

No. 795,614.

PATENTED JULY 25, 1905.

X. HUBERT.
GRAIN CAR DOOR.

APPLICATION FILED DEC. 31, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

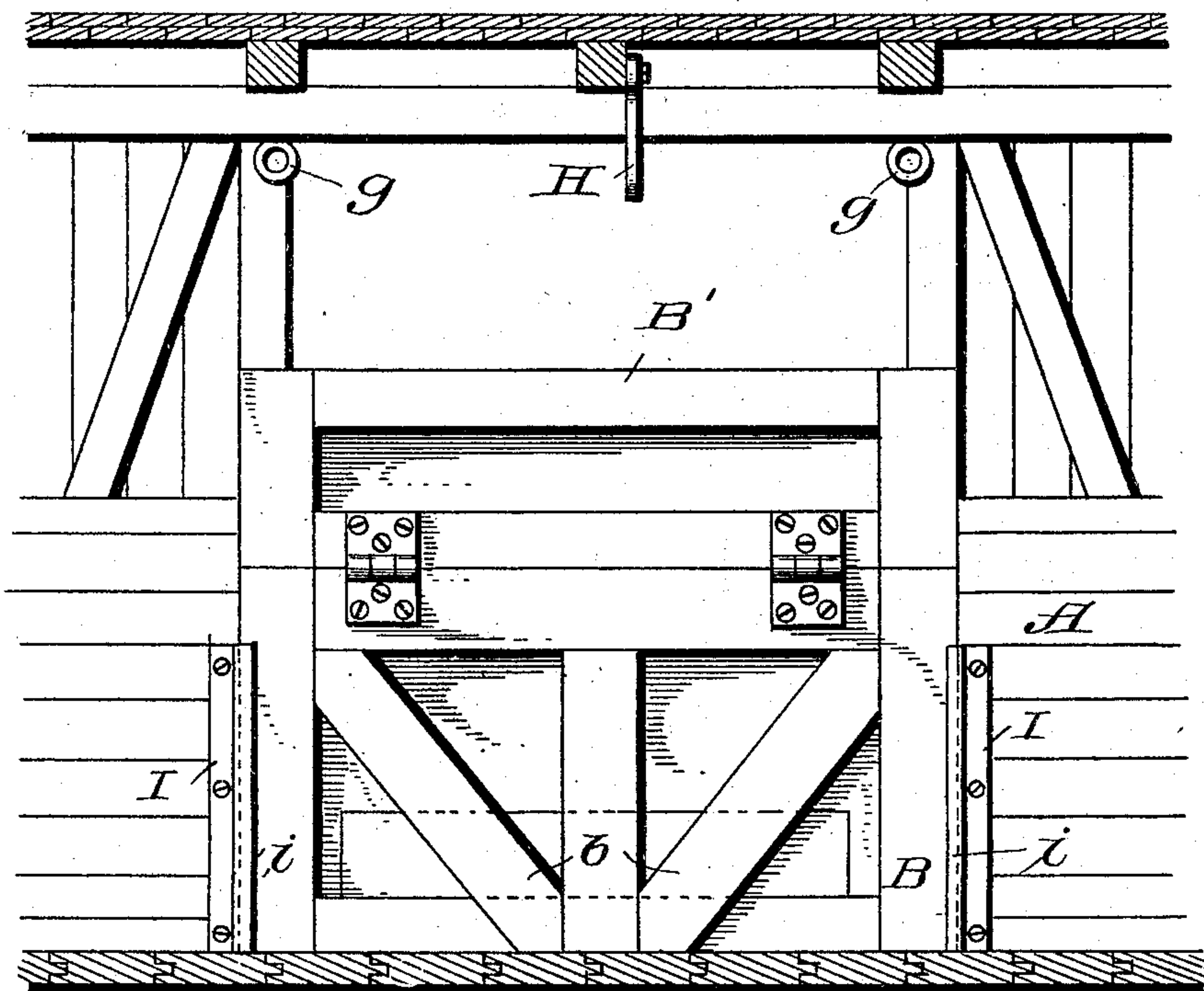
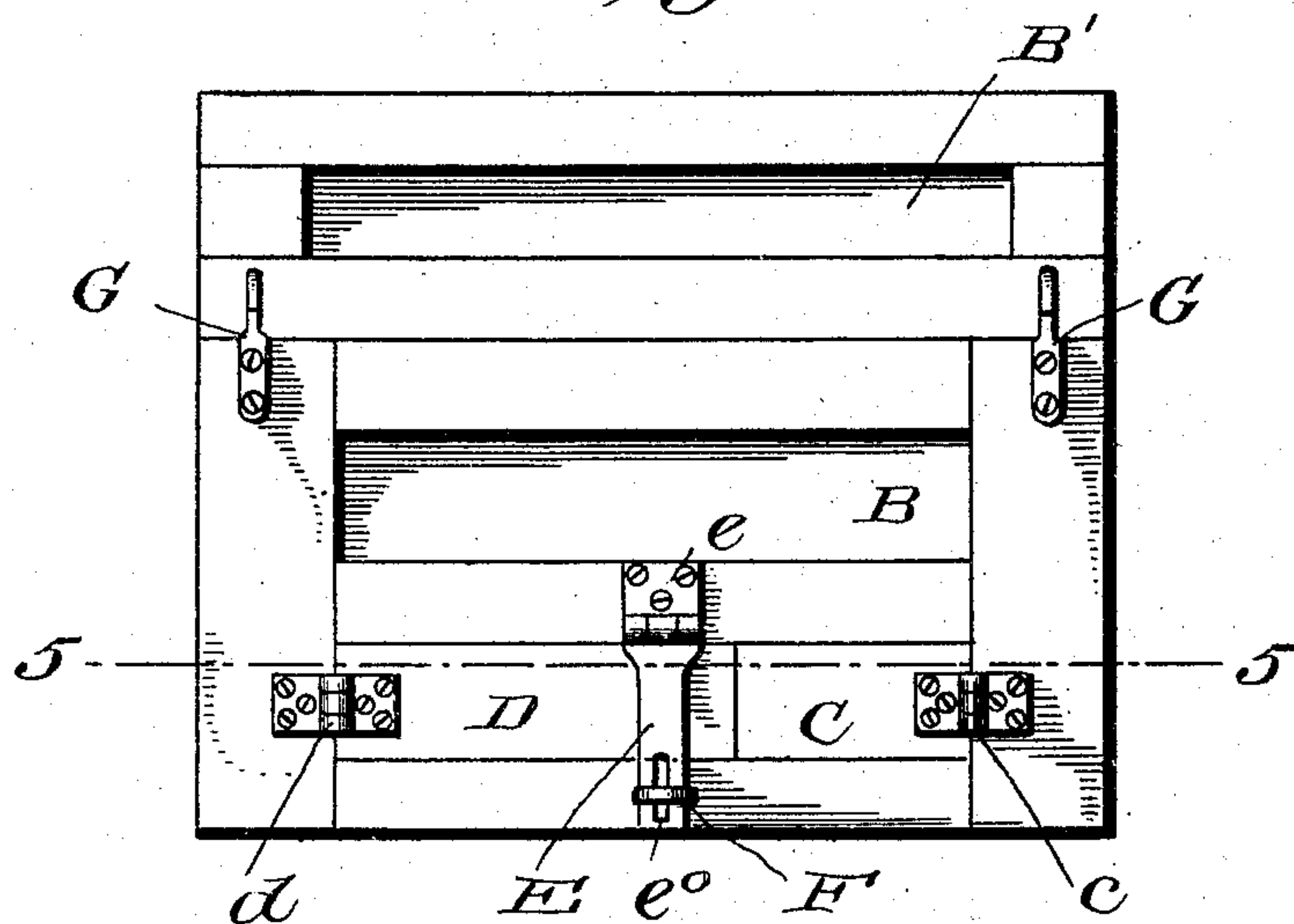


