No. 886,090. PATENTED APR. 28, 1908.

R. D. STRYKER.

GRAIN DOOR.

APPLICATION FILED SEPT. 30, 1907.

Fig. 6.

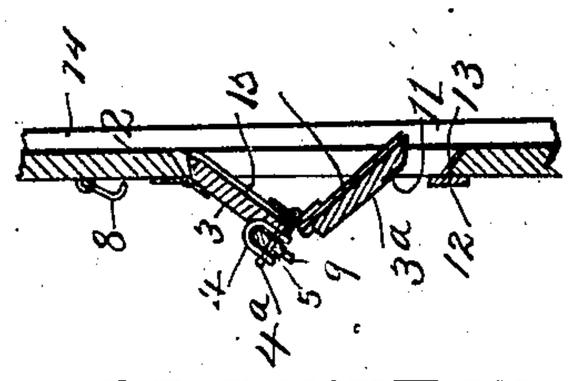


Fig. 5.

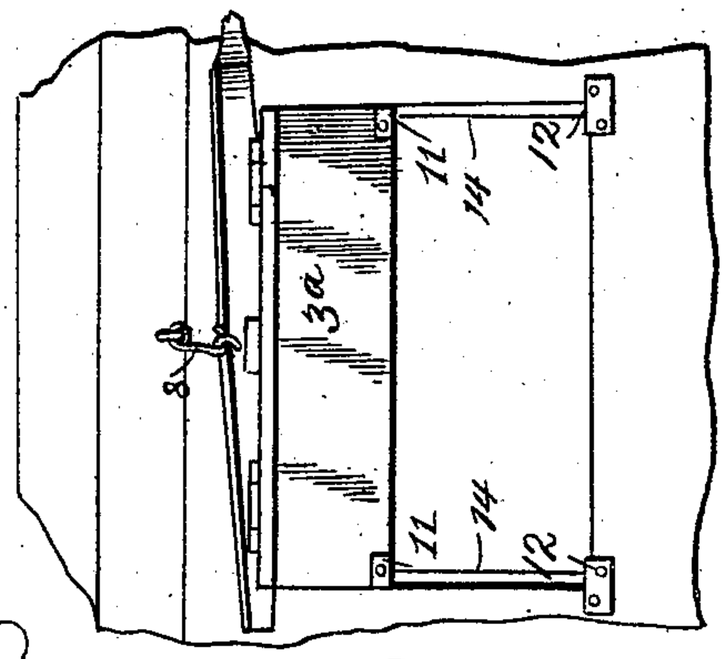


Fig. 2

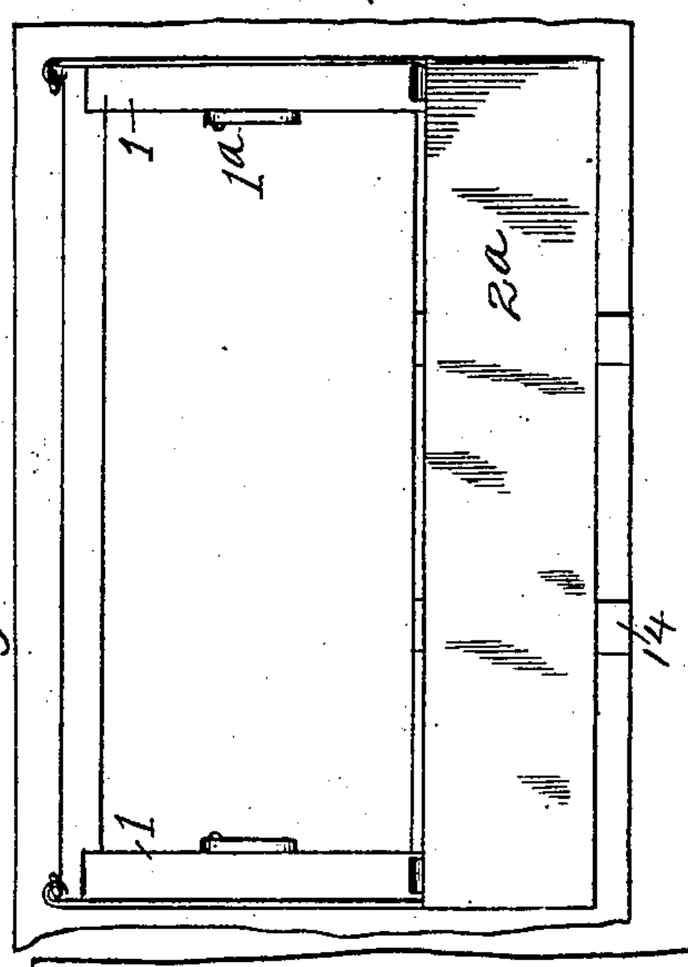
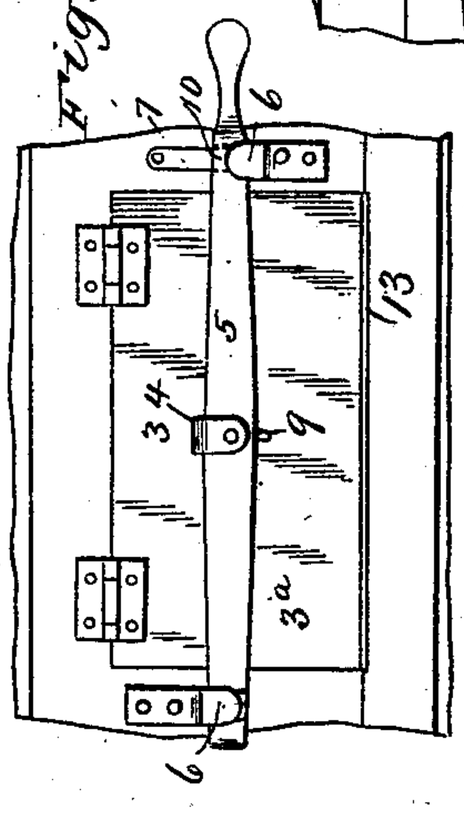


