W. H. ASCUE.

GRAIN CAR DOOR.

APPLICATION FILED JULY 2, 1908.

942,994.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

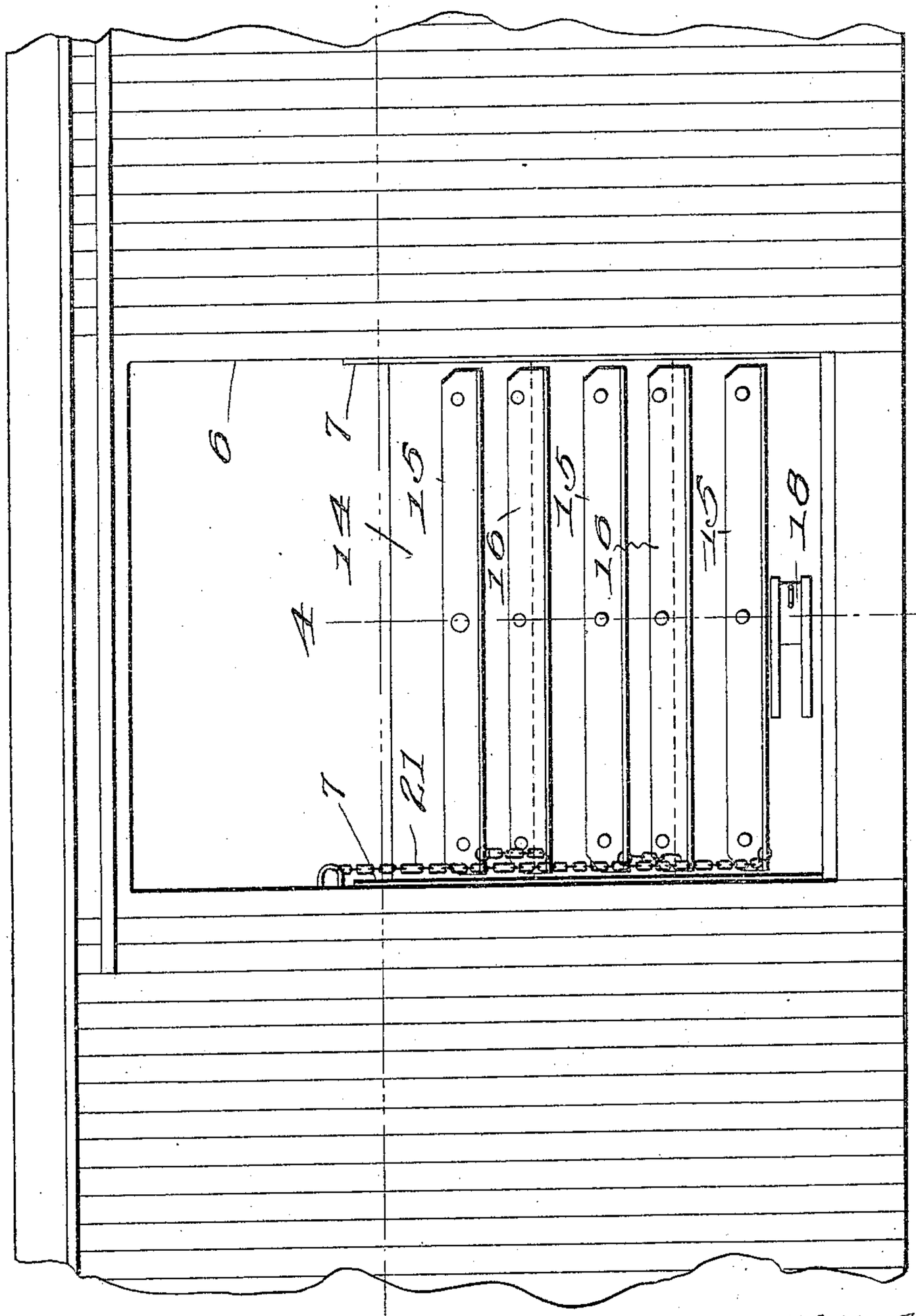
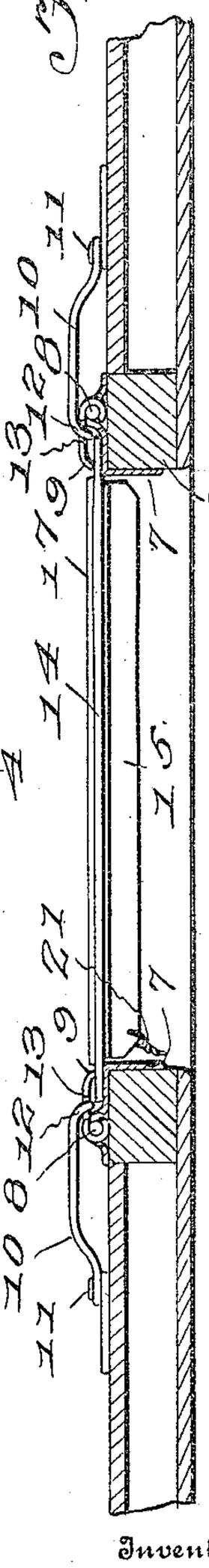


Fig. 2.