Fig. 2.



Witnesses

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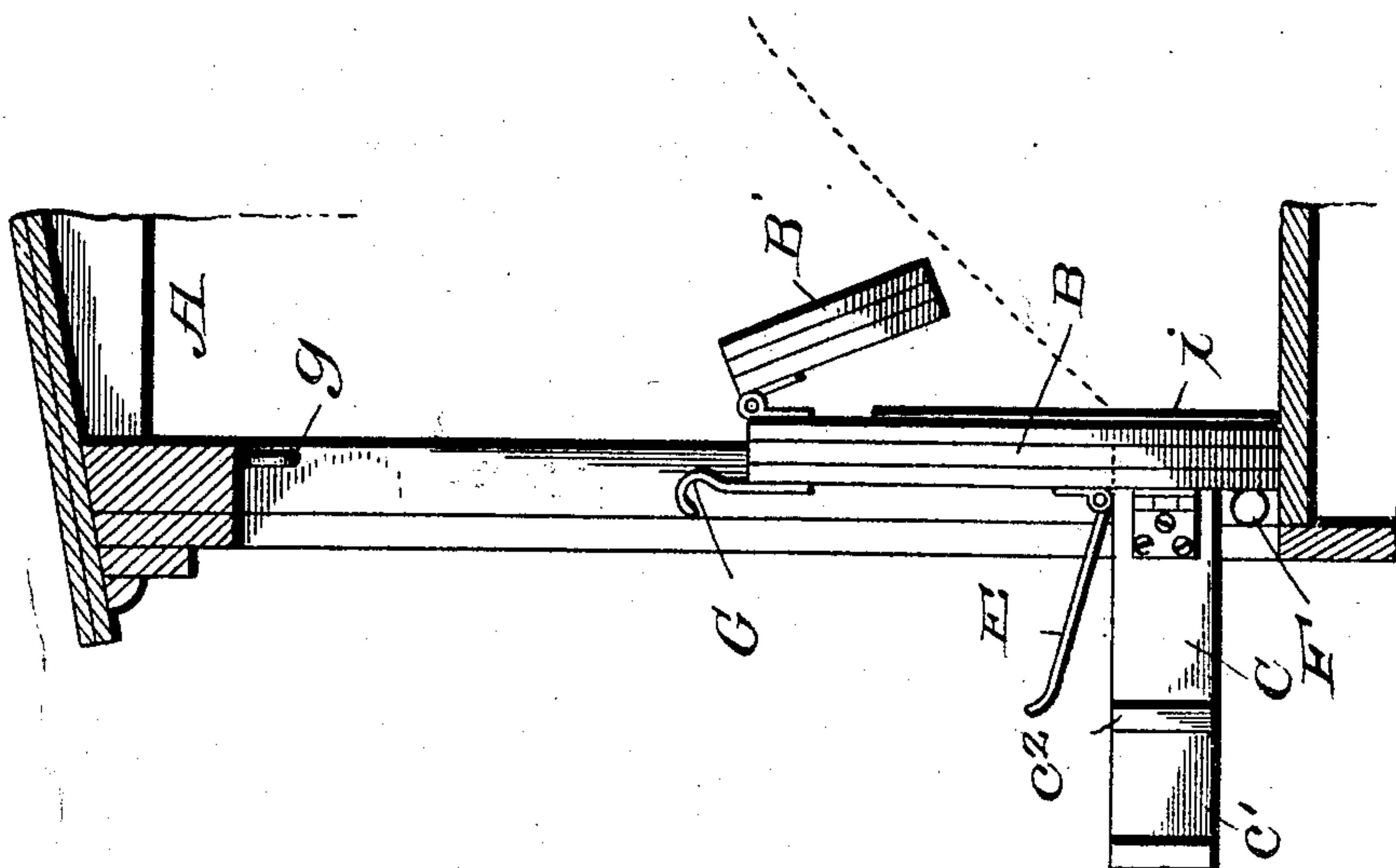
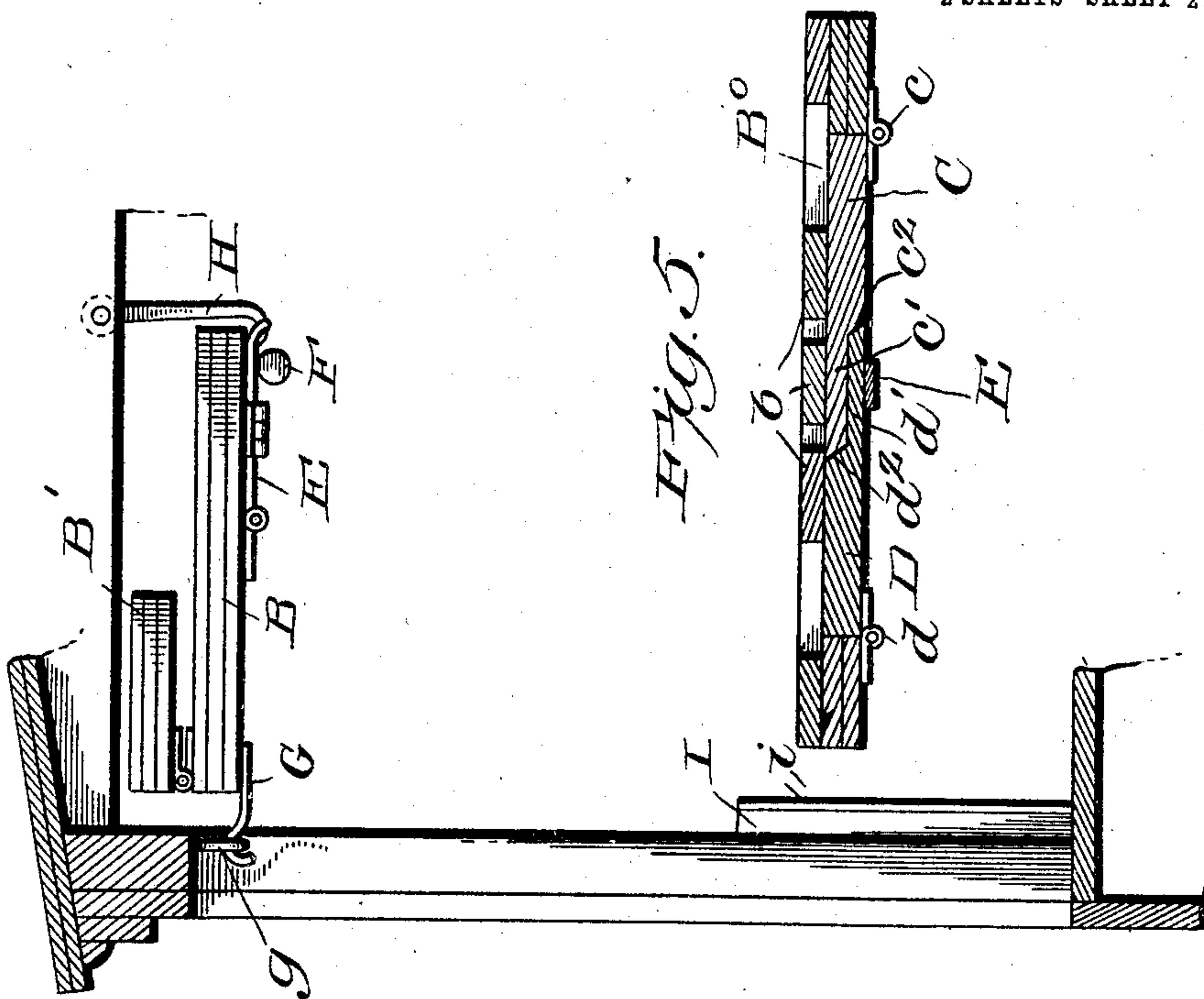
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UNITED STATES PATENT OFFICE.

