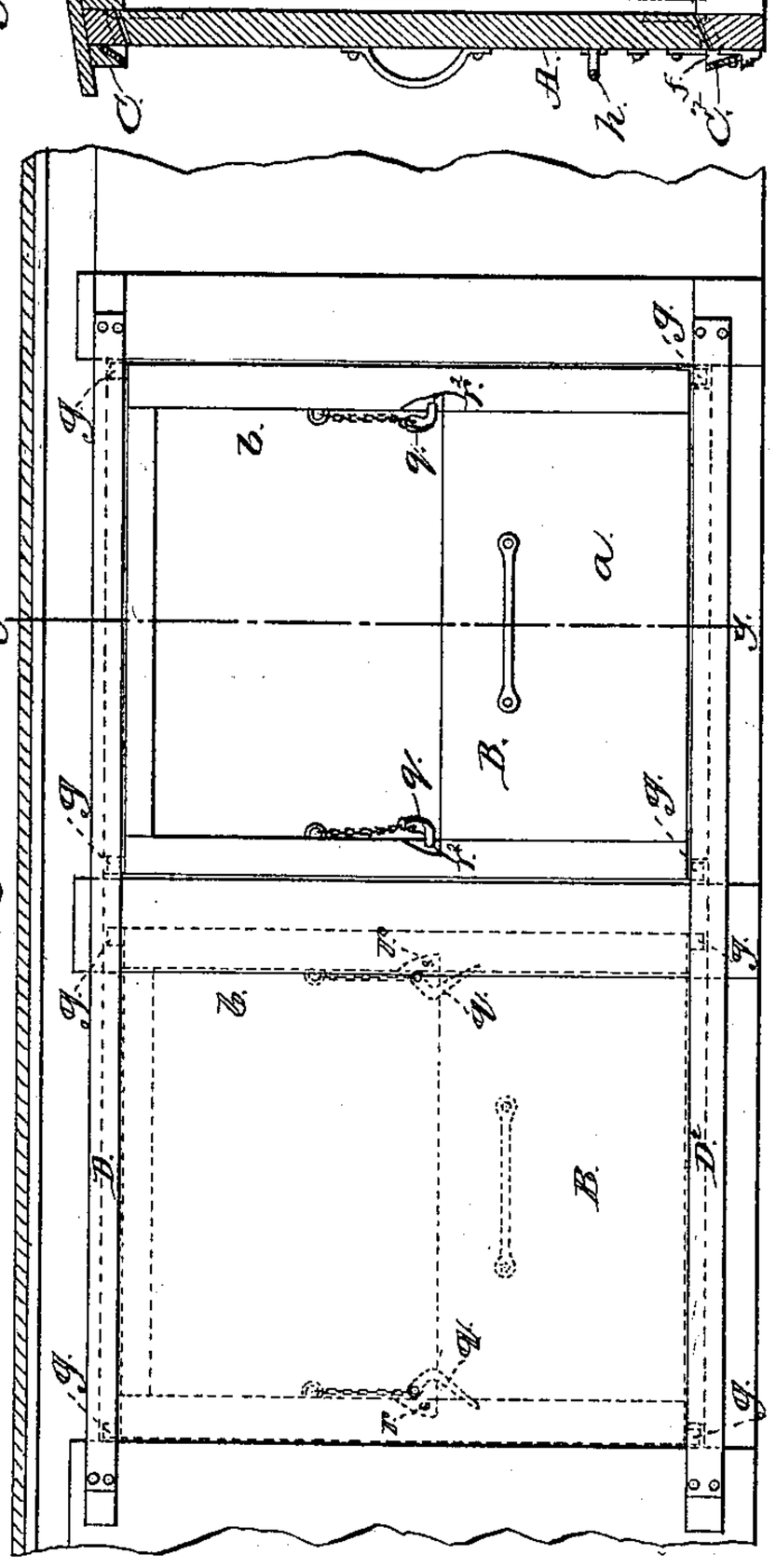


Fig. 4.



WITNESSES:

John A. Ellis.

C. Sedgwick.

INVENTOR:

J. W. Shewmaker.

BY Munn & Co.

ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

J. W. SHEWMAKER.

CAR DOOR.

