J. KILEY.

Grain-Car Door.

No. 227,265. Patented May 4, 1880.

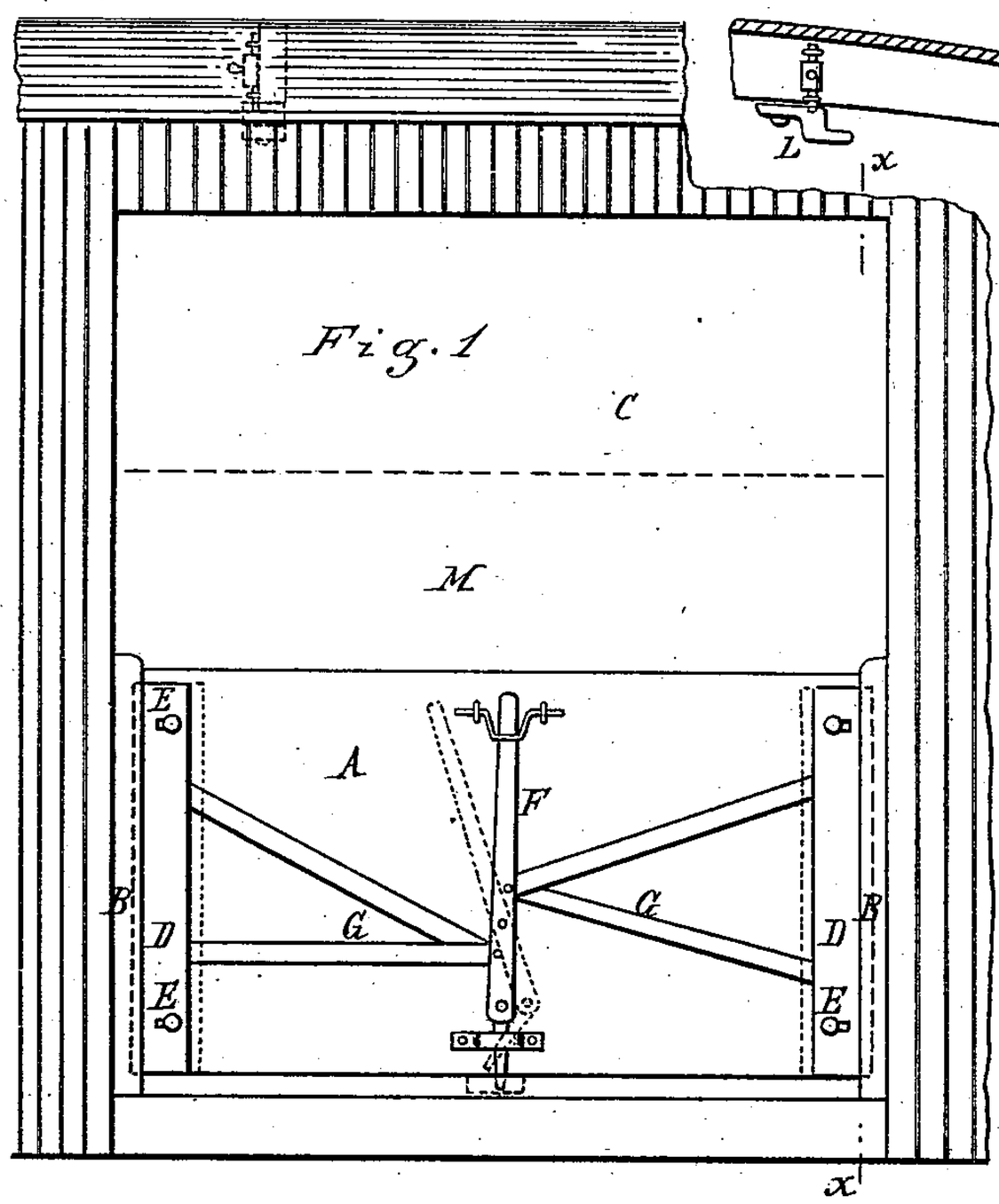

Fig. 1

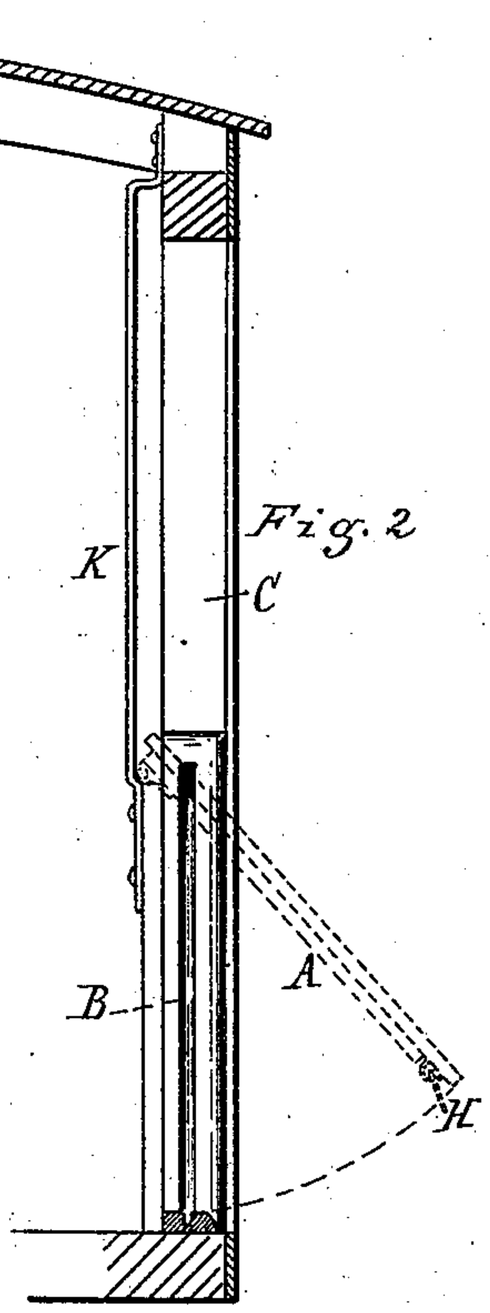

Fig. 2

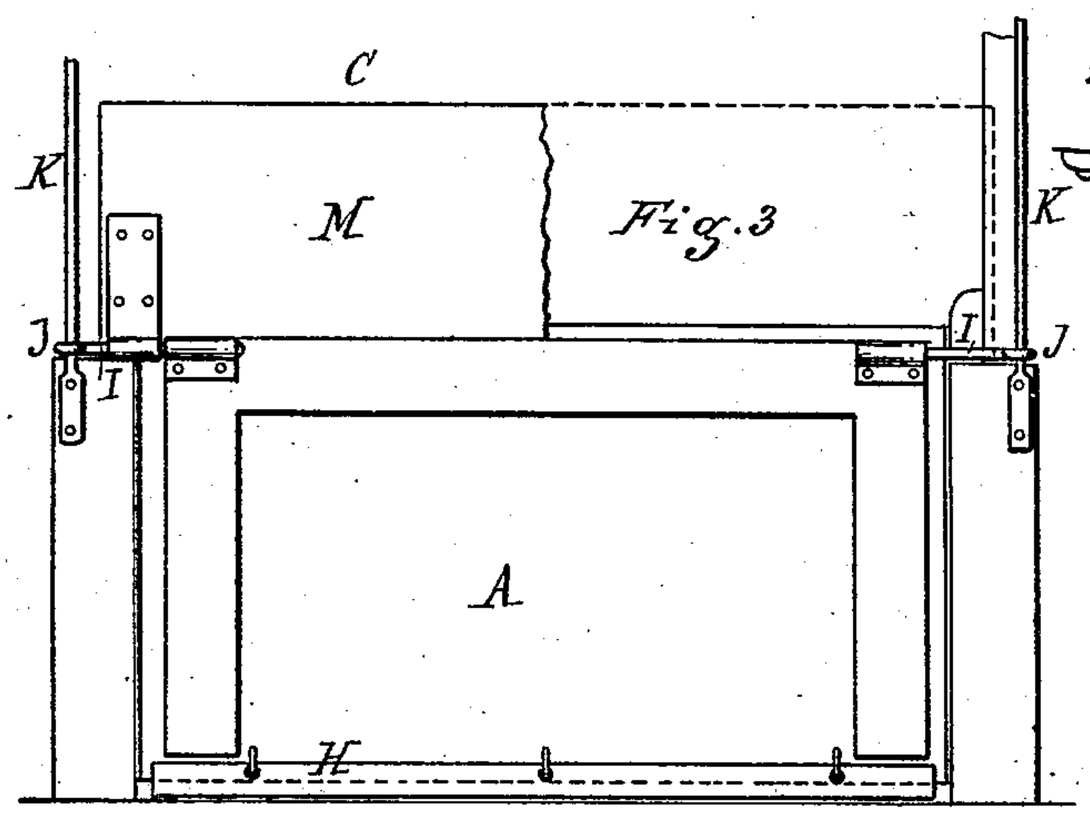

Fig. 3

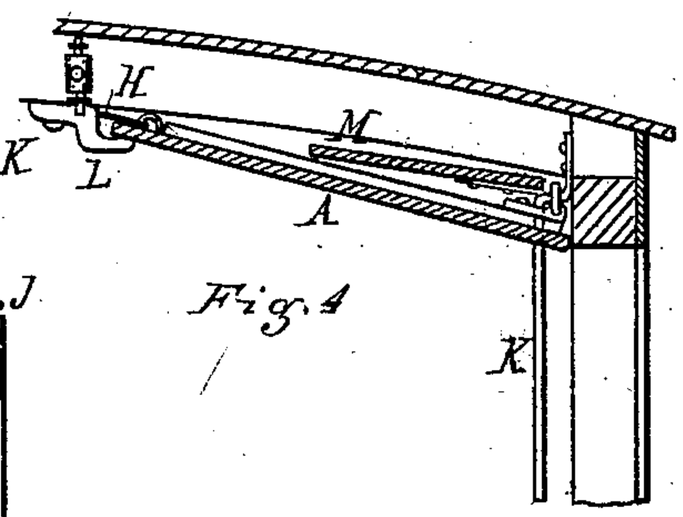

Fig. 4

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UNITED STATES PATENT OFFICE.

JAMES KILEY, OF DETROIT, MICHIGAN.

GRAIN-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 227,265, dated May 4, 1880.

Application filed October 29, 1879.

To all whom it may concern:

Be it known that I, JAMES KILEY, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Grain-Doors for Cars, of which the following is a specification.

The nature of my invention relates to certain new and useful improvements in the construction and operation of grain-doors for railway-cars, or, more properly, doors so constructed and attached to cars designed for carrying grain in bulk that they will effectually, when closed, prevent the grain from escaping, while at the same time they may readily be opened, no matter how heavy the pressure against them may be.

The invention consists in the peculiar construction of parts, their various combinations and operation, as more fully hereinafter described.

