

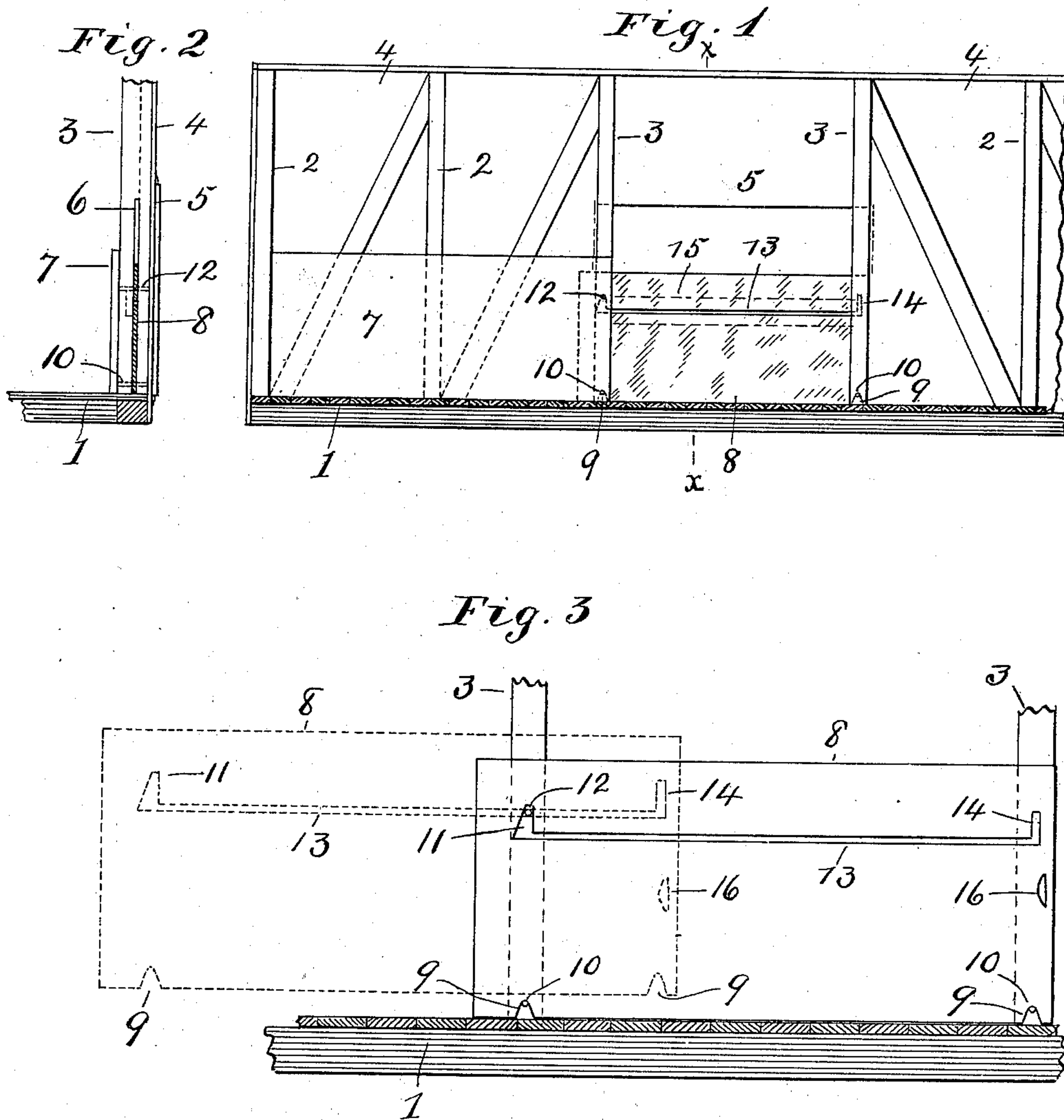
No. 656,437.

Patented Aug. 21, 1900.

W. P. BROWN, JR.
GRAIN CAR DOOR.

(Application filed Mar. 26, 1900.)

(No Model.)



Witnesses
A. H. Opsahl.
M. J. Harrison.

