

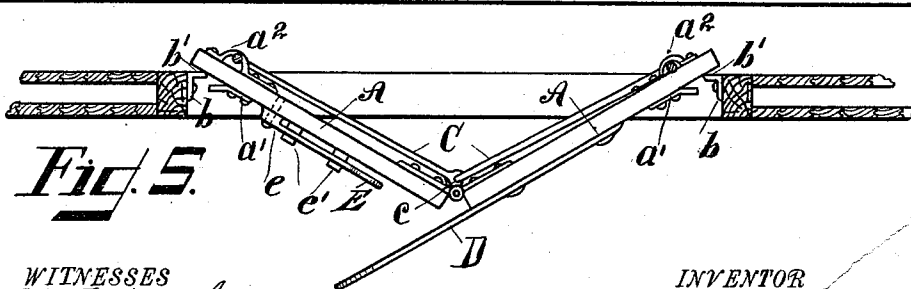
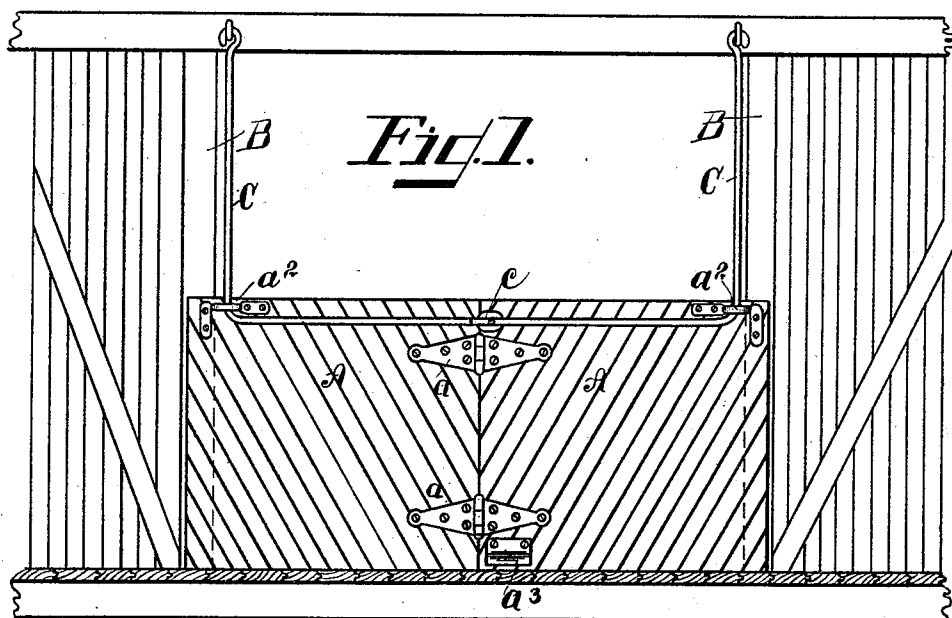
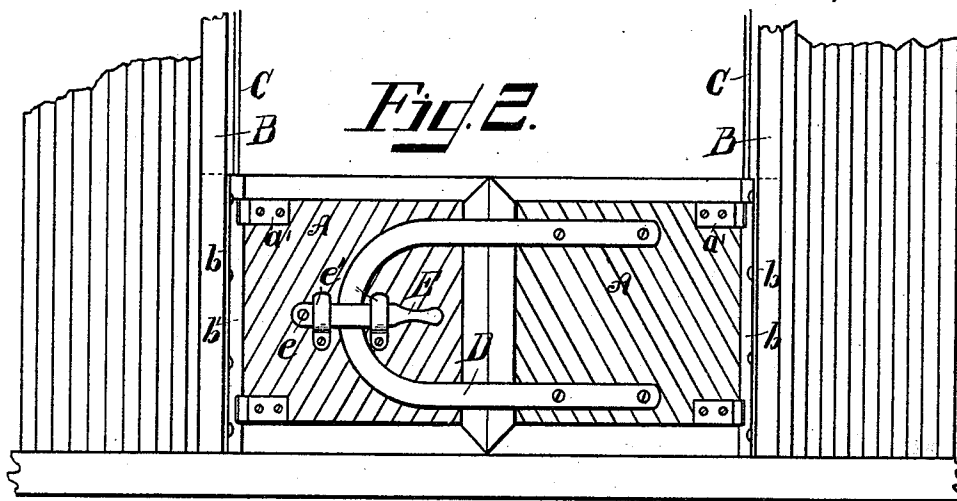
(No Model.)

2 Sheets—Sheet 1.

W. F. LYON.
GRAIN DOOR FOR CARS.

No. 492,926.

Patented Mar. 7, 1893.



