G. C. BANTA.

Grain-Door.

No. 213,491. Patented Mar. 25, 1879.

Fig. 1.

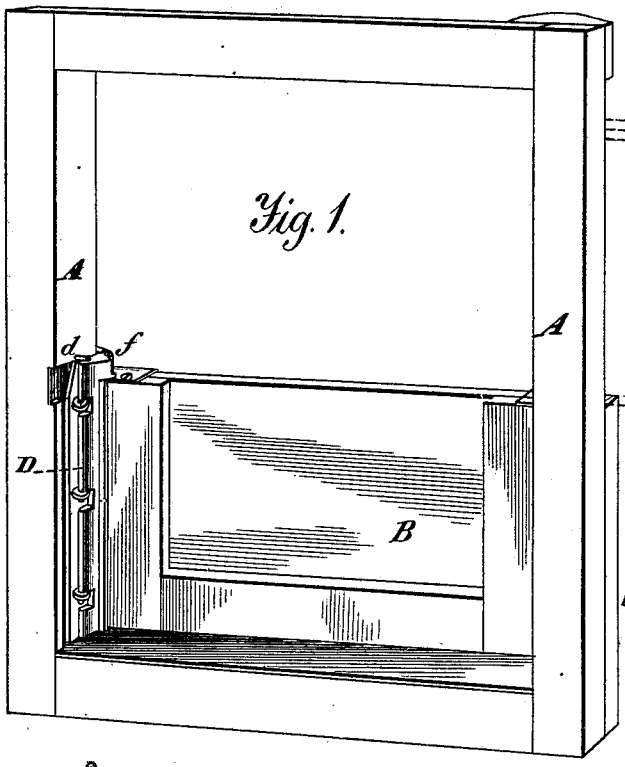

Fig. 3.

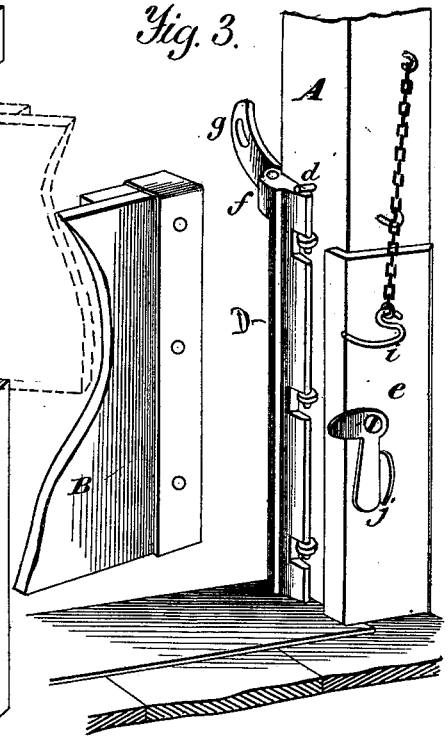

Fig. 2.

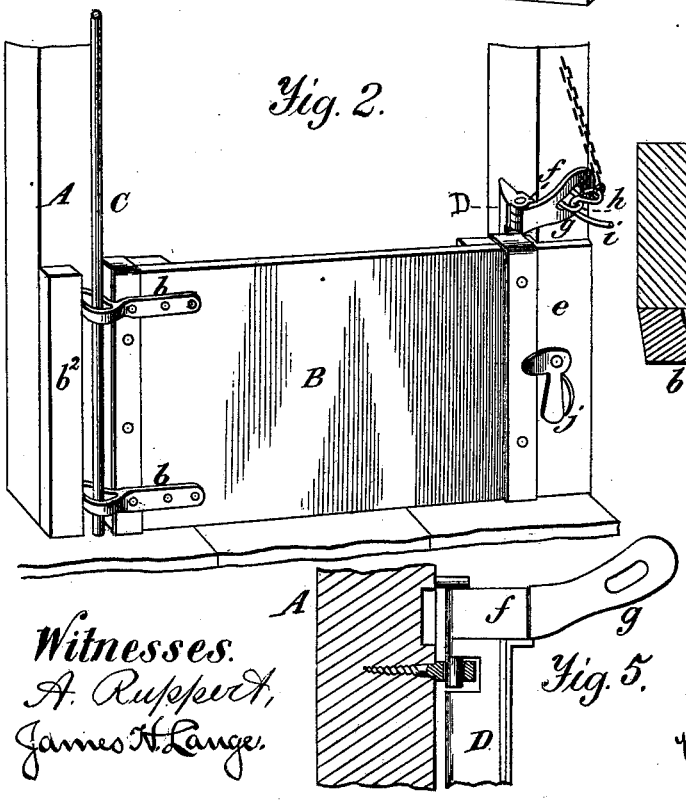

Fig. 4.

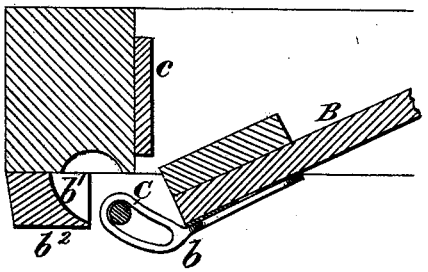

Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE C. BANTA, OF KANSAS CITY, MISSOURI.