Fig. 3



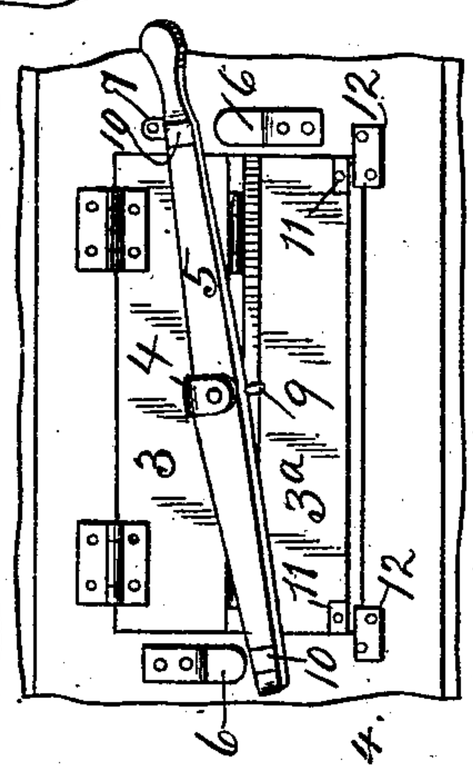
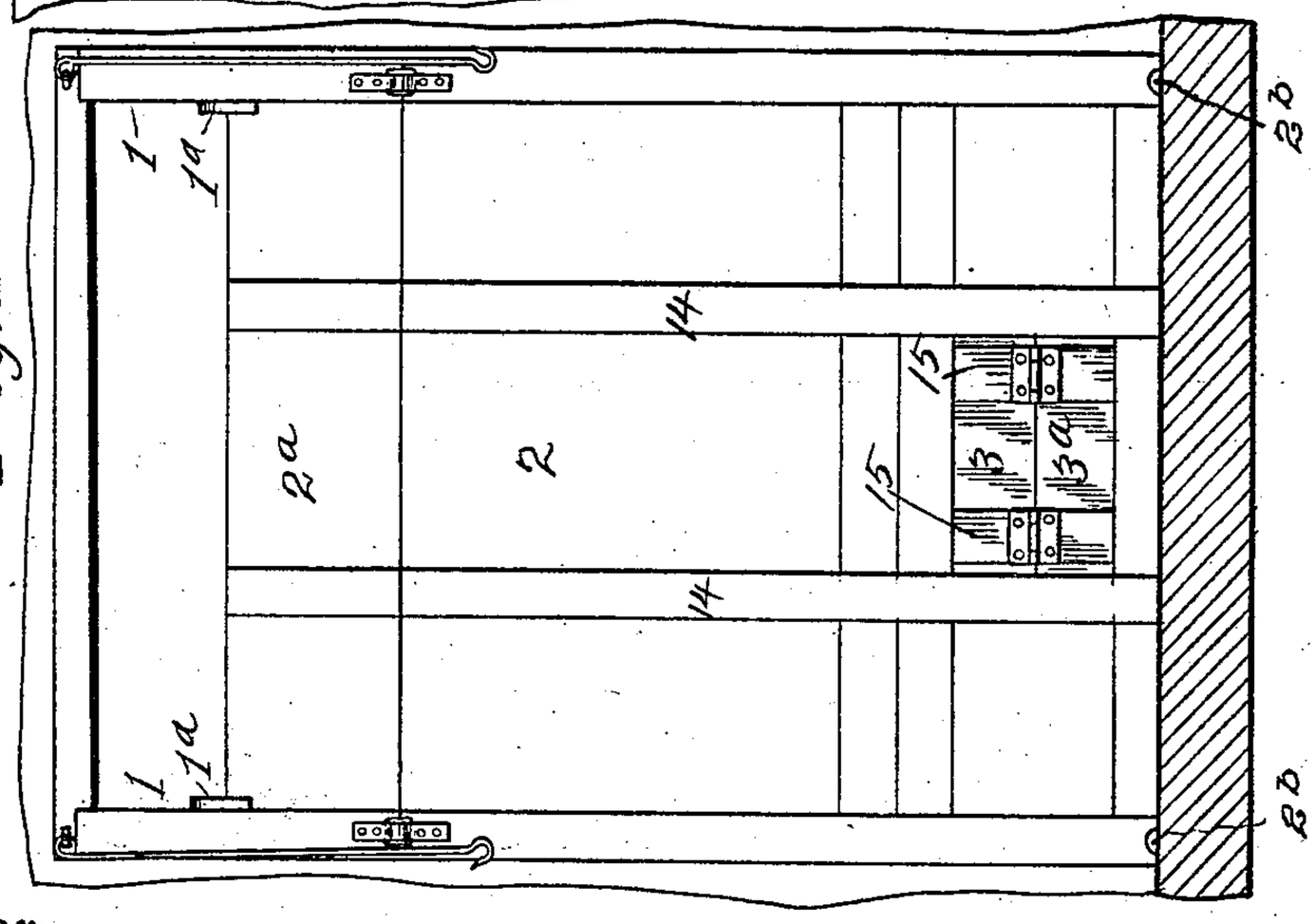


Fig. 4.

Fig. 1



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT D. STRYKER, OF HURON, OHIO.

GRAIN-DOOR.

No. 886,090. Specification of Letters Patent. Patented April 28, 1908.

Application filed September 30, 1907. Serial No. 395,282.

To all whom it may concern:

Be it known that I, ROBERT D. STRYKER, citizen of the United States, residing at Huron, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Grain-Doors, of which the following is a specification.

This invention comprehends certain new and useful improvements in grain doors for railway cars and for other uses, and the invention has for its object an improved construction of door of this character with an auxiliary or supplemental door hinged to the main door and designed, when opened, to form or produce an opening in the main door through which the grain is first allowed to run out, prior to enlarging the opening by the removal of the main door.

With this and other objects in view as will more fully appear as the description proceeds the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a rear view of a grain door embodying the improvements of my invention. Fig. 2 is a similar view with the upper section folded back. Figs. 3 and 4 are fragmentary front views illustrating the supplemental door in closed and partially open positions, respectively. Fig. 5 is a similar view with the supplemental door fully open. Fig. 6 is a transverse sectional view.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing, the numeral 1 designates the main jambs of a door way for a grain car or the like, and 2 the main grain door which is provided with the usual hinged section 2^a adapted to fold back over the main section and arranged to be held in raised position by latches 1^a or similar fastening devices secured to the jambs 1. The main door 2 may be securely held in position by means of latches 2^b of any desired construction secured to the floor of the car and engaging the main door at the lower corners thereof, so as to hold the main door against the jambs. The main door may also be provided with any desired arrangement of parts so that it may be hung in the top of the car when not in use.

