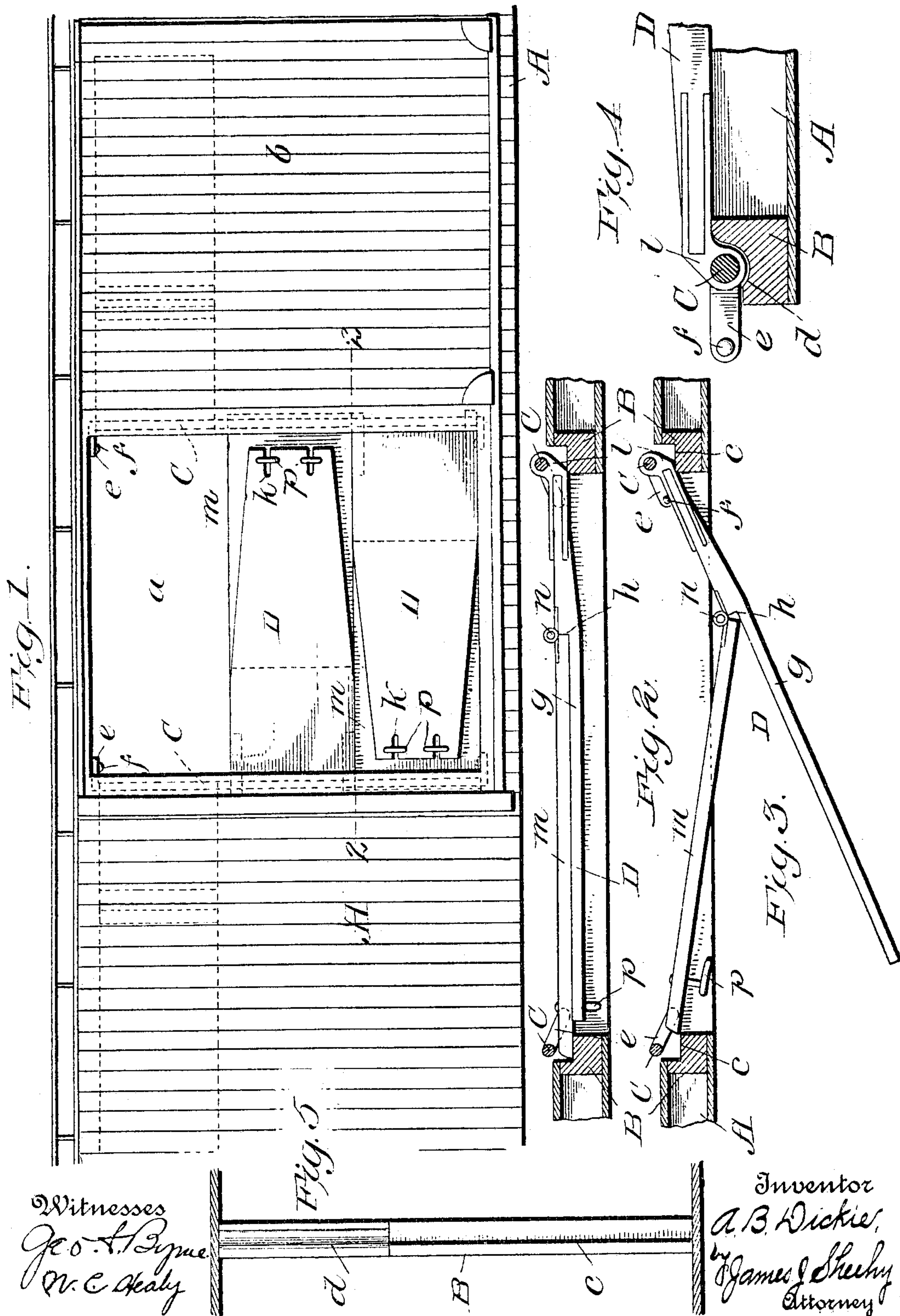


No. 799,226.

PATENTED SEPT. 12, 1905.

A. B. DICKIE.
GRAIN DOOR.

APPLICATION FILED MAY 2, 1905.



UNITED STATES PATENT OFFICE.

ALEXANDER B. DICKIE, OF BRANDON, CANADA.

GRAIN-DOOR.

No. 799,226.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed May 2, 1905. Serial No. 258,520.

To all whom it may concern:

Be it known that I, ALEXANDER B. DICKIE, a citizen of Canada, residing at Brandon, in the Province of Manitoba and Dominion of Canada, have invented new and useful Improvements in Grain-Doors, of which the following is a specification.

