# G. F. DAVID & C. WILDING.

## Grain-Car Door.

No. 167,228. Patented Aug. 31, 1875.

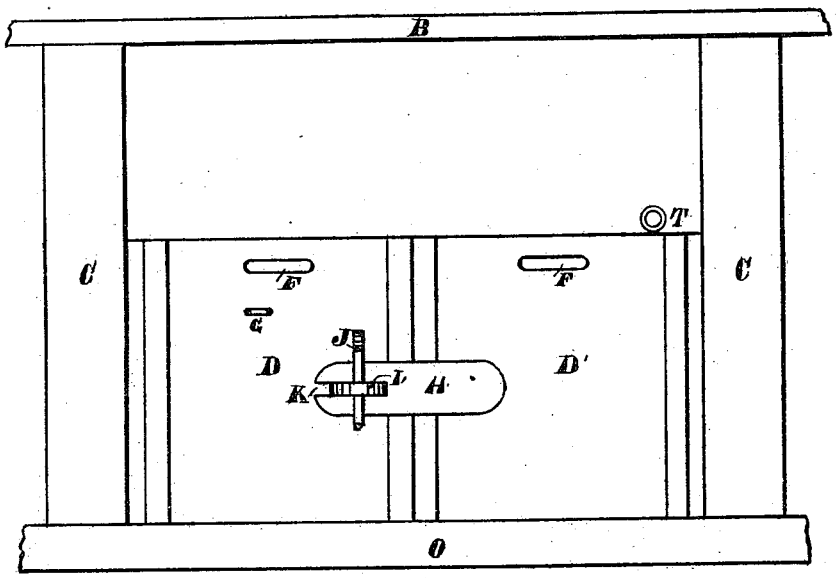



Fig 1

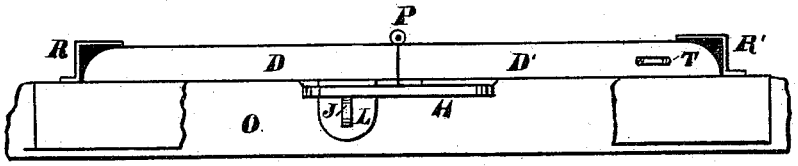
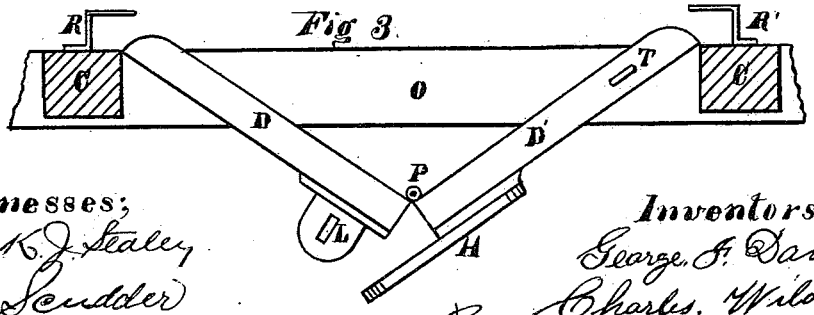



Fig 2


Fig 4.

Fig 3.

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# UNITED STATES PATENT OFFICE.

GEORGE F. DAVID AND CHARLES WILDING, OF INDIANAPOLIS, INDIANA.

## IMPROVEMENT IN GRAIN-CAR DOORS.

Specification forming part of Letters Patent No. **167,228**, dated August 31, 1875; application filed May 19, 1875.

*To all whom it may concern:*

Be it known that we, GEORGE F. DAVID and CHARLES WILDING, of Indianapolis, county of Marion and State of Indiana, have invented a new and useful Mode of Removing Grain-Doors from Grain-Cars, to accomplish which we have arranged a double door, hinged on the inside, which is forced outward, when unfastened, by the weight and pressure of the grain that is inside of the car.

We are aware that double doors hinged at the middle, and the outer edges secured in grooves or pieces attached to the door-frame, have been used before. Such is the case in the patent to H. Stahlnecker, January 23, 1875; but he makes a specialty of describing his invention as not opening outward, but inward, and calls special attention to the fact that the grain must press against the inside of the double doors, and thus hold them tight together.

Our invention is for a different purpose, and the results produced by our invention are entirely different.

The following is a description of our invention, which to make complete we are necessitated to employ some old devices in combination, as shown in our claim.

Figure 1 represents a front view of the double doors inserted in the door-frame of a grain-car, on the inside of which are arranged hinges on the vertical joint in the center, and on the outside are arranged the fastenings, all of which illustrates our invention. Fig. 2 is a top view of the same, the doors being closed and fastened. Fig. 3 is a top view of the same as unfastened, and the grain forcing them outward from the car.

In the drawings, the car-door is represented between the sill O, roof B, and side posts C C. In this opening we arrange the double doors D D′, hinged together at the vertical joint in the center by the hinges P, which must be on the inside of the car, not on the outside. The outer ends of the doors D D′, that enter the grooves or sockets R R′, are rounded on the inside, so as to allow the doors to swing outward when unfastened, and not come in contact with the inside edges of the grooves or sockets R R′. On the front side of one of the doors, as D′, is securely bolted a bar, H. The end that passes by the vertical joint in the center of the doors is provided with a slot, K, which fits over the projecting key-holder L. This key-holder is also securely bolted to the opposite half of the door, as at D, and has a proper hole to receive the key J in the projecting part.

These two doors, when closed and secured by the key J, are held wedged, as in Figs. 1 and 2. Here it will be seen that the key-holder L has been inserted in the slot K of the bar H, and the key J in its seat on the outside of the doors D D′. The grain can then be loaded, and the natural tendency is to force the doors D D′ open, instead of making them tighter, as in the patent to Stahlnecker, and when it becomes necessary to unload the grain, as into the pits of an elevator, all that is necessary is to remove the key J, and the pressure of grain inside of the car forces the doors D D′ away from the car outwardly, as in Fig. 3, and the grain runs out, thus relieving the men in charge of loading or unloading the cars of the necessity of prying out the doors, as is the habit with the ordinary doors used for this purpose. The key J is secured to the double doors by a chain, and the double doors are also secured to the car in the same manner, to prevent them from being lost.

The advantage of a double door opening outwardly from the car can readily be seen over all doors that have to be pried up, or forced inward against the grain.

We do not broadly claim the double doors hinged at the vertical joint on the outside, and grooves or sockets in the posts at the sides of the door.

What we claim as new, and wish to secure by Letters Patent, is—

In combination with a grain-car, a door constructed in two equal halves, hinged together on the inside, so as to allow the doors to open outwardly, and secured together, when inserted in the door-frame, by a bar, H, having a slot, K, at one end, to receive the key-holder L and key J, constructed and arranged to operate substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

GEORGE F. DAVID.
CHARLES WILDING.

Witnesses:
FRANK J. STALEY,
E. D. SCUDDER.