

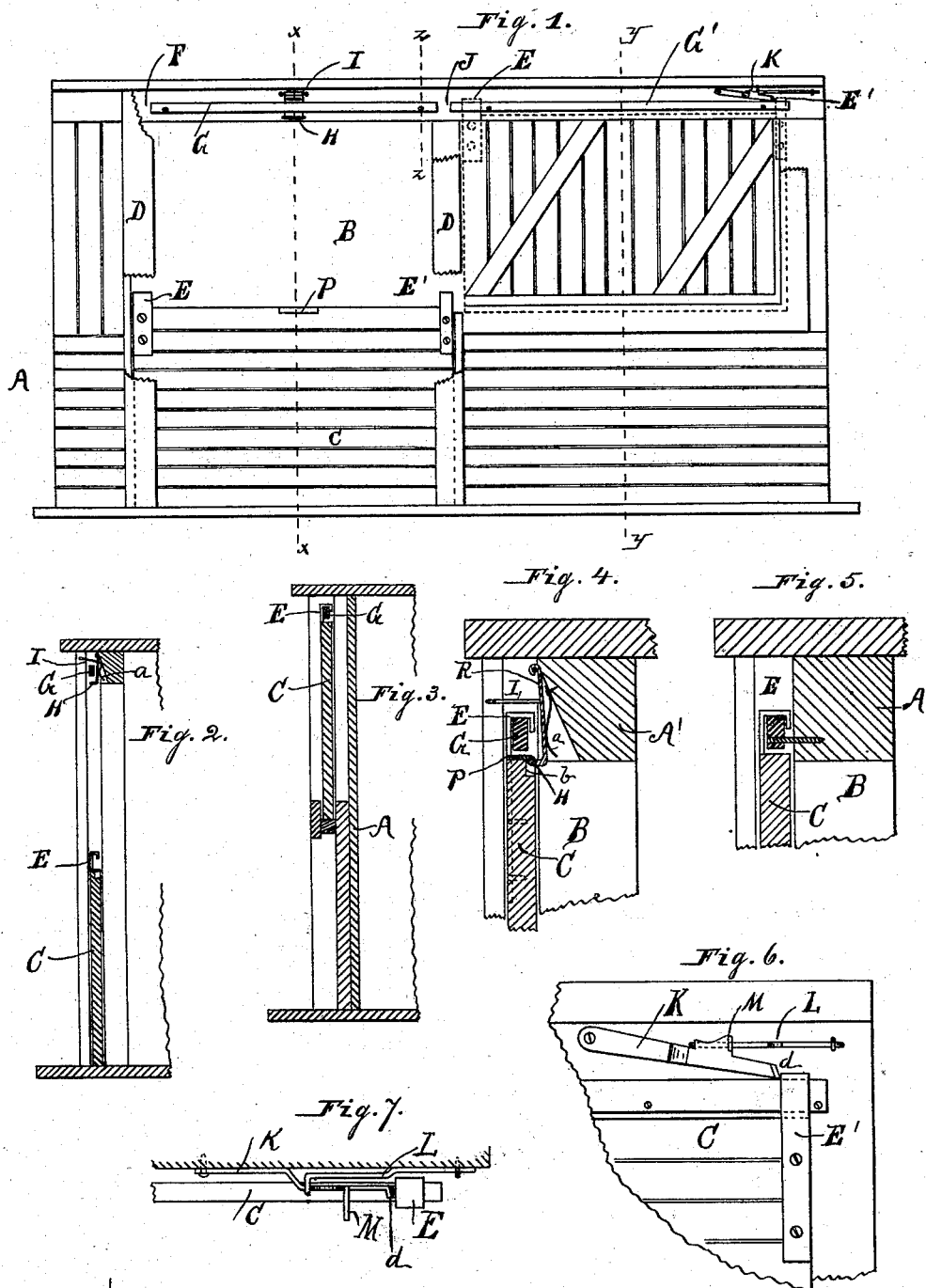
(No Model.)

G. G. TANNER.

GRAIN CAR DOOR.

No. 261,883.

Patented Aug. 1, 1882.



WITNESSES:
George H. Remell
Charles B. Hitchcock

INVENTOR:
George F. Tanner
Per. E. C. Shrink
his Attorney

UNITED STATES PATENT OFFICE.