WITNESSES
H. Clough.
W. S. Bradford

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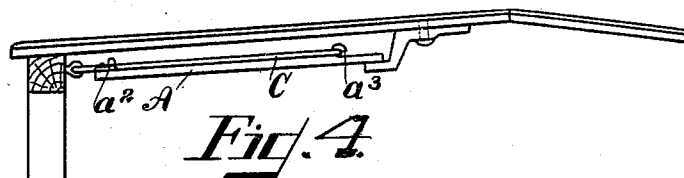
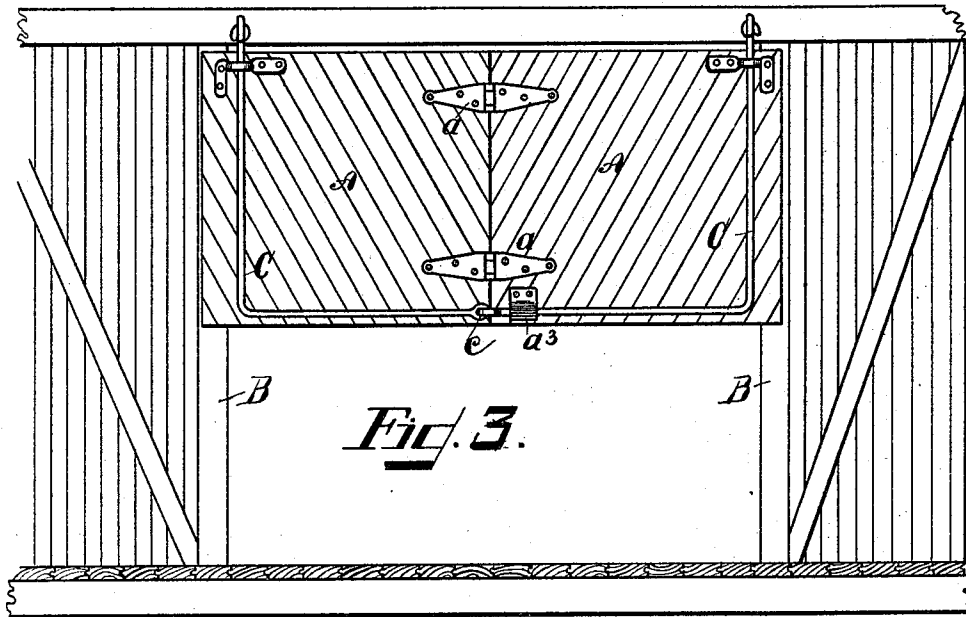
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UNITED STATES PATENT OFFICE.

WILLIAM F. LYON, OF DETROIT, MICHIGAN.

GRAIN-DOOR FOR CARS.

SPECIFICATION forming part of Letters Patent No. 492,926, dated March 7, 1893.

Application filed February 12, 1892. Serial No. 421,282. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. LYON, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Grain-Doors for Cars; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to grain doors for cars, and its object is to provide an improved grain door that is adapted to break in the center, to be elevated in the top of the car, and to be held in position there when not in use; and it consists in a peculiar arrangement and combination of the various parts.

In the drawings, Figure 1 is an inside view of the car door when down in position, showing the rods on which to slide the door upward and the means for holding it in its elevated position. Fig. 2 is a view from the outside. Fig. 3 is a view showing the door in its elevated position. Fig. 4 is a view showing the door elevated and supported in the top of the car. Fig. 5 is a plan view of the door opening at the center, preparatory to its elevation.

In the drawings, A, A, are the sections of the door, and *a*, the hinges attaching these sections together. B, B, are the side frames of the car, on which the door is supported. *b*, *b*, are castings screwed to the side frames, and provided with the angular portions, *b'*. These angular portions are embraced by the irons *a'*, bolted to the door, so that when the sections of the door are in the position parallel to one another, the door is held rigidly in position. *a*³, *a*², are metal loops attached to the upper corners of the sections of the door, and embracing the rods C, C. These rods are bent at right angles, and pivoted together at *c*, at the center of the door. The rods C, C, are pivoted to the frame of the car above the door. The whole door may be slid upward on these rods.

As shown in Fig. 2, to one section of the door is riveted the metal loop, D, extending over onto the opposite section, and held and locked against that section by the latch, E,

pivoted at *e*, and engaging with the holding lugs *e'* on the door. When the loop D is locked in position, the sections of the door form one solid door. When it is desired to break the door in the center, the latch E is raised and the loop D permitted to swing away. While I employ in the construction herein shown an improved latch, E, for holding the loop D in position, the loop itself, or its equivalent, is shown in my prior application, and the operation of the door itself, so far as breaking in the center and opening, is practically the same as shown in the said application. On the bottom of the door, I provide the catch, *a*³, to receive the end of one of the rods C, when the door is elevated, and to hold the door in the elevated position. Any suitable means may be employed, attached to the top of the car to receive and hold the door in its position when swung upward against the top of the car.

The combination of the door adapted to break, or a door provided with a panel and the rods on which to elevate it, is one that has great utility; and, in addition to the separate advantages of the door and the rod for elevating it, such a combination has the great advantage of relieving the door from the pressure of grain, and thus allowing it to be elevated easily and conveniently.

What I claim is—

1. A grain door, consisting of sections A, A, hinged together, in combination with the rods C, C, pivoted at point of junction to correspond with the pivoting of the sections of the door, the lugs *a'*, *a'*, adapted to engage the corresponding lugs in the jambs of the door frame, and means for rigidly holding the said sections firmly together when said door is closed and the lugs *a'*, *a'*, are in engagement with the jamb, substantially as described.

2. A grain car door, consisting of sections A, A, in combination with rods C, C, said rods being pivoted together at the center of the door, loops whereby said rods engage with the upper edge of said door and by means of which said door is adapted to slide upon said rods to the top of the car while partially folded, substantially as described.

3. A grain car door, consisting of sections A, A, in combination with rods C, C, said

rods being pivoted together at the center of the door, loops whereby said rods engage with the upper edge of said door and by means of which said door is adapted to slide upon said rods
5 to the top of the car while partially folded, and means whereby said door and rods may be swung up and retained under the roof of the car, substantially as described.

4. In combination with a car, a door constructed of two sections hinged together and
10 adapted to open outwardly, means for retaining said sections rigidly in position and in en-

gagement with the door jambs, said door being supported by a hanging frame pivoted at the top of the car, said frame being adapted, 15 at its lower engagement with the door, to fold with the door, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM F. LYON.

Witnesses:

CHARLES H. FISK,
MARION A. REEVE.