In the drawings, Figure 1 is an outside elevation, showing a section of a car with grain-door in place and locked; in dotted lines it is shown unlocked and ready to be opened. Fig. 2 is a cross-section at *x x* in Fig. 1. Fig. 3 is an inside elevation with door closed. Fig. 4 is a cross-section, showing the door raised, folded against and secured to the roof of the car when not in use.

In the accompanying drawings, which form a part of this specification, A represents a door a trifle shorter than the distance between the two jambs B, one of the latter being secured at each side of the doorway C, and the inner faces of the jambs are recessed, as shown in Figs. 1 and 2, to receive the edges of the plates D, one of which is secured to either end of the door, upon the outer face thereof, by means of the slots and bolts E, so that said plates may be moved laterally. These plates are compelled to advance or recede by means of the lever F and the connecting-levers G. When the door is in place and the plates forced into the recesses in the jambs the lower end of the lever F enters a slot (shown in dotted lines in Fig. 1) in the door-sill, and prevents the pressure of grain upon the inner face of the door from forcing it outward. Near the lower edge, and upon the inner side of the door, is hinged the strip H, so that it will close or cover any opening below the door through which grain might escape. At each of the upper corners of the door there are pivotally secured the laterally-projecting rods I, the outer ends of which terminate in eyes J, which engage with the vertical rods K, and by means of these devices the door will swing outwardly or inwardly, or, if not in use, may be raised and folded against the roof of the car, as shown in Fig. 4, where it is secured by buttons L or otherwise.

M is a leaf hinged to the top of the door, and is designed to be used when it is desired to close more of the doorway than can be done by the door.

What I claim as my invention is—

In combination with the grain-door A, provided with the lever F, connecting-rods G, and locking-plates D, the pivotal rods I, vertical rods K, and supplemental door M, whereby both the doors A and M may be swung, raised, folded together, and secured to the roof of the car, substantially as described.

JAMES KILEY.

Witnesses:
H. S. SPRAGUE,
GEO. SNOAD.