GEORGE G. TANNER, OF INDIANAPOLIS, INDIANA.

GRAIN-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 261,883, dated August 1, 1882.

Application filed August 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. TANNER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Grain-Car Doors, of which the following is a specification.

My invention relates to improvements in grain-car doors and mode of operating them; and the objects of my invention are, first, to provide the grain-car door with means for holding it suspended when elevated to the top of the car; second, to afford facilities in the slide-rail of the door for permitting the wide and narrow hooks at each end of the door to pass above the slide-rail; and, third, to provide a means for holding the door in position after being elevated and slid toward one end of the car. These objects I accomplish by the devices illustrated in the accompanying drawings, in which—

Figure 1 represents a view of the inside of a car, showing the arrangements of parts fully. Fig. 2 is a cross-section taken at the line *x x*, Fig. 1. Fig. 3 is a cross-section taken at the line *y y*, Fig. 1. Fig. 4 is an enlarged cross-section of the door elevated and the upper portion of the car at the line *x x*, Fig. 1. Fig. 5 is a cross-section of the same, with the door elevated, taken at the line *z z*, Fig. 1. Fig. 6 is an enlarged front view of the stop mechanism for holding the door in position when elevated and slid to one end of the car, and Fig. 7 is a top view of Fig. 6.

Similar letters refer to like parts throughout the several views.

A represents the side of the car; B, the doorway; C, the grain-car door, and D D the vertical strips between which and the side of the car the door slides vertically.

G and G' represent the two sections of the slide-rail, which are secured to the top of the side of the car, projecting sufficiently far inward to permit the hooks E E' of the door to operate thereon. The hook E' of the door is narrow, and passes through the narrow opening J, between the two sections G and G' of the slide-rail. E represents the other hook of the car-door, which, when elevated with the door, passes through the space F above the rail G.

P represents a plate fastened to the central portion of the top of the car-door, below which, on the outside of the door, is a groove, *b*. The downwardly-hanging hook R is hinged at its upper end to the upper side piece, A', and the hook H, at the bottom, operates in the groove *b* below the plate P. This hook is held forward by the push-spring *a* at the back. The hook is also provided with a lever-arm, I, projecting inward, by means of which the hook is operated to release the door, as shown more fully in Fig. 4.

The hooks E and E' of the door C, (when the door C is elevated to the top of the opening B) pass through the openings J and F of the rail G G'. At the same time the plate P moves the hook H back until it is above the hook, when the spring *a* reacts and forces the hook into the groove *b*. The groove *b* is long enough to support the door on the hook H until the hooks E' and E are moved over onto the side rails, G G', the hook E' sliding on the rail G' and the hook E sliding on the rail G. The hook E, being wider than the hook E', passes over the opening J without any interruption. When the door is slid to one end of the car, as indicated by dotted lines in Fig. 1, the hook E' passes under the point *d* of the pawl K, said pawl being forced down behind the hook E' by the spring L. The pawl K is lifted by the lug M when it is desired to move the door forward over the opening B, all of which is shown more fully in Figs. 6 and 7. When the door C has been slid forward over the opening B the hook H enters the groove *b* and prevents the door from dropping until released by a downward pressure on the lever-arm I of the hook R, which, when the hook H is released from the plate P, permits the door to be lowered into its position, as shown in Fig. 1.

What I claim as new, and desire to secure by Letters Patent, is—

1. The grain-car door C, provided at one end with the narrow hook E' and at the other end with a wide hook, E, and the central upper edge provided with a metallic plate, P, with a groove, *b*, below it, combined with the slide-rail G G', having narrow opening J for the hook E' and wide opening F for the hook E to pass through, the hinged hook R, with

lever-arm I, hook H, and spring *a*, substantially as shown and described.

2. In combination with a door, C, provided with narrow and wide hooks E' and E, central
5 plate, P, with groove *b* below it, the hook H, and spring *a*, substantially as shown and described.

3. The door C, with the hook E at one end and the hook E' at the other end, combined
10 with the slide-rail G G', having opening J for

the hook E' to pass through, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE G. TANNER.

Witnesses:

GEORGE H. RENNETT,
E. O. FRINK.