

R. FERGUSON.

Car-Door.

No. 164,285.

Patented June 8, 1875.

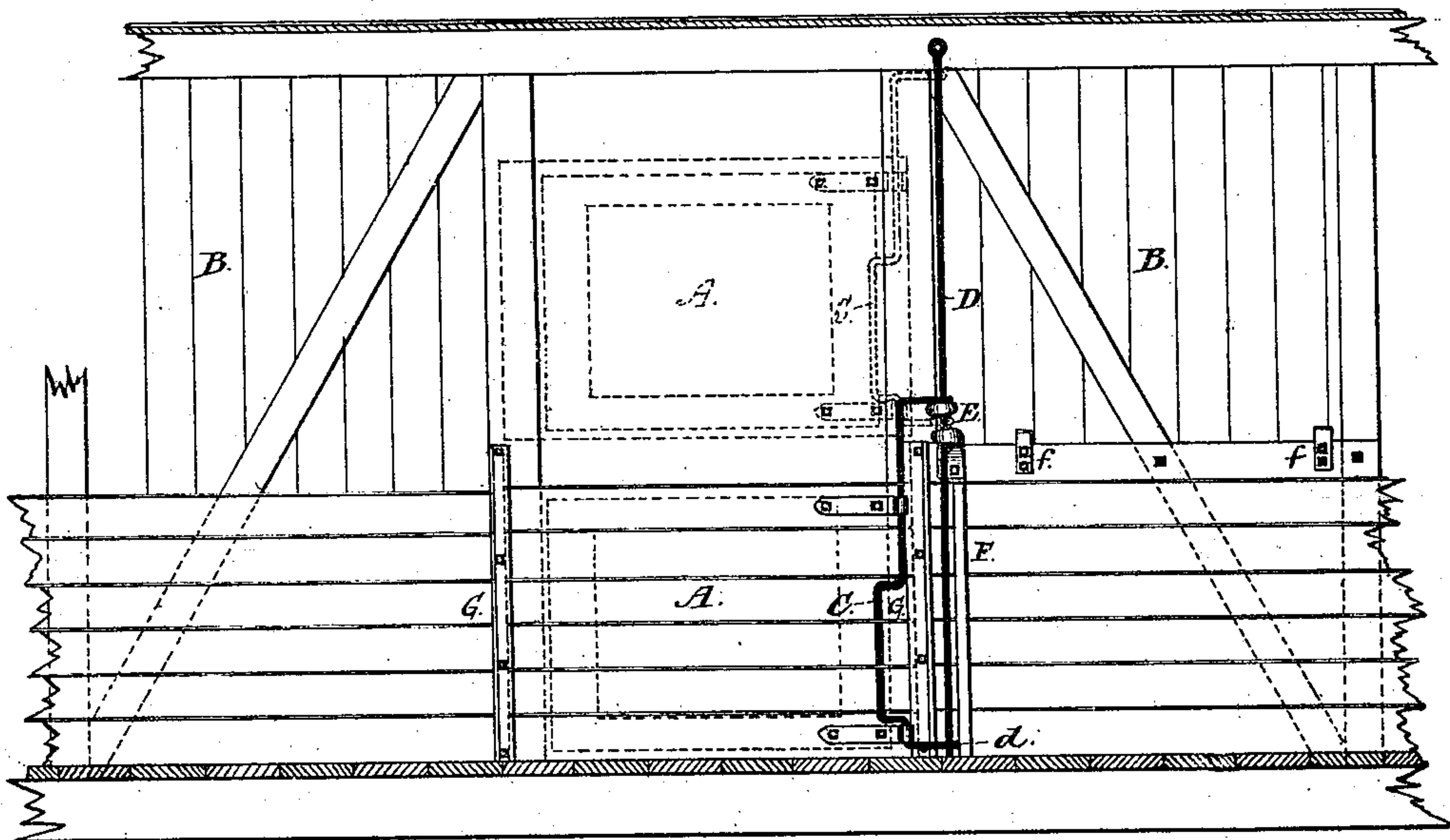


Fig. 1.