IMPROVEMENT IN GRAIN-DOORS.

Specification forming part of Letters Patent No. **213,491**, dated March 25, 1879; application filed January 27, 1879.

To all whom it may concern:

Be it known that I, GEORGE C. BANTA, of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Grain-Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved door for grain or other freight cars, grain-elevators, &c. Fig. 2 is a similar view of the same in a locked position. Fig. 3 is also a similar view thereof with the door standing open, and Figs. 4 and 5 are detail sectional views of the same.

Corresponding parts in the several figures are denoted by like letters.

This invention relates to certain improvements in doors for grain or other freight cars, grain-elevators, &c.; the object of which is to enable the easy and ready opening of the door, to effect the novel locking of the door, to permit of the door having a limited endwise movement to allow it to swing outwardly, and to render the door vertically adjustable, and adapted to be swung inwardly and sustained in an elevated position.

To these ends this invention consists, first, in the detailed construction of the fastening; secondly, in connecting one end of the door or gate to a rod by oblong or elongated eyes; and, thirdly, in so adjusting the door or gate in position as to effect the elevating and holding of the same up out of the way when opened, substantially as hereinafter more fully set forth.

In the accompanying drawings, A refers to the door-frame of a grain or freight car or of a grain-elevator, as the case may be. B is a door or gate, such as is usually used upon the inside of the opening of the door proper or outside door, to remove the pressure of the grain or other like merchandise from the said outside door, and to permit of convenience in reaching the grain in removing the latter.

One end of the door or gate B is provided with oblong or elongated eyes *b b*, preferably extended inwardly at about an acute angle to said end of door or gate, as clearly seen in Figs. 2 and 4, the object of which is to cause them to enter mortises or recesses b^1 b^1, Fig. 4, made in the jamb, and a strip, b^2, fastened thereto, when the door or gate is closed, to assist in holding the latter down in place. These eyes receive a rod, C, fastened to or in the floor and ceiling, or upper part of the car or elevator, as the case may be, for the purpose of hanging the door or gate in position, and for enabling the same to be elevated and swung around against the inside of the car or elevator, and rested upon the strip b^2, out of the way, while the car or elevator is being unloaded. The primary object of these eyes is to enable the gate or door to have a limited endwise movement, for the purpose of freeing it from the cleat *c* in opening the door, and to permit of the opening of the door outwardly.

D is the fastening, or an upright bar pivoted or hung to one side of the frame A at the forward end of the door or gate B, as seen in Figs. 1 and 3. A pin or projection, *d*, projecting from the frame A and directly in contact with the upper end of the fastening D, holds the latter upon its pivots as against upward pressure. This fastening is beveled upon its front surface or edge, and is so hung in place that when said edge is swung around toward the door the latter will rest against said edge, and stand flush with the strip or bar *e* upon the inside of the car or elevator and fastened to the frame A. The strip or bar *e*, which meets the front edge of the door or gate B, is extended sufficiently beyond the inside surface of the frame A to break joints with the face of the fastening D, and thus prevent the escape of grain or other article at that point. The upper end of the fastening or bar D is provided with a right-angled projection or arm, *f*, the function of which is to hold the gate or door down from rising when pressed upon by the grain or contents of the car or elevator, as is apparent from Figs. 1 and 2. To the projection or arm *f* is hinged a hasp, *g*, adapted, when the fastening is brought against the door B, to be connected or pinned to a staple or eye, *h*, by the peculiarly-shaped pin *i*, which staple or eye is fastened to the inside of the door-frame, car, or elevator.

j is a button affixed to the inside of the door-frame or car, and adapted to swing down by gravity and secure the door or gate from swinging or opening inwardly.

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

1. The fastening D, hung or pivoted to one side of the door-frame, and provided at its upper end with a projection or arm, *f*, having a hinged hasp, *g*, substantially as and for the purpose specified.

2. The combination, with the fastening D, hung to the door-frame, and having a right-angled projection, *f*, provided with a hinged hasp, *g*, of the staple or eye *h* and pin *i*, substantially as and for the purpose set forth.

3. The combination of the door or gate B, frame A, button *j*, fastening D, having right-angled projection *f*, provided with a hinged hasp, *g*, staple or eye *h*, and pin *i*, substantially as and for the purpose set forth.

4. The door or gate B, having the elongated eyes or loops *b b*, in combination with the rod C and door-frame, or its equivalent, substantially as and for the purpose described.

5. The door or gate B, having the elongated eyes *b b*, in combination with the rod C and frame A, with one of its uprights and a strip fastened thereto, provided with mortises or recesses b^1 b^1, substantially as and for the purpose explained.

6. The door or gate B, frame A, elongated eyes *b*, rod C, button *j*, fastening D, having the right-angled arm or projection *f*, provided with the hinged hasp *g*, staple or eye *h*, and pin *i*, in combination, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

GEORGE C. BANTA.

Witnesses:
J. B. F. CATES,
GEO. H. ENGLISH.