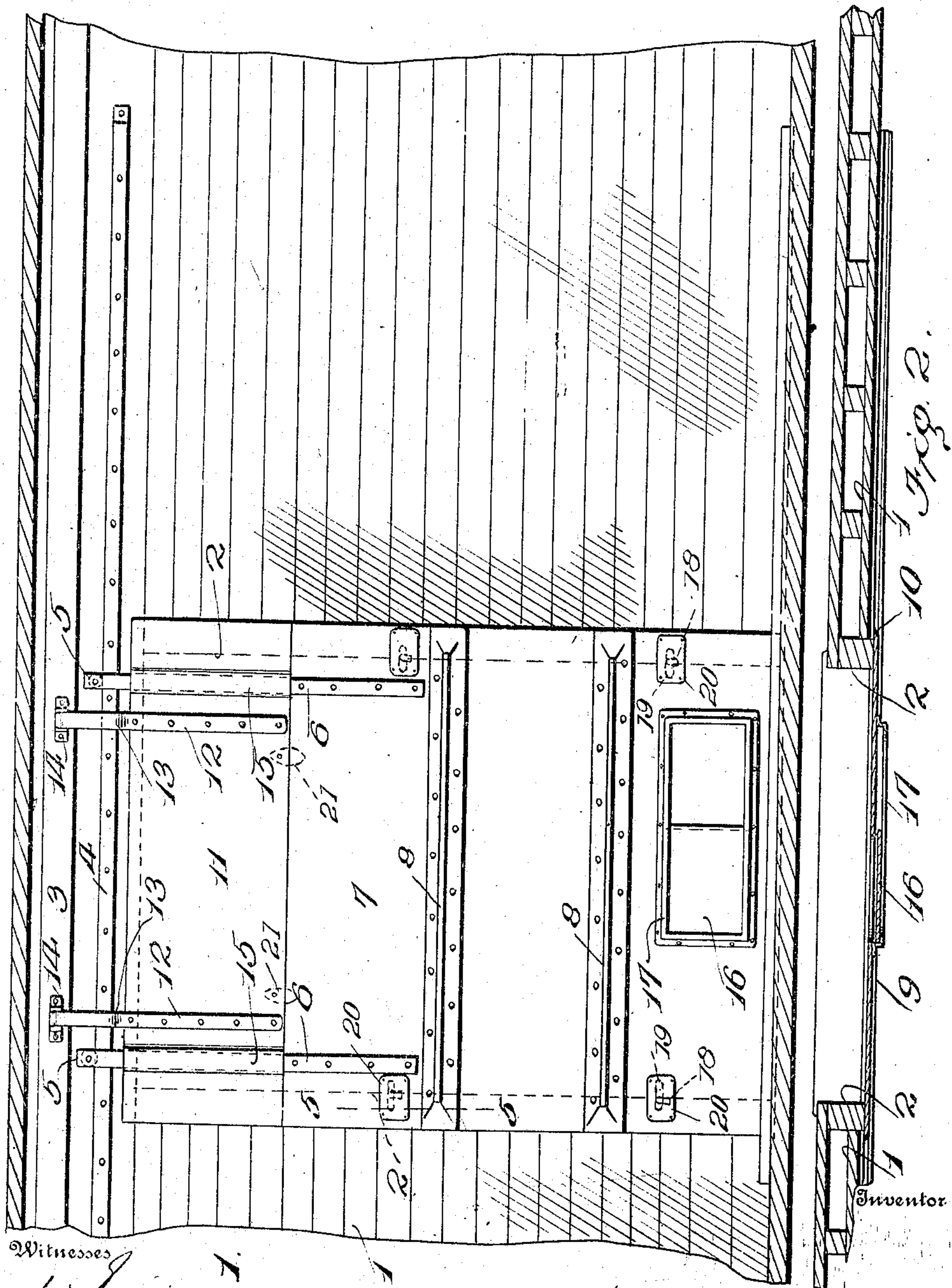


C. L. SMITH.
GRAIN CAR DOOR.
APPLICATION FILED APR. 29, 1908.

908,045.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 1.