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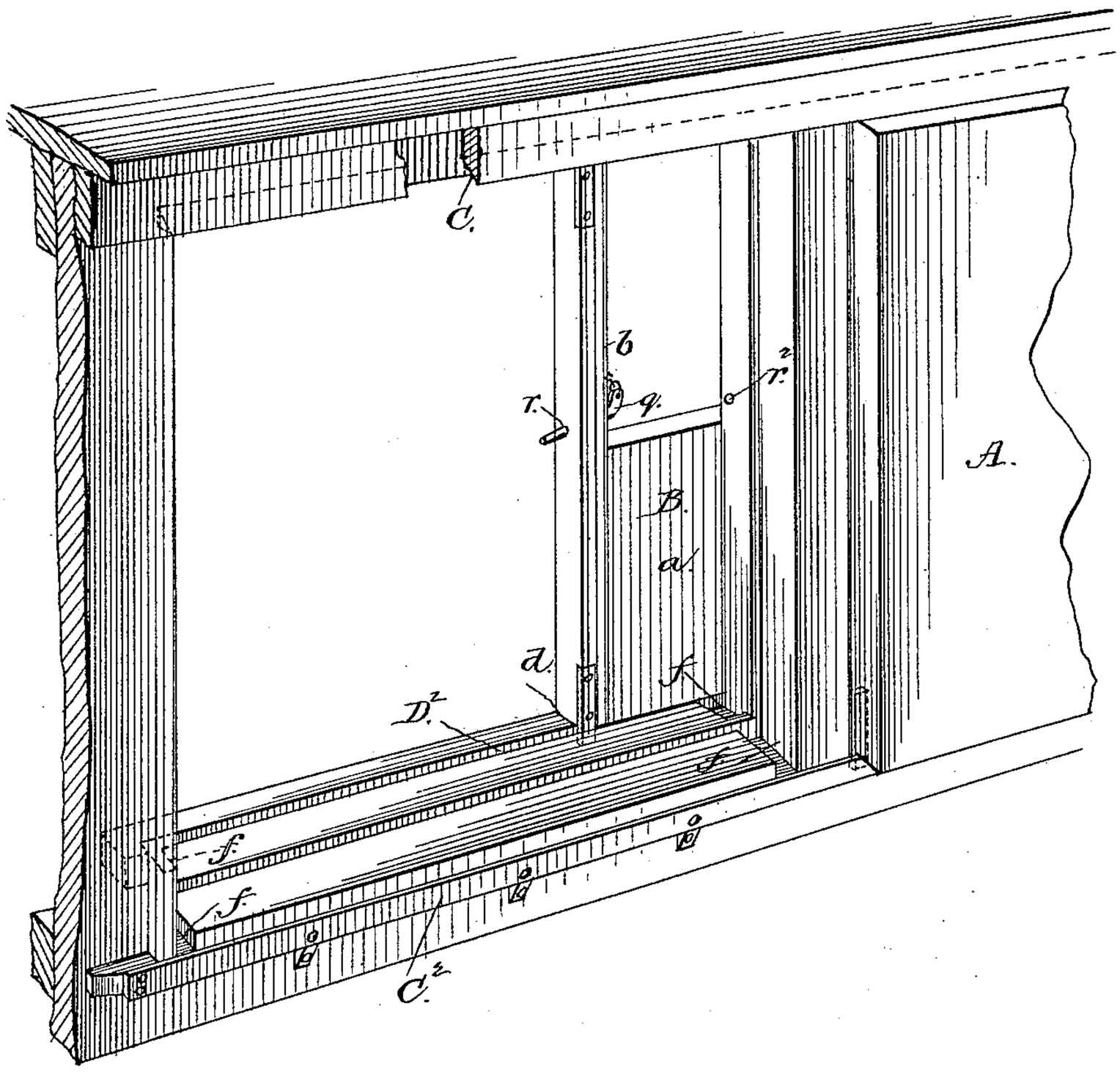
Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN W. SHEWMAKER, OF TERRE HAUTE, INDIANA.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 386,611, dated July 24, 1888.

Application filed November 12, 1887. Serial No. 254,960. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SHEWMAKER, of Terre Haute, in the county of Vigo and State of Indiana, have invented a new and Improved Car-Door, of which the following is a full, clear, and exact description.

This invention relates to the construction of a door or doors for a freight or grain car, which will secure a closing and confinement thereof when desired, and when desired to open said door or doors to permit of a longitudinal slide thereof alongside of the car; and it consists in certain novel constructions and formations of parts of the car and door in relation to each other, all substantially as will be hereinafter more fully described, and specifically claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a view at the outside of the car with the door closed, and showing in dotted lines its position when slid open. Fig. 2 is a vertical cross-section on line *x x*, Fig. 1. Fig. 3 is a similar cross-section to Fig. 2, but showing the car-door as in a position ready to be slid open. Fig. 4 is a view of the inner side of the car, showing an inner or "grain" door, so called, closed, but showing in dotted lines its position when slid open. Fig. 5 is a cross-section on line *y y*, Fig. 3; and Fig. 6 is a similar cross-section to Fig. 5, but showing the grain-door in a position ready to be slid open; and Fig. 7 is a perspective view of a portion of the side of a car at the door-opening thereof, showing portions of the ways on inner and outer sides for the guiding lugs or tongues of the inner and outer doors, said doors being represented as slid open.

In the drawings, A is an outer and closing door, and B is an inner or supplemental door, closed for its lower portion, *a*, and of an open-frame construction for its upper portion, *b*. The vertical edges of each door are preferably squared, as also may be the upper and lower edges, *d d*, of the inner door, B, while the upper and lower edges of the outer door are beveled, the planes of such bevels being substantially parallel with each other, and may extend either downwardly from the inner edge of the door, as shown, or upwardly therefrom, as desired.