My invention pertains to grain-doors for freight-cars; and it contemplates the provision of a simple, strong, and durable grain-door arranged to open outwardly or away from the contents of a car and one which is adapted to be opened and closed with but a minimum amount of effort and which when not in use may be so positioned in a car as to take up but very little space.

Other advantageous features of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a car equipped with two of my novel doors, the said doors being shown in their closed position. Fig. 2 is a horizontal section taken in the plane indicated by the line 2 2 of Fig. 1. Fig. 3 is a similar view illustrative of the manner in which the door is opened outwardly. Fig. 4 is a detail horizontal section illustrative of the manner in which the doors are positioned inside of the car and out of the way when said doors are not in use, and Fig. 5 is a detail view of one of the side stiles of the door-frame.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a freight-car body provided with the usual door-opening *a* and outer sliding door *b* for closing said opening, and B B are stiles at opposite sides of the opening *a*. Each of these stiles is provided in its inner side with a recess *c*, of angular form in cross-section, which extends from a point adjacent to its lower end to an intermediate point in its height, and a recess *d*, of rounded form in cross-section, which extends from a point adjacent to its upper end down to the recess *c*, for a purpose presently set forth.

C C are upright rods arranged adjacent to the stiles B and having crank-arms *e* at their ends pivoted at *f* to the body A, whereby they are adapted to be swung outwardly and inwardly, and D D are the doors, of which there is one on each rod C. These doors D are similar, except that one is arranged to swing outwardly toward the right and the other out-

wardly toward the left, and therefore a detailed description of the one shown in Figs. 2 and 3 will suffice to impart a definite understanding of both. The said door D, Figs. 1 60 and 2, comprises a main section *g*, having a shoulder *h* at its inner side and one or more notches *k* in its free end, hinge-pieces *l*, carried by said section and movable horizontally and vertically on the rod C adjacent to one stile B, an auxiliary section *m*, hinged at one end to the inner side of the main section *g*, as indicated by *n*, and having its free end arranged to seat in the recess *c* of the other stile B, after the manner illustrated in Fig. 2, and turn-buttons *p*, carried by and journaled in the auxiliary section *m*, and adapted, in the position shown in Figs. 1 and 2, to hold said section *m* flat against the section *g*, with the hinged end of the former abutting against the shoulder *h* of the latter, and in the position shown in Fig. 3 to permit the free portion of the section *g* to swing away from the section *m*, as in opening the door.

In the practice of my invention when the doors D are in use they are superposed as shown in Fig. 1 and are secured in such positions by virtue of the sections *g* and *m* of each being held together through the medium of the turn-buttons *p*. When it is desired to open one of the doors—the upper door, for instance—it is simply necessary to turn the turn-buttons *p* of said door into alignment with the notches *k* in the section *g* thereof and then swing said section *g* outwardly on its complementary rod C. This will withdraw the free end of the section *m* from the recess of the stile in which it seats, and the door as a whole may then, because of the swinging rod C, be swung to the left and against the outer side of the body A. To close the door, the operation described is reversed, and when the free end of the section *m* is disposed in the recess *c* of its complementary stile B the turn-buttons *p* are turned to the position shown in Figs. 1 and 2, when the sections *g* and *m* will be held together and the door securely locked in its closed position. When it is not desired to use the doors D, as when the car is to be used for the transportation of freight other than grain, the doors are moved upwardly on their complementary rods C until their hinge-pieces *l* are in the recesses *d* of the stiles B and are then swung into the positions shown by dotted lines in Fig. 1 against the inner sides of the side walls of the body A and out of the way.

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

1. The combination of a car-body having a
5 door-opening, an upright, horizontally-swing-
ing rod arranged at one side of the door-open-
ing and having crank-arms pivoted to the
body, a door comprising sections hinged to-
10 gether and having outer ends arranged when
the door is closed to rest back of the side wall
of the body and also having the outer end of
one section pivoted on the said upright rod,
and means for detachably holding the sections
15 together to secure the door in its closed po-
sition.

2. The combination of a car-body having a
door-opening and upright stiles at opposite
sides of said opening; said stiles having lower
recesses *c* and upper recesses *d* in their inner

sides, upright rods arranged adjacent to the 20
stiles and having crank-arms at their ends piv-
oted to the bottom and top of the body, super-
posed doors one of which is arranged to swing
horizontally and move vertically on each rod;
said doors respectively comprising sections 25
hinged together and having outer ends ar-
ranged when the door is closed to rest in the
recesses *c* of the stiles, and means for detach-
ably holding the said sections of the doors to-
30 gether to secure the doors in their closed po-
sition.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

ALEXANDER B. DICKIE.

Witnesses:

E. C. MACKAY,
H. J. McNEIL.