Witnesses

W. H. Woodson
Fig. 1

By

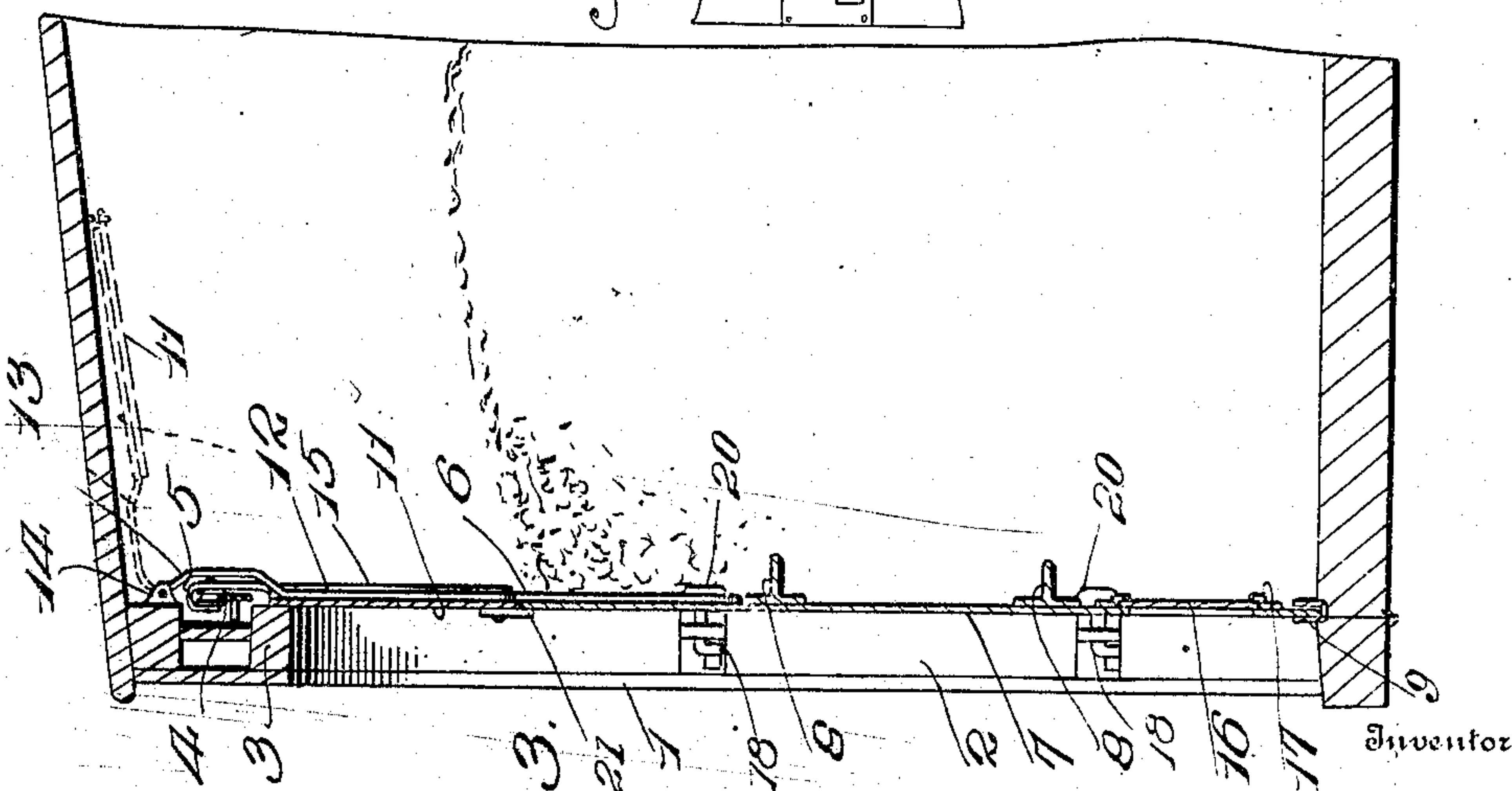
