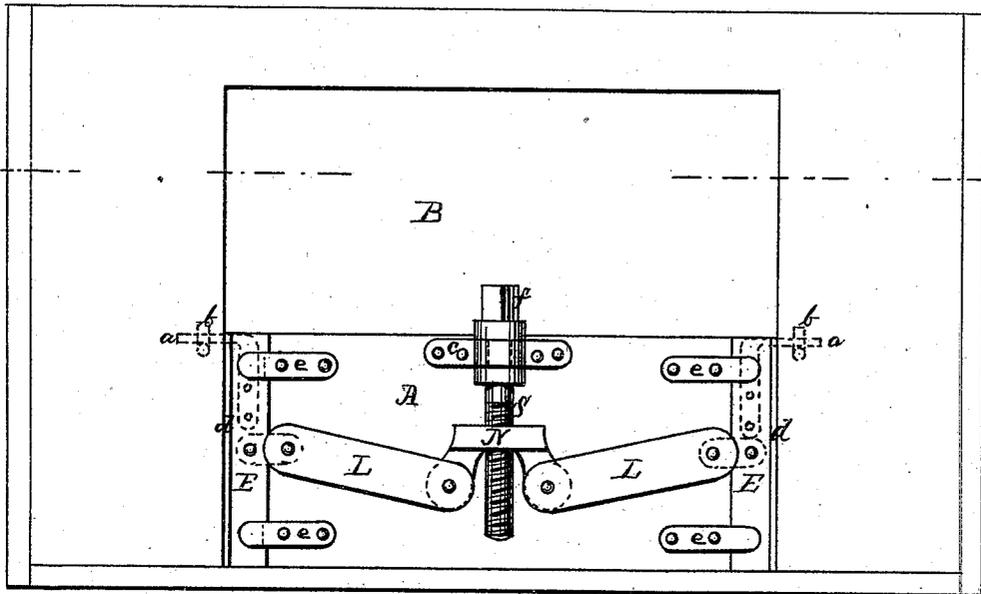


L. F. FRAZEE.  
DOORS FOR GRAIN-CARS.

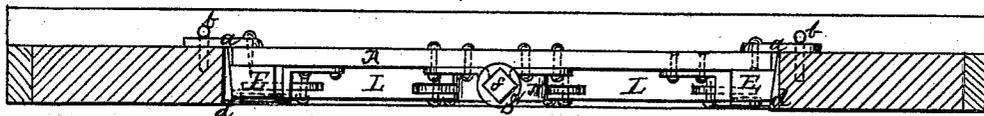
No. 172,012.

Patented Jan. 11, 1876.

*Fig: 1.*



*Fig: 2.*



*Witnesses:*  
*Henry Eichling*  
*D. S. Clark*

*Inventor:*  
*Lawrence F. Frazee*  
*By* *Rich. Mich*  
*His Atty.*

# UNITED STATES PATENT OFFICE.

LAWRENCE F. FRAZEE, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN DOORS FOR GRAIN-CARS.

Specification forming part of Letters Patent No. 172,012, dated January 11, 1876; application filed September 27, 1875.

*To all whom it may concern:*

Be it known that I, LAWRENCE F. FRAZEE, of Jersey City, county of Hudson, State of New Jersey, have invented an Improved Door for Grain-Cars, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof.

My invention consists in a supplemental swinging door or gate, detachably hung in the lower part of the doorway of a car, and arranged to open outwardly, provided with extensible pressure-bars upon its sides, operated by any suitable mechanism, to be forced tightly against, or withdrawn from, contact with the jamb of the car-door, whereby an ordinary freight-car may be readily converted into a car adapted for the transportation of grain, and whereby the said supplemental door may be conveniently and quickly opened for the delivery of the grain from the car at its destination.

Figure 1 is an exterior elevation of a car-doorway, showing my supplemental door in position therein. Fig. 2 is a plan of the same.

A is the supplemental door or gate, detachably hung in the lower part of the doorway B by means of the hinge-pins *a*, engaged in the hooks *b* on the inside wall of the car, as shown, and arranged to swing open outwardly. The extensible pressure-bars E E are mounted and arranged to move in guides or ways *e*, as shown, on either end of door A on its exterior side. The said bars are beveled off on their outer edges, from within outward, and bear against cleats *d*, which are beveled reversely—that is, from without inward—as shown. When the door A is adjusted tightly in place in the doorway B the bursting or forcing open of the said door by the weight of the grain is prevented. The door A itself is made somewhat shorter in length than the distance between the cleats *d*, so that it will readily pass between the said cleats on being swung open. As shown in the drawing, the extensible pressure-bars E are operated by the levers L L, hinged to them and to the nut N, which works on the screw S, which is provided with a crank-post, *f*, and is mounted in the brace *c* upon the exterior of the door A. The bars

E and their operating mechanism are thus all on the exterior of the door A, and removed from contact with, and liability to be clogged by, the grain carried in the car, while they are covered by the full car-door during transit.

Now, it is evident that the supplemental door A may be readily secured in place in the doorway of a car by means of the extensible pressure-bars E, and that an ordinary freight-car may be thus adapted to carry grain; and that, by relieving the bars E of the pressure, and withdrawing them from contact with the cleats *d*, the door A may be swung outwardly, and the car thus readily and quickly opened for the delivery of the grain at its destination.

The extensible pressure-bars E may be operated by any mechanism the equivalent of the devices shown in the drawings—such, for instance, as a ratchet-lever mounted upon the top of the door A, provided with a connecting-rod, to which the levers L L are hinged, or by horizontal male screws joined and working in a female nut, the ends of the screws being suitably connected to the bars E.

It is not my intention to claim, broadly, herein supplementary bars or gates mounted and made movable on the ends of a door for grain-cars, as I am aware that such a device, arranged to extend to the edges of the door, and be withdrawn therefrom, is now employed, carrying bolts fixed to the bars, and adapted to be extended into sockets in the jamb of the door.

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

The door A, provided with the bars E, having beveled outer edges, and arranged to be extended freely beyond the edges of the door, and to be pressed tightly against the bevels *d* on the door-jamb by the levers L L, as described, and for the purpose specified.

Witness my hand this 21st day of September, A. D. 1875.

LAWRENCE F. FRAZEE.

Witnesses:

A. S. FITCH,  
HENRY EICHLING.