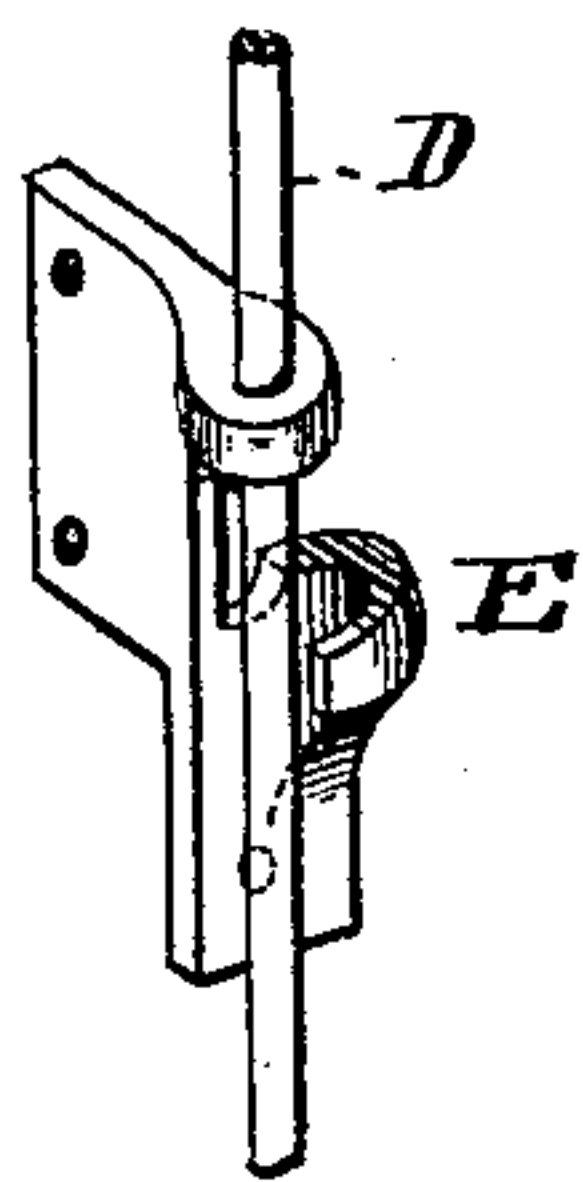


Fig. 3.