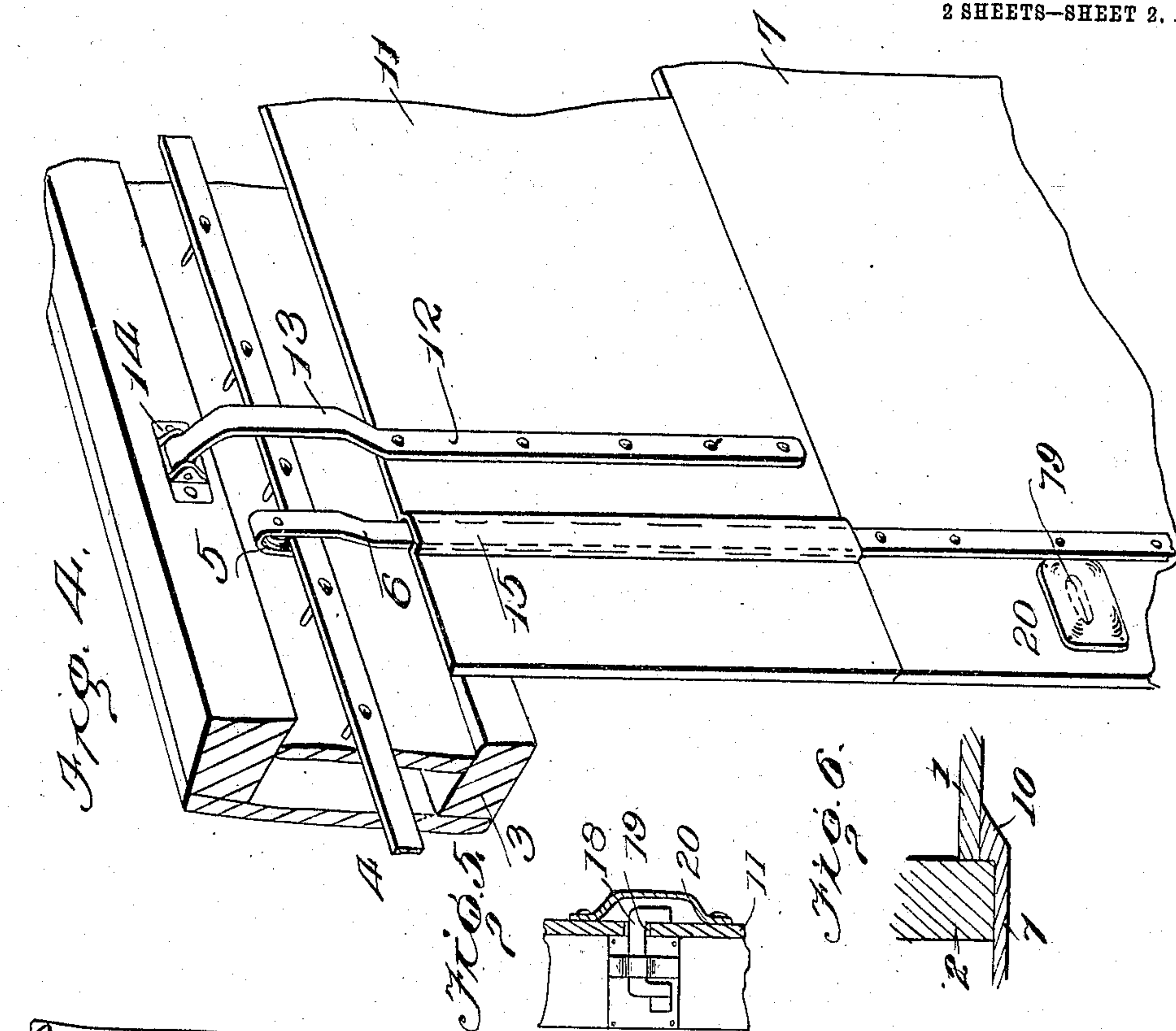
C. L. Smith
Attorney

