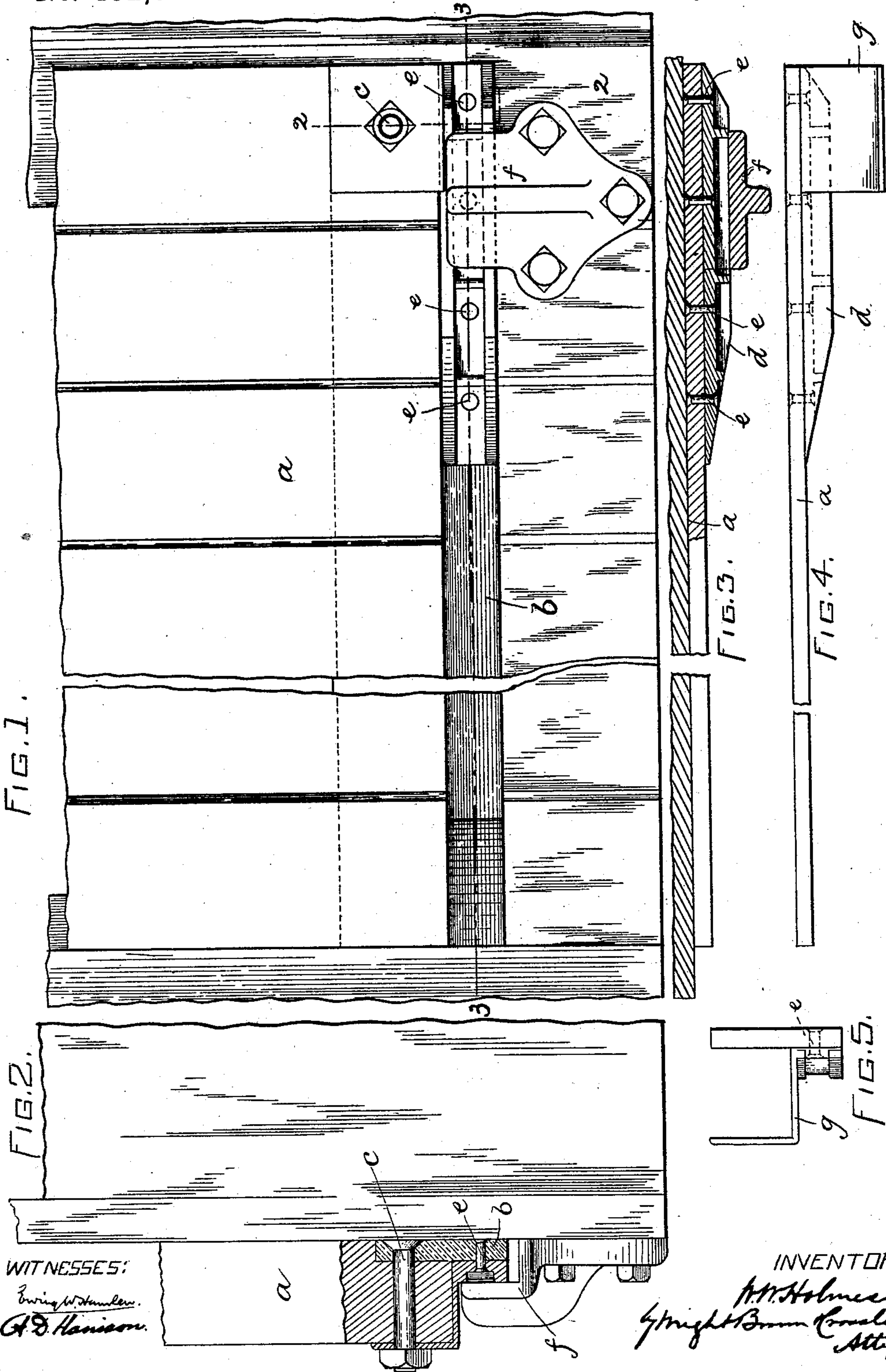


(No Model.)

W. W. HOLMES.  
CAR DOOR.

No. 452,570.

Patented May 19, 1891.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

WILLIAM W. HOLMES, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE  
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## CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 452,570, dated May 19, 1891.

Application filed January 22, 1891. Serial No. 378,634. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. HOLMES, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain  
5 new and useful Improvements in Freight-Car Doors, of which the following is a specification.