XAVIER HUBERT, OF SUPERIOR, WISCONSIN.

GRAIN-CAR DOOR.

No. 795,614.

Specification of Letters Patent.

Patented July 25, 1905.

Application filed December 31, 1904. Serial No. 239,215.

To all whom it may concern:

Be it known that I, XAVIER HUBERT, a citizen of the United States, residing at Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Grain-Car Doors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in grain-doors, and has for its principal object to provide a means whereby a quantity of the grain may be initially withdrawn to relieve the pressure against the door, after which the door may be elevated and the remaining contents of the car readily removed.

Another feature of the invention is to so construct the door and hang the same when elevated that the entire door may be swung inwardly into the car and suspended from the ceiling thereof to hold the same out of the way, and thus enable the car to be used for other purposes than carrying grain.

In the accomplishment of these and other desired ends I provide a door constructed and arranged substantially as hereinafter described, and illustrated in the accompanying drawings, forming a part of this application, and which discloses the preferred embodiment of my invention.

In the drawings, in which like letters designate like parts in the several views, Figure 1 is a longitudinal section through a part of a grain-car, showing the inside face of the grain-car door in the position it appears when the car is loaded. Fig. 2 is a detail front elevation of the door. Fig. 3 is a transverse section through one side of the car, showing the car-door in end elevation and its parts in the position assumed as the contents of the car are being initially discharged. Fig. 4 is a similar transverse section showing the door folded up, swung inwardly, and suspended from the ceiling of the car; and Fig. 5 is a section on the line 5 5 of Fig. 2.

