

MILES H. CARD & LEVI SAFFOD.

Improvement in Grain Doors for Railway Cars.

No. 118,339.

Patented Aug. 22, 1871..

Fig. 1

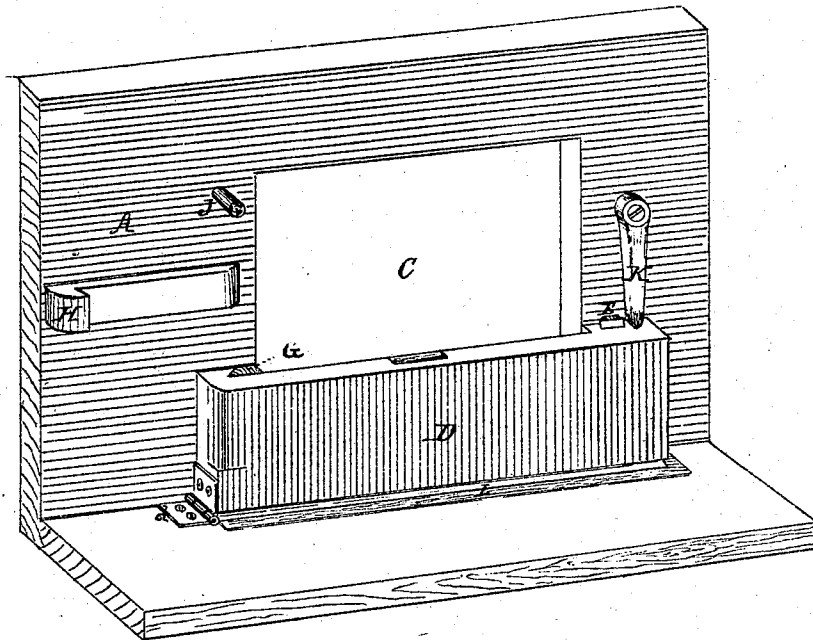
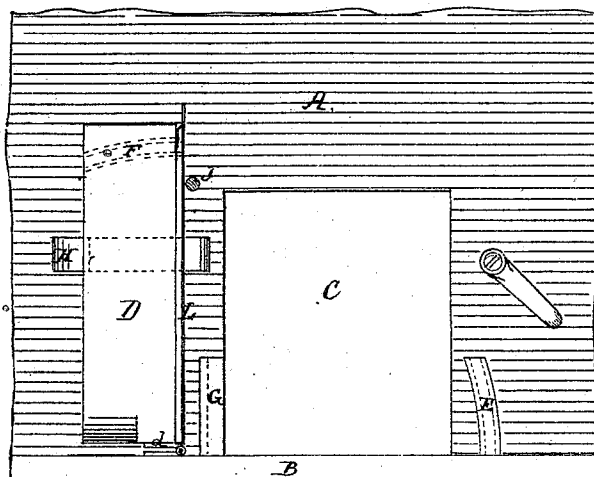


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

MILES H. CARD, OF FREEPORT, AND LEVI SAFFOD, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GRAIN-DOORS FOR RAILWAY CARS.

Specification forming part of Letters Patent No. 118,339, dated August 22, 1871.

To all whom it may concern:

Be it known that we, MILES H. CARD, of Freeport, county of Stevenson, and LEVI SAFFOD, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Grain-Doors for Railway Cars; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a perspective view of our invention from the interior of the car; and Fig. 2 is a front elevation from the same point of view, showing the door opened.

Like letters of reference made use of in the several figures indicate like parts.

To enable those skilled in the art to make and use our invention, we will proceed to describe the same with particularity, making use in so doing of the aforesaid drawing.

A represents in the drawing the side of an ordinary freight-car, such as are used upon railways for transporting grain. B is the floor thereof, and C the common door-way, shown open. D represents our grain-door hinged to the floor of the car by one of its lower corners, as shown by the hinge D. This door is made to extend beyond or lap over the sides of the door-way at each side, and is of a height sufficient to retain the car-load of grain. At the free or moving end of the door and attached to the side of the car is a dovetailed guide-piece, E, of a curved shape, the curve of which is described by a radius equal to its distance from the hinge. A dovetailed recess or groove, F, indicated in dotted lines at Fig. 2, is cut in the outer face of the door D, so that when the same is shut or turned down the guide-piece will enter the groove and hold the door securely from lateral movement or shaking, and at the

same time form a tight joint and effectually prevent the grain from working between the side of the car and the door, and so out of the door-way. G is an abutment placed at the side of the door-way nearest the hinge, and beveled at its inner side to fit an offset in the door D when closed, so as to form a similar joint upon this side of the door-way. H is a stop, and J a pin for the purpose of retaining the door in position when opened, and K is a button or detent for securing the door when closed. L is a flap or strip of flexible material, such as canvas, leather, rubber-cloth, or similar substance secured to the bottom of the door and extending into the car and beyond the moving end of the door a short distance and lying upon the floor of the car. When the car is full the weight of the grain upon this flap makes the joint between the door and the floor tight against leakage, assisted in a measure by the material immediately under the door itself acting as packing.

By our construction we are enabled to produce a grain-door which is tight against loss by leakage, and durable, dispensing entirely with the troublesome lathing and packing usually employed when common doors are used.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The grain-door D, provided with the flap L, curved groove or dovetailed slot F, offset *g*, and hinge *d*, in combination with the dovetailed curved guide-piece E, abutment G, and detent K, all constructed and arranged substantially as described and shown, for the purposes set forth.

MILES H. CARD.
LEVI SAFFOD.

Witnesses:

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