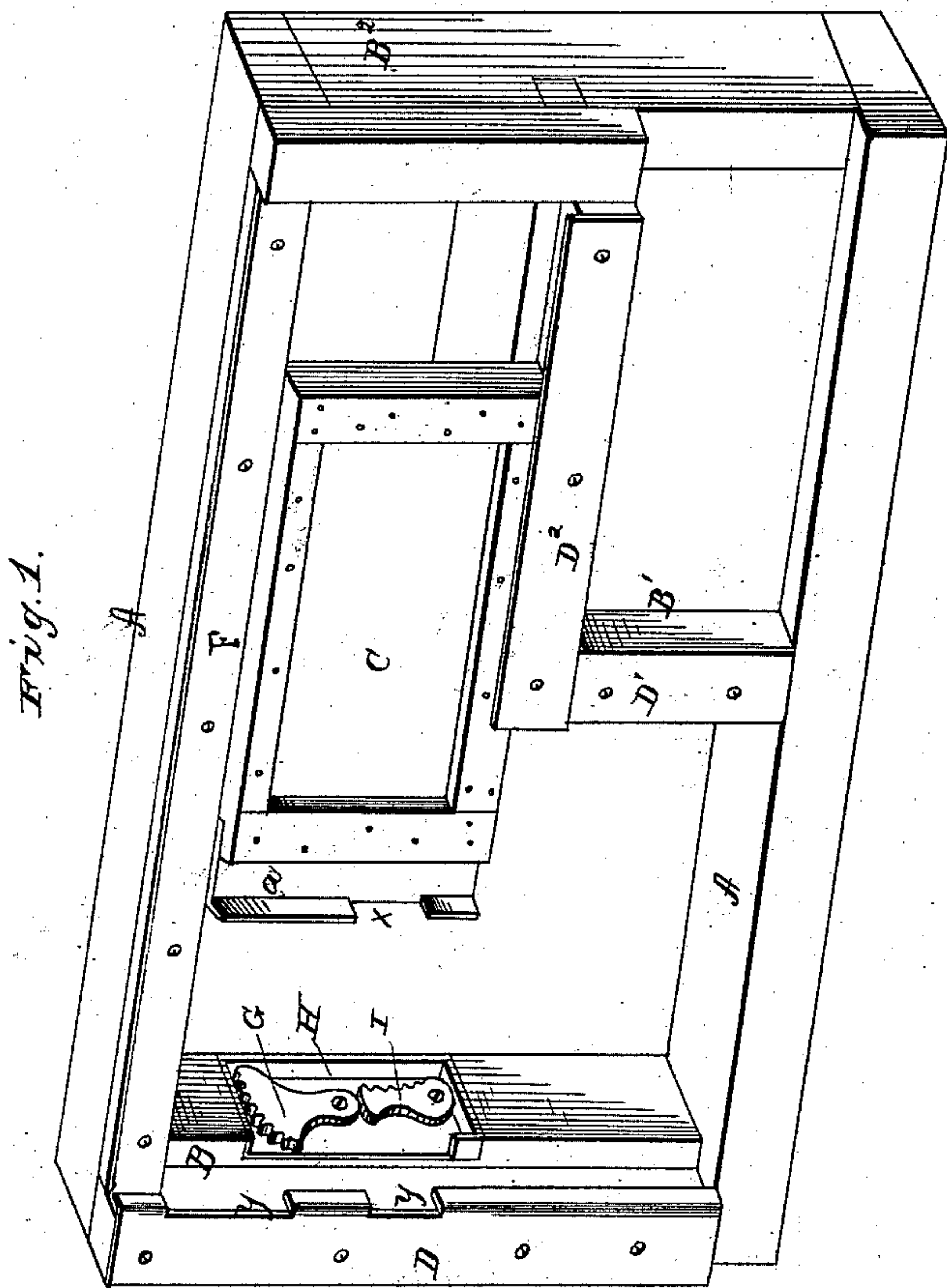
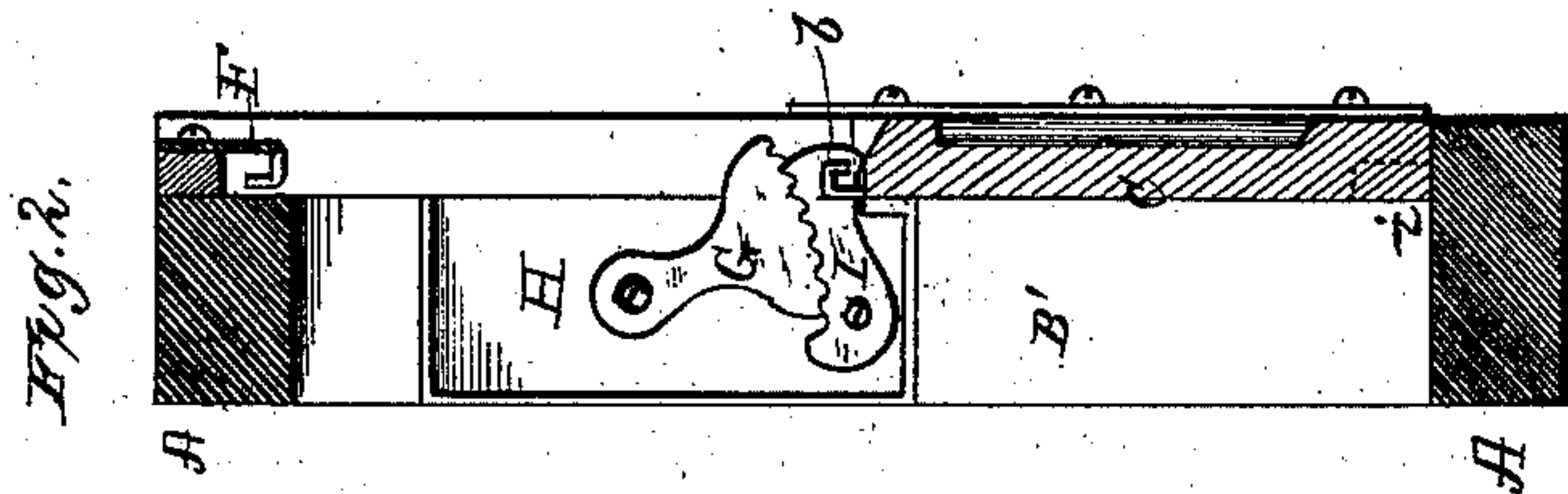