This invention relates to freight-car doors, the lower portions of which are provided with wedge-shaped projections arranged to bear  
10 upon ears or brackets affixed to the body of the car below the door, portions of said ears or brackets projecting upwardly in position to bear upon said wedge-shaped projections and co-operate therewith in forcing the door  
15 inwardly against the side of the car, thus preventing rattling of the door.

Heretofore the wedge-shaped projection of each door has been applied to the outer surface of the door and projects outside of said  
20 surface, thus requiring a like projection of the fixed ear or bracket on the body of the car, said bracket being thus made so prominent that it is liable to be broken by contact with objects outside of the car, besides re-  
25 quiring to be made quite bulky and heavy.

The present invention has for its object to obviate the projection of the fixed ear or bracket outside of the outer surface of the door; and to this end it consists in the im-  
30 proved construction hereinafter described, said construction involving a downwardly-projecting flange or rib at the lower edge of the door, a wedge-shaped projection thereon, the outer surface of which is inside of or set  
35 back from the plane of the outer side of the door, and an ear or bracket affixed to the car below the door and formed with its bearing-surface inside of the plane of the outer surface of the door.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of the lower portion of a sliding door and a portion of the side of the car, said door and car being provided with  
45 my improvements. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents a section on line 3 3 of Fig. 1. Fig. 4 represents a top view of the flange and wedge-shaped projection attached to the bottom of the car-door. Fig. 5 represents an end view  
50 of the construction shown in Fig. 4.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a sliding door for freight-cars, which door may be supported  
55 by wheels or trucks at or above its upper edge and a track attached to the car and supporting said wheels.

In carrying out my invention I attach to the lower edge of the door a downwardly-pro-  
60 jecting flange or rib *b*, which extends, preferably, the entire length of the door and has its rear side substantially flush with the inner surface of the door, its outer side being off-  
65 set or set back from the outer side of the door, as shown in Fig. 2. I prefer to cut a seat or rabbet in the rear side of the door to receive the upper portion of the flange *b*, said flange being attached to the door by  
70 a suitable number of bolts *c* passing through the lower portion of the door or in any other suitable way.

*d* represents a wedge-shaped projection securely connected to the flange *b* at or near one end thereof by bolts *e* or other suitable  
75 means, the outer side of said projection being beveled or inclined at one or both ends thereof, so that when the door is being moved lengthwise the projection will come to a bearing  
80 on the fixed ear or bracket *f*, attached to the side of the car, without an abrupt blow or shock. The projection *d* is of such width that its outer surface is back from the plane of the  
85 outer side of the door *a*, as shown in Fig. 2. The ear or projection *f* is securely bolted to the body of the car below the door *a*, and its upper portion is offset from the side of the car sufficiently to bear upon the outer side of  
90 the projection *d* and hold the door *a* firmly against the side of the car when the door is moved to such a position that the projection  
95 *d* bears against the ear.

The described location of the projection *d* back of the outer side of the door enables the ear or bracket *f* to be formed so that it does  
100 not project outside of the door, as shown in Fig. 2. Hence the size of the ear or bracket is considerably reduced as compared with one which is formed to bear against the outer side of the door.

I prefer to form an L-shaped flange *g* on one end of the projection *d*, said flange being



formed to extend across the bottom of the door and upwardly at the outer side of the door, as shown in Figs. 1, 2, and 5. The said flange constitutes a wearing-plate or protector for the lower corner of the door at the end thereof and is securely retained in place by one of the bolts *c*, which passes through the vertical portion of the flange, as shown in Fig. 2.

10 I claim—

1. A car-door having a downwardly-projecting flange at its lower edge and a wedge-shaped projection at the outer side of said flange, the said projection and flange being set back from the plane of the outer surface of the door, as set forth.

2. A car-door having a downwardly-projecting flange at its lower edge and a wedge-shaped projection on the outer side of said flange, said projection and flange being set back from the plane of the outer surface of

the door, combined with an ear or bracket affixed to the body of the car below the door and formed to co-operate with said projection in holding the door against the side of the car, as set forth.

3. The combination, with a car-door, of the metallic flange *b*, inserted in a socket formed in the rear side of the door and projecting below the latter, and the projection *d*, attached to said flange and provided with an L-shaped flange extending across the lower edge of the door and upwardly at the outer side of the door, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 19th day of January, A. D. 1891.

WILLIAM W. HOLMES.

Witnesses:

EDW. J. MORGAN,

J. LEWIS GREEN.