

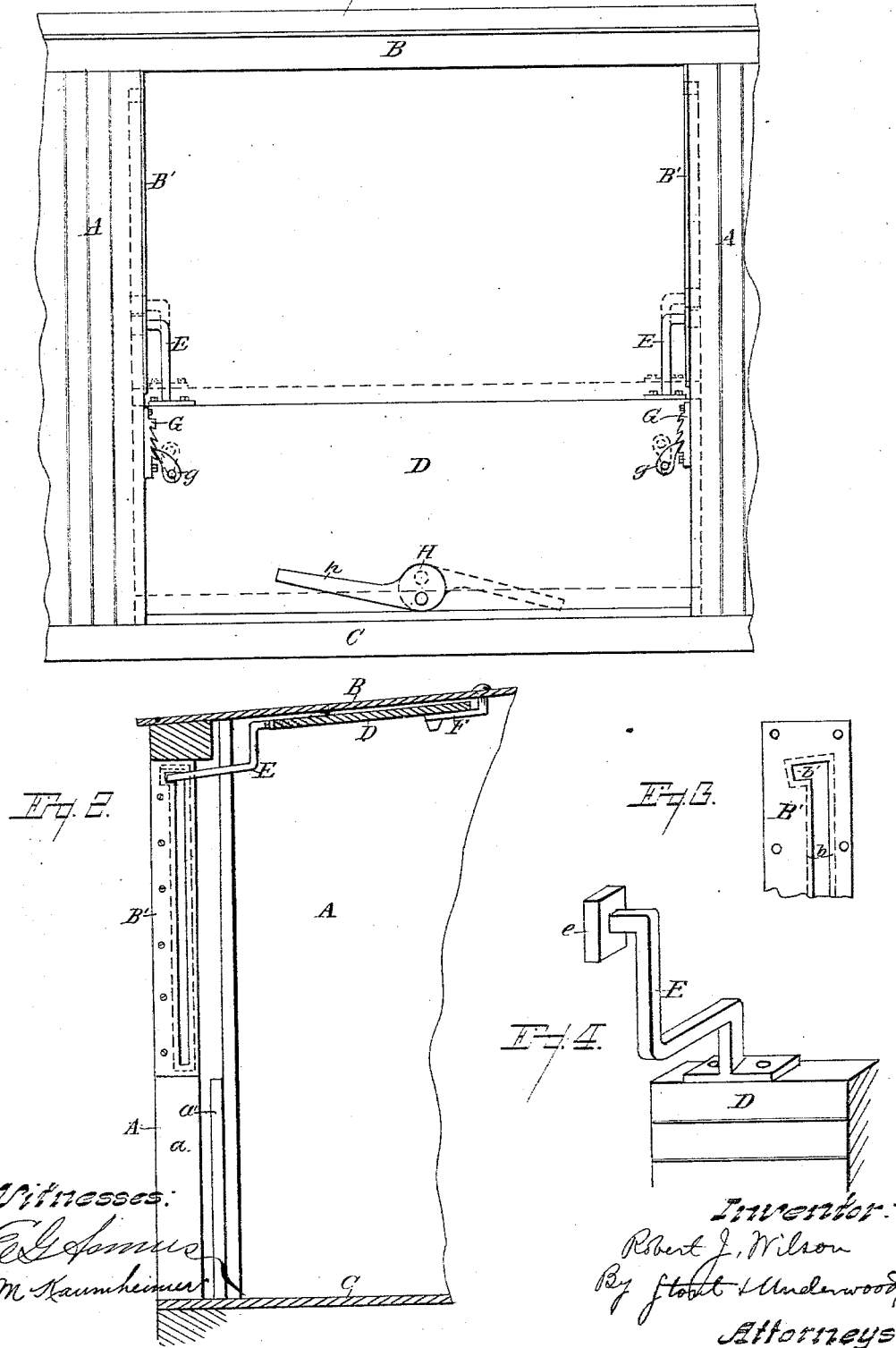
(No Model.)

R. J. WILSON.

GRAIN CAR DOOR.

No. 303,960.

Patented Aug. 19, 1884.



Witnesses:

E. J. Thomas
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Inventor:

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UNITED STATES PATENT OFFICE.

ROBERT J. WILSON, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-FIFTH
TO WM. J. RYAN, OF SAME PLACE.

GRAIN-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 303,960, dated August 19, 1884.

Application filed December 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. WILSON, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Grain-Car Doors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to grain-car doors, and will be fully described hereinafter.

In the drawings, Figure 1 is an elevation of my improved device. Fig. 2 is a transverse section thereof, and Figs. 3 and 4 are details.

A represents the sides of the car; B, the roof, and C the bottom, of the car.

D is the door, which is adapted to slide vertically between the cleats *a a'*, the latter of which extends up only the height of the door, while the former extends the full height of the side of the car, and are provided with the grooves *b*, partly covered by the slotted metallic plates *B'*, both the grooves and the slots in the plates having the elbow or angle *b'* at the top.

E E are rods rising from the top of the door D, near each end, bent first outwardly, then vertically, and then inwardly at right angles, so as to enter the grooves *b* in the cleats *a* and plates *B'*, and then the said rods end in oblong heads, *e*. The slots in the plates *B'* are of less width than the grooves *b* in the cleats; and so, when the rods are in place and the plates bolted or otherwise secured against the cleats, the heads of the rods are secured against the possibility of coming out, and at the same time have free vertical play in the grooves. Thus it will be seen that the doors can be raised up until they are free from the inner cleats, *a'*, when the heads *e* of the rods will be at the top of the grooves *b*, and they can then be pushed into the angles *b'* of the grooves, and the door will swing upward and inward upon these pivotal points to the car-roof, and be there secured by the hooks F F, which are simply angle-pieces pivoted in the car-roof—one at each corner of the door—and which can be turned under the said door to secure it to the roof, or turned away from it

to free it when it is to be let down. At each side of the door, near its top, there are secured to the cleats *a a'* the racks G G, and to the front of the door are pivoted the locking-catches *g g*, adapted to lock the door and prevent it from rising accidentally, but which can be freely released by the hand when it is desired to elevate the said door, and at the center of the front of the door, near the bottom, there is pivoted the cam H, having lever *h* integral therewith, which can be readily turned by the foot of the operator from the position shown in full lines to the position shown in dotted lines in Fig. 1, and thereby serve to raise the door a few inches from the car-bottom, which will enable it to be easily raised by hand the rest of the way to the top of the car, as described; but without such start it has been difficult to raise grain-car doors, and heretofore they have been started by crow-bars, trucks, &c., which greatly injures the door and in time destroys its usefulness, permitting the escape of grain through the holes thus made, which is all entirely avoided by my improvement.

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

1. The combination of the doorways having the racks G G secured thereto, with the door D, provided with the locking-catches *g g*, adapted to engage with the said racks, and thereby prevent the door from rising, substantially as set forth.

2. The combination of the door D with the cam H, pivoted near the bottom of the front of said door, and having lever *h* integral with the cam, whereby the same may be operated by foot, and the door raised thereby from the bottom of the car, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ROBERT J. WILSON.

Witnesses:

STANLEY S. STOUT,
H. G. UNDERWOOD.