Witnesses

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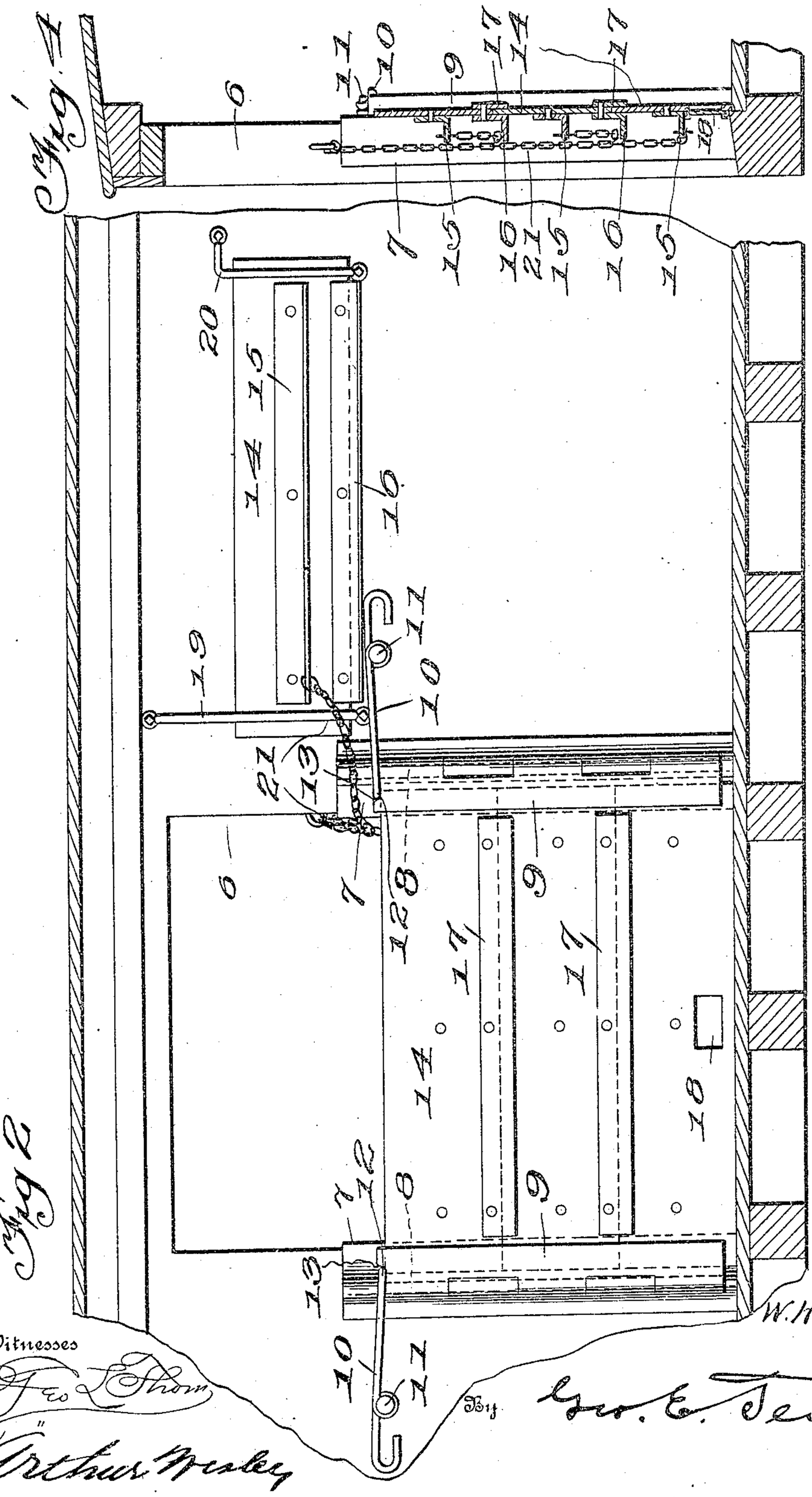

UNITED STATES PATENT OFFICE.

WILLIAM H. ASCUE, OF KIOWA, KANSAS.