I provide longitudinal grooved tracks or ways C and C^2 on the outside of the car at the lines of the top and bottom of the outer door, and longitudinal grooved ways D and D^2 on the inside of the car at the lines of the top and bottom of the inner door, and at the corners of the door-opening, at the top and bottom thereof, I provide for the respective outer and inner doors a transverse groove or grooves, *f*, leading to the grooves of the said longitudinal ways, said grooves *f* being of a depth corresponding with the length of vertical tongues or lugs *g g*, secured on the top and bottom of said doors in such position that when the doors are opposite the door-openings said lugs *g* will align with the respective transverse grooves *f*, so that the doors may be forced laterally into the door-opening and be made to stand in the plane of the car-walls.

To open the outer door, it is first, by its lower end, through its handle *h* or otherwise, pulled outwardly, its lower lugs, *g*, moving in the transverse slots *f* until they reach the groove of the trackway C^2, and then the upper end of the door is tilted outwardly, its lugs being similarly guided in the upper transverse grooves, *f*, until they rest in the longitudinal groove of the way C, when the door may be slid, with its lugs *g*, in the longitudinally-grooved ways along the outside of the car, away from the door-opening.

While the inner or grain door, B, is shown with its upper and lower edges square, it is intended at some times to provide said door with beveled upper and lower edges, as described for the outer door, correspondingly beveling the top and bottom of the door-opening therefor, and again, if desired, the beveled edges on and for the outer door need not be employed, although it is a useful feature in securing a close and effective closing of the door-opening.

I provide suitable means for securing the doors when closed, and, as shown for the outer door, they consist of rigid hasps or slotted lug-plates *l*, engaging staples *m* on the side of the car at the sides of the doorway, the hasps being held upon the staples by pins m^2, and of aligning sockets $n\ n^2$ at the bottom of the door, through which bolts *p* pass, the beveling the upper edge of door and the doorway serving, when the lower edge of door is inwardly con-

fined, to securely prevent outward play of the upper edge, and, as shown, for the inner door when in its closing position by a bolt, *q*, passing through holes *r* in side frames of the grain-door into socket-holes r^2 in the jambs.

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

1. The combination, with a car provided with grooved trackways and having its door-opening provided with lateral grooves *f* at the top and bottom, of a door having vertically-extending lug or lugs *g* at its upper and lower edges, substantially as and for the purpose described.

2. The combination, with a car provided with grooved trackways and having the top and bottom of its door-opening beveled and provided with lateral grooves *f*, of a door having its top and bottom edges beveled and provided with lugs *g*, substantially as and for the purpose set forth.

3. The combination, with a car provided with inside grooved trackways and lateral grooves at the top and bottom of its door-opening, of a grain-door having its lower portion closed and its upper portion of open-frame construction, and provided with lugs at its top and bottom edges, substantially as and for the purpose set forth.

4. The combination, with a car provided with grooved trackways and having the top and bottom of its door-opening inclined in substantially parallel lines and provided with lateral grooves *f*, of a door having its upper and lower edges inclined in substantially parallel lines and having vertically-extending lugs *g* at its upper and lower edges, substantially as and for the purpose described.

5. The combination, with a car having a door-opening provided with inwardly and outwardly extending grooves *f f* at its upper and lower edges and inner and outer longitudinal grooved trackways, C C^2 D D^2, of outer door, A, and inner apertured door, B, each of said doors being provided with vertically-extended lugs *g g* at its upper and lower edges, substantially as and for the purpose described.

6. The combination, with a car having its door-opening at the top and bottom inclined in substantially parallel lines and provided with inwardly and outwardly extending grooves *f f*, and having inner and outer longitudinal grooved trackways, C C^2 D D^2, of the outer door having its upper and lower edges inclined in substantially parallel lines, and an inner apertured door, B, each of said doors being provided with vertically-extending lugs *g g* at its upper and lower edges, substantially as and for the purpose described.

7. The combination, with a car having a door-opening provided with a lateral groove or grooves, *f*, in its upper and lower edges and longitudinal grooved trackways C C^2, and provided with staples *m* and bolt-sockets n^2, of a door provided with vertically-extended lugs *g* at its upper and lower edges and having hasps *l* and sockets *n*, and the bolts m^2 *p*, substantially as and for the purpose described.

8. The combination, with a car having a door-opening provided with inner and outer caps and sills at its top and bottom, each of which has lateral grooves *f f*, and having socket-holes r^2 in the inner jambs, and inner and outer longitudinal grooved trackways, C C^2 D D^2, of an outer door, A, and inner open top door, B, each provided with vertically-extending lugs *g g* at its upper and lower edges, and said inner door having the hole *r* and the bolt *q*, substantially as and for the purpose described.

JOHN W. SHEWMAKER.

Witnesses:
GEO. D. WILKINS,
U. T. SHEWMAKER.