C. L. SMITH.
GRAIN CAR DOOR.
APPLICATION FILED APR. 29, 1908.

908,045.

Patented Dec. 29, 1908.

2 SHEETS—SHEET 2.



Witnesses

W. H. Woodson

By

C. L. Smith
W. H. Woodson Attorney

UNITED STATES PATENT OFFICE.

CURTIS L. SMITH, OF DUNN, INDIANA.

GRAIN-CAR DOOR

No. 908,045.

Specification of Letters Patent.

Patented Dec. 29, 1908.

Application filed April 29, 1908. Serial No. 429,908.

To all whom it may concern:

Be it known that I, CURTIS L. SMITH, a citizen of the United States, residing at Dunn, in the county of Benton and State of Indiana, have invented certain new and useful Improvements in Grain-Car Doors, of which the following is a specification.

This invention comprehends certain new and useful improvements in doors for grain cars, and the invention has for its object the simple, durable and efficient construction of a door adapted to slide sidewise across and away from a door-way and embodying a hinged upper section adapted to be swung inwardly and secured in a suspended condition to the top or roof of the car when not desired for use, and the invention consists in certain constructions, and arrangements of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is an elevation of a car-door constructed in accordance with my invention; Fig. 2 is a horizontal sectional view thereof; Fig. 3 is a transverse vertical section; Fig. 4 is a fragmentary perspective view. Fig. 5 is a detail sectional view on the line 5—5 of Fig. 1. Fig. 6 is a fragmentary horizontal sectional view of one edge portion of the door and one of the jambs against which the door closes.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates the side of a grain-car and 2 the door posts or jambs defining the side walls of the door-way.

3 designates the upper door-sill of the car, and 4 designates a rail which is secured to said sill and which extends across the door-way and to one side thereof as clearly illustrated in the drawings.

Outwardly facing hooks 5 that are formed on the upper ends of suspension bars 6, are engaged with the rail 4 and are adapted to slide thereon, said suspension bars being riveted, bolted or otherwise fastened to the main or lower door section 7 at the upper edge thereof, so as to support the door as it is slid across and to one side of the door-way. The door 7 is preferably reinforced by transversely extending steel bars 8 riveted there-

to. The lower edge of the door 7 is adapted to slide in a groove or channel in the lower supporting rail 9.

One edge of the door 7 is formed with an angularly disposed edge 10 which is adapted to scrape against the side wall of the car when the door is moved to an open position so as to prevent any leakage of grain around the side edge of the door, and also to maintain a secure joint between such side edge and the wall of the car when the door is in a closed position.

The door section 7, as is common with all doors of this type, terminates at its upper edge below the upper edge of the door way and is supplemented by an upper door section which in the present instance is designated 11 and which is secured near its ends to hangers 12 riveted or otherwise fastened thereto. The hangers 12 extend upwardly and are curved as indicated at 13 and extend around and clear of the rail 4 and the upper ends of the hangers 12 are pivotally connected to the brackets 14 secured to the wall 3, so that the upper door section 11 may be closed in the door-way above the upper edge of the main door 7, and be swung backwardly and upwardly out of the way and held in an inoperative position against the roof of the car by any desired fastening device (not shown). The upper section 11 of the door is grooved near its ends as indicated at 15, the grooves extending vertically and being designed to engage the suspension bars 6 of the main or lower door 7 when the upper section 11 is closed, in order to admit of a close joint between the two sections.

16 designates a supplemental door which is mounted in the main door 7 near the lower end thereof and which is adapted to slide in channel irons 17 secured to the main door so as to open or close an opening therein, in order to permit the grain to flow out whenever desired before the main door 7 is opened. It is to be understood that this small supplemental door 16 is provided with any form of handle so that it may be opened or closed from the outside of the car.

In order to hold the main door in closed position I have provided latches 18 that are mounted within casings in the door jambs and that are formed with hooked ends adapted to be inserted through horizontally elongated slots 19 formed in the main door, the latches being turned after their hooks have been inserted through the slots so that

the hooks will engage with the rear face of the door and hold the same locked. In order to cover these slots 19 to prevent the grain from leaking out, I have provided caps 20, to be fastened by rivets or the like to the inner face of the door over the slots as shown. In order to hold the upper section 11 of the door in closed position I have provided the turn-buttons 21.

10 Having thus described the invention, what is claimed as new is:

1. The combination of a car, provided with a door-way, and an elevated rail secured thereto above the door, of suspension bars mounted to move in a side-wise direction on said rail, a main lower door secured to said suspension bars, an upper door section adapted to close the upper end of the door-way, and hangers secured to said upper door section and pivotally connected to the car above the door way and arranged to swing transversely of the door-way, said hanger

rods being formed with bent out portions extending around the rail.

2. The combination with a car provided with a door-way and an elevated rail secured thereto above the door-way, of suspension bars mounted to move in a sidewise direction on said rail, a main lower door secured to said suspension bars, and an upper door section adapted to close the upper end of the door-way, and hangers secured to said upper door section and pivotally connected to the car above the door-way and arranged to swing in a vertical plane, said upper door section being formed with grooves adapted to receive the suspension bars.

In testimony whereof I affix my signature in presence of two witnesses.

CURTIS L. SMITH. [L. s.]

Witnesses:

J. A. ISSELSTEIN,
PETER SONDGERATH