Inventor.
William P. Brown Jr.
By his Attorney.
P. H. Gunkel

UNITED STATES PATENT OFFICE

WILLIAM P. BROWN, JR., OF MINNEAPOLIS, MINNESOTA.

GRAIN-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 656,437, dated August 21, 1900.

Application filed March 26, 1900. Serial No. 10,124. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. BROWN, JR., a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Grain-Car Doors, of which the following is a specification.

My invention relates to inside doors for retaining grain in cars; and its object is to provide a durable door that can be conveniently operated and when not in use will be out of the way. This object I accomplish by means of a sliding door arranged to pass through openings in the door-posts and between the outer sheathing and an inner casing of the car and to be automatically locked in place both while in use and while out of use.

My improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of a portion of a grain-car equipped with my improvements and viewed from the inside. Fig. 2 is a transverse section on the line *xx* of Fig. 1, and Fig. 3 is an enlarged detail view of the middle portion of Fig. 1.

In said drawings, 1 designates the floor; 2, the studs; 3, the door-posts or door-frame; 4, the housing, and 5 the usual outside door of an ordinary freight-car. The door-posts 3 and also the studding adjacent to one of them are provided with vertical slots 6, and the inside of the car is lined, as shown at 7, to a suitable height for containing grain.

The door 8 for retaining grain is preferably formed of a single plate of metal; but it may be composed of wood or metal and wood united. At the lower edge, near each end, is a notch 9, which when the door is in use receives a pin 10, that passes through the slot 6 in the door-post and which serves to prevent movement of the door toward the right or left; but as such notches alone might not be sufficient under all conditions during transportation to prevent such movement of the door an additional means for holding it in place is provided by a similar notch or slot 11 in the upper portion of the door in vertical line with one of the slots 9 for engaging a pin 12 in the door-post slot 6. The notch 11, as shown, is an upward continuation of a slot 13, that extends lengthwise of the door 8 from points near the ends and vertically over

the notches 9, and at the opposite end from the notch 11 the slot 13 extends upward at a right angle to form a notch 14. When the door is in use, the notch 11 being then in engagement with the pin 12 coöperates with the notches 9, which are engaged by the pins 10 in preventing lengthwise movement of the door, and when the door has been moved aside from the door-opening to its hidden position the notch 14 by engaging the pin 12 coöperates with the notch 9, which engages the pin 10 beneath it in locking it in place. To prevent grain from escaping through the slot 13, a thin strip of board or metal (shown by dotted lines 15 in Fig. 1) may be used to cover the slot, the ends of the strip being inserted in the slots 6 to be easily removed when required.

In practice to close the door it may be grasped at its exposed end (a suitable notch or groove 16 being provided for the purpose) and then lifted slightly and removed, the greater portion of the weight resting on the pin 12 to the position shown by full lines. To return it, the opposite end is lifted to free the notches 9 and 11, and the door can then be easily made to slide to its concealed position. Such retaining-doors need occupy only a portion of the height of the car-door opening, the height depending upon the kind and quantity of grain to be loaded in the car.

Having described my invention, what I claim is—

1. A sliding door for a grain-car, provided in its body portion with a longitudinal slot having suitably-located upward extensions, and provided in its lower edge with notches, ways for guiding its movements, a device engaging in said slot on which the door slides in opening and closing it, and devices engaging in said notches to lock the door in its extreme positions, substantially as set forth.

2. The combination with a car-door frame having guideways, of a grain-door having notches in its lower edge near the ends, and devices in said ways for engaging in said notches to prevent lengthwise movement of the door, substantially as set forth.

3. The combination with a door-frame having guideways, of a grain-door having notches in its lower edge near the ends, and having in its body a longitudinal slot with upwardly-

extending notches vertically over the notches in the lower edge, and devices in said ways for engaging in said slot and notches, substantially as set forth.

- 5 4. A sliding door for a grain-car, having a longitudinal slot the ends of which extend upward, notches in the lower edge of the door, guide-slots therefor provided in the door-

frame, and pins in said slots, substantially as set forth.

In testimony whereof I have hereunto set my hand this 12th day of March, 1900.

WILLIAM P. BROWN, JR.

In presence of—

P. H. GUNCKEL,

M. F. HARRISON.