A designates the car of any suitable construction, and B B' the car-door, B designating the main portion of the car-door and B' a hinged extension at the top thereof. This door may be of a panel construction, as illustrated, with the braces or stays *b* on the inside face thereof, which also serve as an abutment to limit the inward swing of a pair of

hinged gates, hereinafter described, operating in an elongated opening B⁰, disposed and extending transversely across the door adjacent its bottom edge. These gates just referred to and designated in the drawings as C D are hinged at one end by suitable hinges *c d* to the side stiles of the door and are provided at their other ends with recessed portions forming tongues C' D', having beveled end faces adapted to register with similarly-beveled shoulders *c*² *d*², formed by the cut-away or recessed portion of the respective gates, the whole forming a close-fitting overlapping joint between the ends of said gates when in their closed position. Suitable means are provided for holding these gates locked in their closed position, and for the purpose of illustration I have provided a hasp E, suitably secured by a short hinge-plate *e* to the car-door on one side of said elongated opening B⁰ adjacent the overlapping ends of said gates C D and adapted to extend transversely across the outer gate D and secured at its free end on the opposite side of said opening B⁰ by means of any suitable lock—such, for instance, as the swiveled key F, carried by the door operating in the slot *e*⁰ of the hasp. Although this hasp E is illustrated in the drawings as being secured at the upper side of the elongated opening with the swivel-key on the lower side, it is obvious that the disposition of this hasp may be reversed.

At the upper end of the main body portion of the door B are secured hooks G, adapted to engage in eyelets *g*, secured to the top side beam of the car, although it is obvious that the disposition of these hooks and eyelets may be transposed.

H is a hook pivotally suspended from the ceiling of the car for purposes which are obvious, but will be hereinafter referred to.

In operation when the car is filled the door is in the position illustrated in Figs. 1, 2, and 5. When the outer or sealed door of the car is removed and it is desired to discharge the grain, the hasp E is unclasp and the pressure of the grain in the car against the horizontal gates C D forces the latter open and a constant flow of grain through the elongated opening B⁰ is permitted. While this flow continues the grain close against the door is gradually discharged, leaving a hollow space behind the door slanting upwardly from the opening, and the hinged extension B' falls down-

wardly, as illustrated in Fig. 3. The pressure is now fairly taken off the door, and the whole door may be elevated in any usual way and hung by hooks and eyelets G g to the top of the car.

Although not necessary, I have illustrated means for guiding the lower part of the door. For instance, in Fig. 1 there is shown a bent iron plate I, bolted to the inside face of the car side and having an extension i, forming a channel with the side of the car, in which the lower part of the door is guided. This plate is one of such height that when the door has been elevated to its uppermost position the lower edge of the door will be just above the top of the plate I to permit the inward swing of the door. When the door is in its vertically-suspended position, it will be obvious that, if desired, it may be swung inwardly in a folded position and suspended from the ceiling, being supported at one end by the hooks and eyelets G g and at its other end by the hook H.

Although having thus described the invention and its manner of application and operation, it will be understood that I do not wish to limit myself to the exact details as disclosed; but

What I claim is—

1. The combination with a grain-car door provided with an elongated opening disposed transversely thereof near its bottom edge, of a pair of horizontally-swinging hinged gates, for normally closing said opening, having overlapping ends, means for limiting the inward swing of said gates, and a vertically-disposed hasp hinged to said door on one side of said opening and adapted to extend transversely across the overlapping ends of said gates, and means for securing

the other end of said hasp on the opposite side of said opening.

2. The combination with a grain-car door provided with an elongated opening disposed transversely thereof near its bottom edge, of a pair of horizontally-swinging hinged gates, for normally closing said opening, having overlapping ends, means for limiting the inward swing of said gates, and a vertically-disposed hasp hinged to said door on one side of said opening and adapted to extend transversely across the overlapping ends of said gates, and means for securing the other end of said hasp on the opposite side of said opening, comprising a swiveled key operative in a slot cut in the free end of said hasp.

3. The combination with a grain-door provided with an elongated opening disposed transversely thereof at its bottom edge, of a pair of horizontally-swinging gates for normally closing said opening, hinged at one of their ends to the side stiles of the door and at their other ends, on their front and rear faces respectively, recessed and forming tongues adapted to interlap and make a snug joint, each of the said tongues terminating in beveled faces, means for limiting the inward swing of said gates, and a vertically-disposed hasp hinged to said door on one side of said opening and adapted to extend transversely across the outer tongue of said gates, and means for securing the free end of said hasp on the opposite side of said opening.

In testimony whereof I affix my signature in presence of two witnesses.

XAVIER HUBERT.

Witnesses:

Jos. P. HESS,
H. W. CUPPLES.