

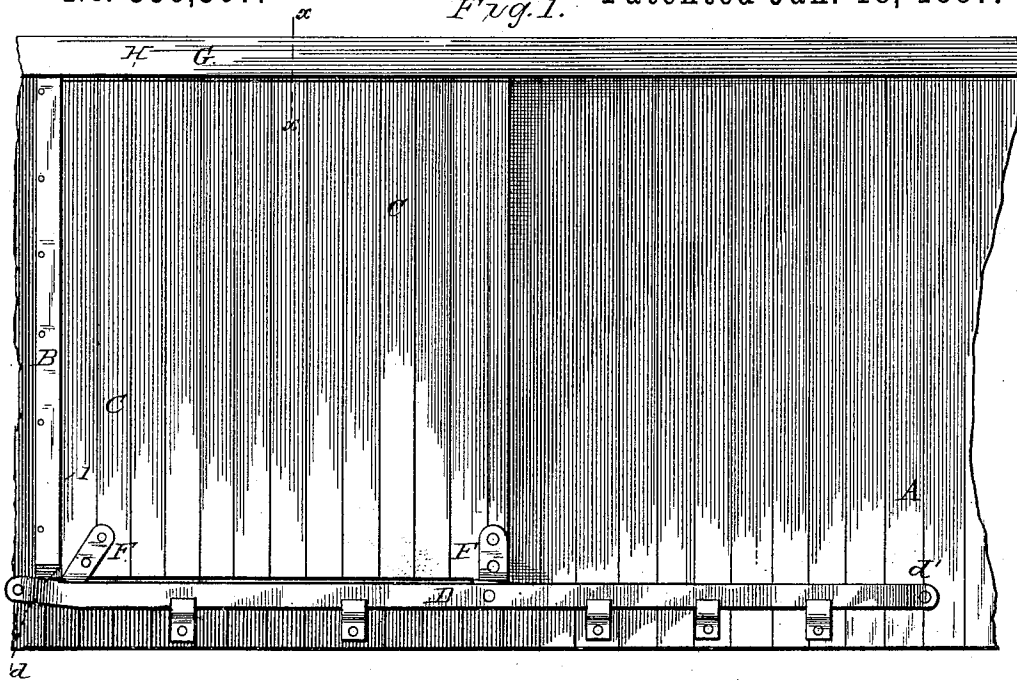
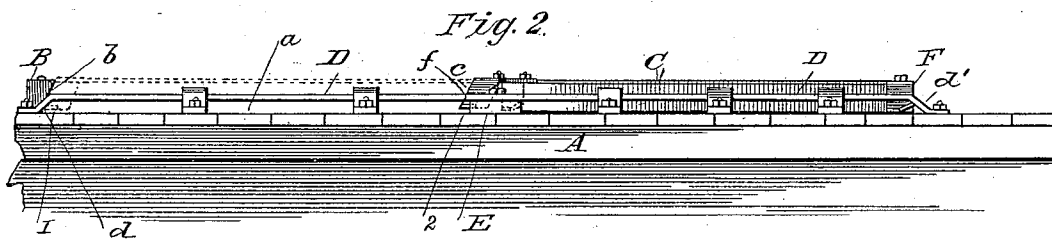
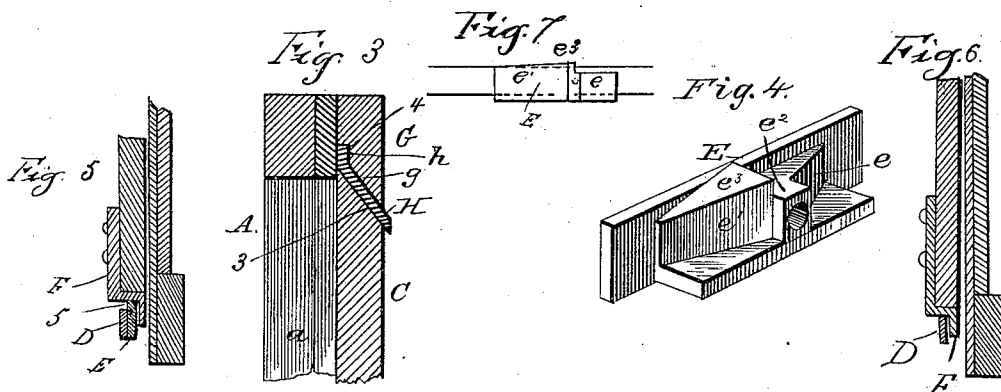
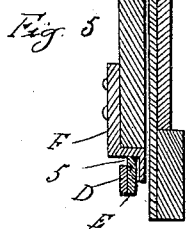
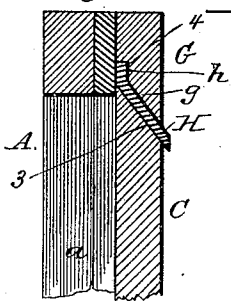
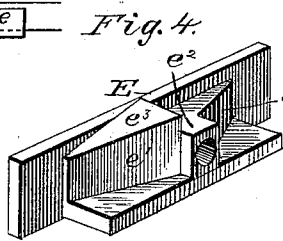
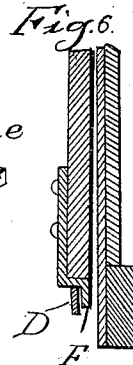
(No Model.)