W. I. STRATIFF.
Grain-Car Door.

No. 222,097.

Patented Nov. 25, 1879.



WITNESSES

F. L. Curand
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UNITED STATES PATENT OFFICE.

WILLIAM I. STRATIFF, OF ALTOONA, PENNSYLVANIA.

IMPROVEMENT IN GRAIN-CAR DOORS.

Specification forming part of Letters Patent No. **222,097**, dated November 25, 1879; application filed October 27, 1879.

To all whom it may concern:

Be it known that I, WILLIAM I. STRATIFF, of Altoona, in the county of Blair, and in the State of Pennsylvania, have invented certain new and useful Improvements in Grain-Doors for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a grain-door for railroad-cars, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a transverse vertical section of the same.

A A represent the horizontal top and bottom timbers of a railroad-car adapted for carrying grain, and B B' B² are the vertical posts connecting the same.

The space between the posts B B' is left open to be closed by the door C, which is of such dimensions as to fit between said posts and cover the lower half of the space between them. This door C does not lie exactly between the posts B B', but more properly against their inner sides, and is held in position by vertical metallic guides D and D', fastened on the inside of the frame-work.

One edge of the door C is provided with a flanged metallic guide-bar, *a*, which is notched or slotted, as shown at *x*, to allow the flange to enter corresponding slots *y* in the guide D, and the flange of the bar *a* then passes down within said guide D, to hold the door at that end from moving inward. The other end of the door lies behind the guide D' for the same purpose, and the door is therefore held properly, so as not to have any inward movement.

The flange *a*, attached to the door and pro-

vided with the open space *x*, in conjunction with the spaces *y* in the guide D, causes the door to be caught just as soon as it changes from a horizontal to a vertical movement; and in the reverse movement of the door, as soon as it reaches its highest point, the openings in the flanges allow the door to be moved horizontally to one side.

The door C is, at its upper edge, provided with hooks or hooked hangers *b b*, which, when the door is raised, enter slots in a flanged guide-rail, F, attached to the inner side of the top timber, A. The door C, when thus raised, is moved laterally to one side, and is suspended by means of the hangers *b b* on the flanged rail F, the lower edge of the door being held behind a metallic guide, D², which extends horizontally from the upper end of the vertical guide-bar D'.

It will therefore be seen that the door C is at no time removed from the car, but remains attached to the car in such a manner that it can easily and quickly be put back in place to close the opening in the side of the car. When the door is in this position it is locked tightly by means of a latch, I, at each end. This latch is pivoted in a box, H, which is let into the vertical post; and above the latch in said box is pivoted an eccentric, G, as shown. The latch I is turned down to have its end rest on the top edge of the door, and the eccentric G is then turned down to bear on the latch, which securely locks the door, so that the grain cannot work under the door and pry the same up.

The adjoining edges or surfaces of the latch and eccentric may be made toothed or corrugated to take into each other, as shown, and thereby prevent any accidental release of the parts.

The position of the eccentric and the latch is such that the jarring of the car when in motion will have a tendency to bring the parts closer together rather than separate them.

The door C is, at the bottom, in the center, on the outer side, provided with a metal-lined recess, as shown at *i*, for the application of a bar or lever for prying up the door.

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

The grain-door C, provided with the flanged guide *a*, having opening *x*, in combination with the vertical guide D' and the vertical flanged guide D, having openings *y*, and the guide-flanges D² F, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of March, 1878.

WILLIAM I. STRATIFF.

Witnesses:

H. AUBREY TOULMIN,
AMBROSE WARD.