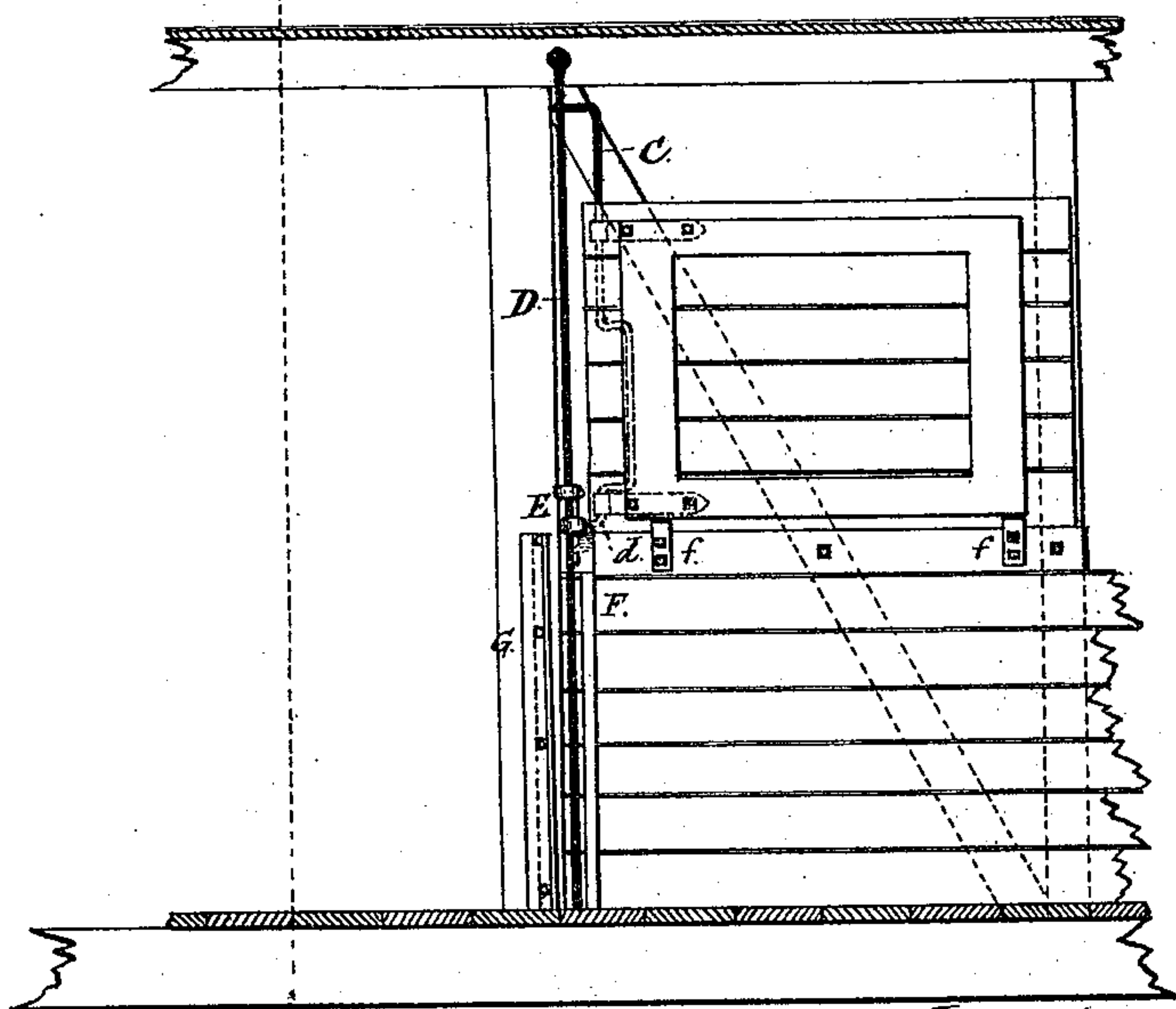


Fig. 2.

Witnesses:

Geo. A. Bird

Hugh Bird

Inventor:

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per
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Attys

UNITED STATES PATENT OFFICE.

ROBERT FERGUSON, OF TORONTO, CANADA.

IMPROVEMENT IN CAR-DOORS.

Specification forming part of Letters Patent No. 164,285, dated June 8, 1875; application filed February 18, 1875.

To all whom it may concern:

Be it known that I, ROBERT FERGUSON, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, master car-builder, have invented a certain new and useful Improvement in the manner of Attaching Grain-Doors to Box-Cars, of which the following is a specification:

My invention relates to an improvement in the manner of attaching grain-doors to box-cars, designed for the purpose of so securing them that, while being readily adjusted, as required, they cannot easily be torn from the fastenings and lost, as is now the case, and to overcome which great disadvantage is the object of my invention.

My invention consists in hinging the grain-door to a peculiarly-shaped hinged bar, which is attached to, and slides upon, a vertical rod secured in position on or near the door-stile. Also in a casting, used as a stop and guide for the said hinge-bar, the whole being arranged and applied substantially as hereafter specified.

Figures 1 and 2 are sectional views of portions of a grain-car containing my improvements. Fig. 3 represents a detached part of the invention.

A is the grain-door. B represents a portion of the side of a car, showing the doorway. C is the hinge-bar, bent and attached to the door A, as shown, so that the said door will swing but slightly one way. D is the vertical rod upon which the hinge-bar slides. *d* is the lower arm of hinge-bar. E is a casting, forming a stop and guide for the hinge-bar C, as hereafter described. *f* are catches for holding the door A against the side of the car when put up out of the way. F is a cleat or strip of wood, on one side of the vertical rod, and extending as high as the inside sheeting. G are the pieces forming the grooves into which the door A slides.

From this description it will be seen that the grain-door A is secured to the car by the

hinge-bar C, fitting onto the vertical rod D, which is fastened to or near the door-stile of the car.

The drawing represents the doorway closed by the grain-door A, which is opened by sliding it upon the vertical rod D till it reaches the position shown by the dotted lines across the doorway, where it is prevented from going higher by the arm *d* striking against the casting E. The bottom of the door is by this clear of the pieces G and can easily be swung around, the casting E supporting, and at the same time guiding, the door into position against the side of the car, as represented in Fig. 2.

The advantage of the hinge-bar is here observable, as it permits the end of the door to which it is attached to swing in and fit snug against the side of the car.

Grain-doors, as now used, are in themselves similar to that shown in the drawing, but are either not secured in any way to the car, or are only held by a light chain, from which they are readily detached. The consequence is that these doors are continually being used as gangways and other purposes for which they were never intended, and are thus soon destroyed or lost. The plan of attaching them by a chain has failed, simply from the fact that they are so easily detached, and apparently so easily replaced, that they are continually being detached, and, of course, seldom replaced, the evil complained of remaining almost as great as though no connection had ever been made.

What I claim as my invention is—

In a car, the combination of sliding bar C, the lower end of which forms arm *d*, door A, rod D, and checking and locking device E, substantially as and for the purposes set forth.

ROBERT FERGUSON.

Witnesses:

GEO. A. AIRD,
HUGH AIRD.