C. R. WATSON.
Grain-Car Door.

No. 203,226. Patented April 30, 1878.

Fig. 1.

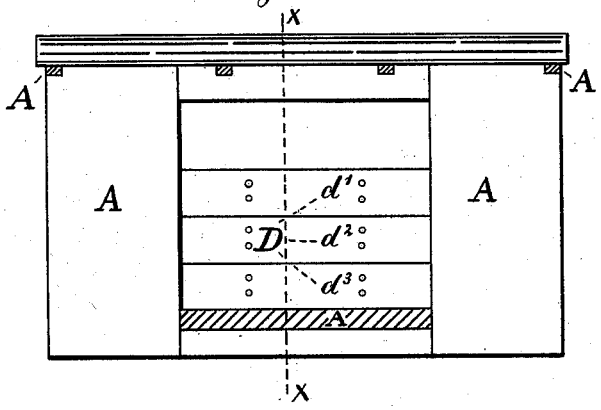


Fig 2.

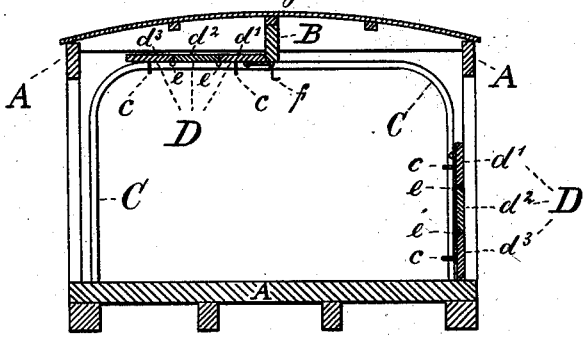
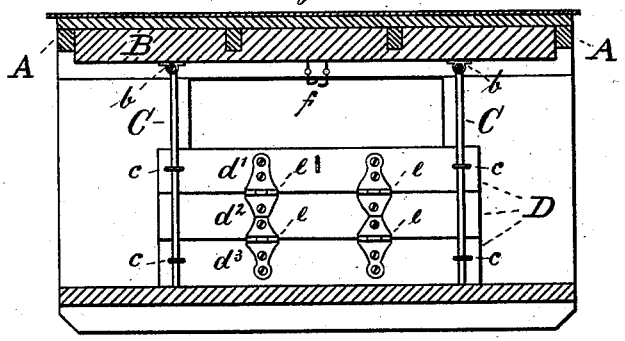


Fig. 3.



WITNESSES.

Milton R. McDonald

James B. Lizius

INVENTOR.

Chauncey R Watson

UNITED STATES PATENT OFFICE.

CHAUNCEY R. WATSON, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN GRAIN-CAR DOORS.

Specification forming part of Letters Patent No. **203,226**, dated April 30, 1878; application filed February 23, 1878.

To all whom it may concern:

Be it known that I, CHAUNCEY R. WATSON, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Grain-Doors; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a side elevation of a car, showing the grain-door in position when in use. Fig. 2 represents a transverse vertical section taken through the line *x x* of Fig. 1, showing one of the grain-doors in position when in use, and the opposite door at the top of the car, where it is carried to be out of the way. Fig. 3 is a longitudinal vertical section, showing the door in position and looking at the inside thereof.

Similar letters of reference in the several figures indicate like parts.

This invention relates to improvements in the class of grain-doors for cars; and the invention consists in the combination, with a car, of an inside vertically-sliding flexible or yielding door and guiding-rods, whereby the door, when not in use, may be carried up and placed on the horizontal portion of said guiding-rods, so as to be out of the way, all as substantially hereinafter described.

Referring to the accompanying drawings, A represents the body of a car, having guiding-rods C at either side of the doorway, fastened at their lower ends in the floor of the car, which rods extend upwardly, and parallel with the inner frame of the car, to within a short distance of its top, where they are curved and suitably braced to the central roof-timber B. D represents the grain-door, constructed of longitudinal sectional pieces d^1 d^2 d^3, hinged together, as shown at *e e*. The upper and lower sections thereof, d^1 and d^3, are provided with staples *c c*, which encompass the guiding-rods C, and serve to direct the movement of the doors when it is desired to place them out of the way at the top of the car. The guiding-rods, at their lower ends may be, provided with screw-threads, which work into metal plates provided with female threads, which latter, when affixed to the floor of the car, serve to hold the rods firmly thereto and in proper position to admit of the desired movement of the grain-doors. The grain-doors, when at the top of the car, may be securely held there out of the way by a hook, *f*, locking into a staple on the upper section d^1.

The great desideratum to be obtained in the use of a grain-door is that, while it may serve its proper purpose when the car is loaded with grain, it may with facility be moved out of the way when the car is empty or loaded with other freight without being detached from the car, whereby its loss or injury is rendered improbable, and it is always in such position that its use as a grain-door may be resorted to whenever needed. The bottom section d^3 of the door may be shod with an iron plate, to prevent injury thereto when being raised to allow of the egress of the grain.

I am aware that a car-door of similar construction, sliding in grooved ways, is old, and such I do not desire to claim, broadly, as my invention. Said door, however, constitutes an outside or closing car-door proper, and the car could not be loaded or used for bulk grain, unless the grain is put in from the roof of the car, as the door completely closes the doorway or opening.

Furthermore, said door is obviously objectionable for other reasons, viz: the grain will lodge or get in the grooved ways in which the door slides, binding or locking it so as to prevent its being raised; and also, being an outside door, the grain pressing against it would force or bulge the door outward, producing a similar effect as the grain lodging in the grooved ways; whereas my door, being an inside door, and not reaching the top of the doorway or opening, admits an open space at the top for loading in the grain, with an ordinary outside door, to be locked or otherwise secured after the car is loaded. By also employing guiding-rods for the door to slide upon, and being an inside door, the defects incident to the grooved ways and an outside door before referred to are entirely obviated.

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

The combination, with a car, of an inside flexible or yielding sliding grain-door, having

staples *c*, and the vertical and horizontal bent guiding-rods C, extending from the floor of the car upwardly and under the roof of the car, as herein shown and described, whereby said door, when not in use, can be carried up on the horizontal portions of said guiding-rods out of the way, substantially as specified.

In testimony whereof I have hereunto set my hand this 18th day of February, 1878.

CHAUNCEY R. WATSON.

Witnesses:
EDMOND VAILLANT,
WILL. M. FLOYD.