GRAIN-CAR DOOR.

942,994. Specification of Letters Patent. Patented Dec. 14, 1909.

Application filed July 2, 1908. Serial No. 441,645.

To all whom it may concern:

Be it known that I, WILLIAM H. ASCUE, citizen of the United States, residing at Kiowa, in the county of Barber and State of Kansas, have invented certain new and useful Improvements in Grain-Car Doors, of which the following is a specification.

This invention relates to grain car doors, and has for its object to provide an improved sectional metal door, especially designed for use on cars in which grain is shipped, the purpose being to provide a door which will be grain-tight and which will not be liable to allow the escape of grain, and which may be built up in sections to any height desired. Means are also provided for supporting the sections out of the way when not in use, said means consisting of brackets on the inside of the car in which the unused sections may be placed. Improved means are also provided for holding the door sections in place.

The construction shown in the accompanying drawings, and described hereinafter, is the best form of the invention now known to me, but the invention is not limited in its scope to the exact form shown and described, as various modifications may be made.

In the accompanying drawings, Figure 1 is an outside elevation of the door. Fig. 2 is an inside elevation thereof, one section being shown out of use. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of the same.

Referring specifically to the drawings, the casing of the doorway of an ordinary grain car is indicated at 6. The jambs thereof are supplied with metal plates 7, on the inside thereof, said plates being bent around the jambs to protect the same. Said plates, near their inner edges, are also buckled or bent up to form a tubular knuckle which receives a long hinge pintle 8, to which the knuckles of a leaf 9 are connected, the parts being recessed in alternation, after the manner of hinges, to form a long hinge joint permitting the leaf 9 to swing. This leaf 9, in connection with the opposite part of the plate 7, forms the guide at one side of the doorway to receive one end of the door sections. The leaf 9 is normally pressed in or closed by a spring 10. This spring is pivotally attached to the inside of the car by a pivot pin 11, and the end of the spring is hooked as indicated at 12 and adapted to fit in a notch 13 in the upper end of the leaf 9. By turning the spring on its pivot, it may be swung up out of engagement with the leaf, thus allowing the leaf to swing open freely. When the spring is turned or swung down to engagement with the leaf, it presses said leaf in tight contact with the door sections. These parts just described are duplicated at the opposite side of the doorway. One or both of the leaves 9 can also be swung open against the tension of the springs, which will allow the door sections to be placed in or removed from the doorway.

The door is made of several sections of sheet metal indicated at 14. Each section extends across the door and is of sufficient length to be engaged at the ends under the leaves 9. Each section is strengthened on the outer side by a pair of angle irons 15 and 16 riveted thereto. The angle iron 15 is located or extends along about the middle of the section. The angle iron 16 is located at the lower edge of the section and projects below the same, forming one side wall of a groove to receive the upper edge of the next section below, the other side wall of said groove being formed by a flat plate 17 of sheet metal secured to the inner side of the section. When these sections are set in place across the doorway, one rests upon the other, with the upper edge of the lower section fitting within the groove at the lower edge of the upper section. This forms a grain-tight joint between the sections, and the angle irons make the section strong enough to support the pressure without great weight of metal, each of the sections being small enough for a man to readily handle. As many sections as desired may be used. I have shown three in the drawings, but six will be a good number for an ordinary grain door, making each section light enough to handle easily. The lower section 14 has a slide 18 to let out grain when desired.

In order to support the sections out of position and out of the way on the inside of the car, I provide the inside of the car with a rack consisting of a rod 19 and a rod 20 which are fastened at their ends to the side of the car near the top thereof and which are properly bent and constructed to form a rack in which the sections may be placed, the ends of the sections being inserted behind the bars or rods, as shown in Fig. 2. The rod 20 is short, allowing the sections

to be readily put in or taken out over the top end thereof. Each section is provided with a chain 21 connected to a ring on the door post and to the angle bar 15. These chains prevent accidental loss of the sections, and they are sufficiently long to allow the sections to be placed in the rack.

The construction described allows a door of any desired height to be quickly and easily put in place. The spring pressure of the hinged leaves 9 holds the ends of the door sections closely against the door posts and so forms a tight joint at the ends, and the joints between the door sections are grain-tight in consequence of the grooved construction described.

I claim:

The combination with a door and door posts, of a vertical guide for the door having a swinging plate with a notch adjacent its upper end, and a spring extending from the door post and having a hooked end arranged to engage in the notch and to bear against the said plate, said spring being pivotally mounted on said post and said guide being cut away above its said notch whereby said spring may be rotated to disengage from the plate.

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

WILLIAM H. ASCUE.

Witnesses:
J. E. HOLMES,
C. W. WILSON.