G. J. FERGUSON.

CAR DOOR.

No. 356,307.

Fig. 1. Patented Jan. 18, 1887.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE J. FERGUSON, OF GREENVILLE, TEXAS, ASSIGNOR OF ONE-EIGHTH
TO EDWIN F. STAHL AND SAMUEL BRANTHOFFER, OF SAME PLACE, AND
ALMER L. DOWNER, OF PITTSBURG, TEXAS.

CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 356,307, dated January 13, 1887.

Application filed June 1, 1886. Serial No. 203,839. (No model.)

To all whom it may concern:

Be it known that I, GEORGE JONES FERGUSON, of Greenville, in the county of Hunt and State of Texas, have invented a new and useful Improvement in Car-Doors, of which the following is a specification.

This invention is an improvement in car-doors, and has for an object to provide a simple construction by which the door in its open and closed positions may be pressed firmly in against the side of the car, and by which the door may more perfectly protect the contents of the car from the weather than the doors of ordinary construction; and the invention consists in certain features of construction and novel combinations of parts, as will be described.

In the drawings, Figure 1 is a side view of a portion of a car provided with my improvements. Fig. 2 is a bottom plan view of a portion of a car provided with my improvements, the door being shown open in full lines and closed in dotted lines. Fig. 3 is a detached vertical section on line *x x*, Fig. 1. Fig. 4 is a perspective view of the central stop. Fig. 5 is a detailed section drawn through the rail D, the stop E, the rear projection, F, and a part of the door when the latter is in a closed position. Fig. 6 is a sectional view drawn through the rail, the projection F, and a part of the door when the door is between open and closed positions; and Fig. 7 is an inner side view of the stop E, showing the same in connection with a portion of the track.

The car A has door-opening *a*, and is provided at the edge 1 of said doorway with a stop-bar, B, which has its face *b* beveled inwardly from its outer to its inner edge. The door C has its front edge, *c*, beveled to fit the beveled face *b*, and such parts close tightly together when the door is shut. Below the doorway *a*, and extended in rear thereof, I secure the track D, which has its ends *d d'* tapered or inclined gradually into the side of the car, forming wedges. The end *d* is arranged at the edge 1 of the doorway, while the end *d'* is arranged a distance beyond the opposite edge equal to the width of the door. The end *d* of the track is also bent upward toward its

extremity, as shown, in order to elevate the front edge of the door when the door is closed, and this incline upward of the track, together with an incline on the center stop, presently described, serves to force the door upward and form a close joint at the top.

Track D supports the door by straps F resting therein, and provides a means of sliding the door to open and closed position.