The main door 2 is provided, preferably near or at its bottom, with an opening of any desired size and proportions, said opening being closed by a supplemental door consisting of upper and lower hinged sections 3 and 3^a, preferably of equal size. The upper section 3 is hinged at its upper edge to the main door 2, and is mounted to swing outwardly and upwardly, while the lower section 3^a is hinged to the upper section so that such lower section will swing inwardly and fold against the upper section when the supplemental door is opened.

In order to securely hold the door in closed position and at the same time to form a brace or reinforce for the said supplemental door, I provide a band 4 which is secured in a countersunk position to the section 3, preferably at the normally lower edge thereof and provided with a section at the back of the supplemental door, to secure the pivot bolt 4^a securely in place, and a latch bar 5 of wood or metal is pivoted intermediate of its ends on the pivot bolt 4^a flush with the supplemental door. This latch bar 5 is formed at one end with a handle and is designed to be swung into locking engagement with the angular keepers 6 that are secured to opposite sides of the supplemental doorway in the main door 2 and which face oppositely as shown.

7 designates a spring catch which is designed to snap over the latch bar 5 when the latter is in locking position and which may be depressed into a recess in the main door whenever it is desired to swing the latch bar to a release position.

8 designates a pivoted hook which is secured to the main door above the supplemental door and which is designed for engagement with a screw eye or other loop 9 that in the present instance is secured to the latch bar 5 so as to hold the supplemental door in open position.

To protect the parts from wear, I provide the latch bar 5 at its ends if the bar is made of wood with preferably metallic plates 10 designed to receive the wear of the keepers 6 and also provide the lower corners of the supplemental door with wear plates 11 designed to bear against the complemental plates 12 which are secured to the lower corners of the supplemental doorway and that are designed to project slightly into the frame or doorway

of the supplemental door and reinforce the same against pressure in an outward direction. Preferably the lower edge of the supplemental doorway is covered with a sheath 13 of metal and said edge is preferably beveled correspondingly to the beveled lower edge of the supplemental door. The upper edge of the section 3 is also beveled, as best seen in Fig. 6 so as to prevent the possibility of any leakage through the cracks while in transit. Also, as best seen in this view, the meeting edges of the sections 3 and 3[a] are preferably rabbeted so as to insure a tight joint when closed. Vertically extending battens 14 are attached to the rear face of the main door and project slightly into the supplemental doorway so as to form jambs for the supplemental door. The cleats 15 of the supplemental door are designed to bear against said jambs, said bearing relation of the parts in connection with the beveled edges of the supplemental door and doorway insuring a tight jointing and sealing of the parts when the supplemental door is closed.

From the foregoing description in connection with the accompanying drawing it will be seen that I have provided a very simple, durable and efficient construction of grain door for grain cars and the like, which is supplied with a supplemental door so that a portion of the grain may be permitted to run out to relieve the pressure of the entire body of grain within the car, preparatory to opening the main door, said supplemental door being composed of comparatively few and simple parts that may be cheaply constructed and easily assembled and that are reinforced by parts of the main door in a manner to secure a rigid structure.

Having thus described the invention, what is claimed as new is:

A main grain door provided with an opening, a supplemental door adapted to close said opening and consisting of an upper and a lower section, the upper section being hinged at its upper edge to the main door and arranged to swing outwardly therefrom and the lower section being hinged to the upper section and adapted to fold inwardly upon the upper section and to extend in closed position back of the extremity of the lower edge of the opening, and a latch bar pivoted intermediate of its ends on the supplemental door at the meeting edges of the hinged sections thereof, the main door being provided with keepers for engagement by said latch bar.

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

ROBERT D. STRYKER. [L. S.]

Witnesses:

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PHILIP B. BANGEL.