Within the track, midway between the ends *d d'*, I arrange the central stop, E, having inclined or wedge-shaped faces *e e'*, extending toward, respectively, the ends *d d'* of the track. This central stop is located at the edge 2 of the doorway, and is preferably formed of a single casting having the wedge-faces *e e'* and the stop portion *e''* at the juncture thereof. The stop also has a beveled or inclined face, *e''*, arranged above the face *e'*, and inclining upward from the outer to the inner end of said face *e'*, so that it will engage the hanger projection of the door and elevate the outer edge of the door when the door is closed.

The door C has at its opposite edges hanger projections or straps F F, which project below its bottom, and are then bent or turned down within the rail D, and the part on which the bottom of door rests slides on the track D, and engages incline *e''* and end *d*. For convenience of reference, I term these the "front" and "rear" projections.

The construction and arrangement of the rear hanger projection, in connection with the rail and the stop E, are shown most clearly in Figs. 5 and 6.

In Fig. 5 the door is shown closed and projected upward by the incline *e''*. This incline, as shown in Fig. 7, starts on a level with the track D, and then rises above said track.

In Fig. 6 the position of side of car, track, and door is shown when the door is between open and closed position.

When the door is closed, its front and rear projections will engage, respectively, the end *d* and face *e'*, and in the open position of the door the projections will engage face *e* and end *d'*. In both open and closed positions, therefore, the door will at its lower and top edges be pressed firmly in and up, forming a

very tight joint, and preventing any jarring of the door; but while moving between either of these open or closed positions the door will have free motion, as the downward projections 5 of F F can move outwardly to the rail or track D, and straps F F when moved from closed position will move down to the natural level of track D.

At its upper edge, 3, the door is tapered or 10 inclined upward from its front to its rear side, and such edge slides in an overhanging guide-strip, G, having a beveled face, *g*, corresponding to the edge 3 of the door. In rear of strip G, I form an upwardly-projected groove or way, 15 4, extended longitudinally in a horizontal line, or in line with the direction of movement of the door.

Upon the inclined edge 3 of the door I secure a plate, H, of metal, resting flat against 20 the said edge, and provided at its inner side with an upwardly-projected flange, *h*, which slides in the groove or way 4. Thus it will be seen the plate serves to guide and retain the door at its upper edge, and sheds the water 25 flowing down the outer face of the strip G, preventing such water from passing down the joints between the planks forming the door.

By arranging the strips G and B above and at the edge 1 of the doorway and inclining the 30 faces thereof, which are engaged by the door to form inclined bearings, the door will bind in tightly at both its front and top edges, when the wedge constructions force it inward and upward at its lower edge as the door is closed.

35 Having thus described my invention, what I claim as new is—

1. The combination of the car having guide-

strip G, having face *g*, and provided with an upwardly-projected groove or way, 4, the door, and the plate H, secured on the upper edge of 40 the door, and having a flange, *h*, sliding in way 4, substantially as set forth.

2. The combination of the rail D, having its ends *d d'* inclined inward, forming wedges, and provided between said ends with the wedges 45 *e e'*, and the door having projections fitting within the rail and engaging said wedges in the open and closed positions of the door, substantially as set forth.

3. The car having a doorway and provided 50 at the edge 1 and above the same with inclined bearings, combined with the door having its front and top edges fitted to said bearings and wedge constructions for forcing the lower edge of the door inward against the car, substan- 55 tially as set forth.

4. The combination, with the track having its ends *d d'* bent inward, forming wedges, and the door having projections F at its lower end, fitting within said rail and engaging the ends 60 *d d'*, of a center block, E, secured within the rail midway the ends *d d'*, and formed with wedge-faces *e e'*, substantially as set forth.

5. The combination, with the car having a doorway and provided above the same with a 55 way and below it with a track for the door, of the door and wedge-surfaces for forcing the door upward in the closed position thereof, substantially as set forth.

GEORGE J. FERGUSON.

Witnesses:

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