

No. 735,556.

PATENTED AUG. 4, 1903.

F. L. MONSON.

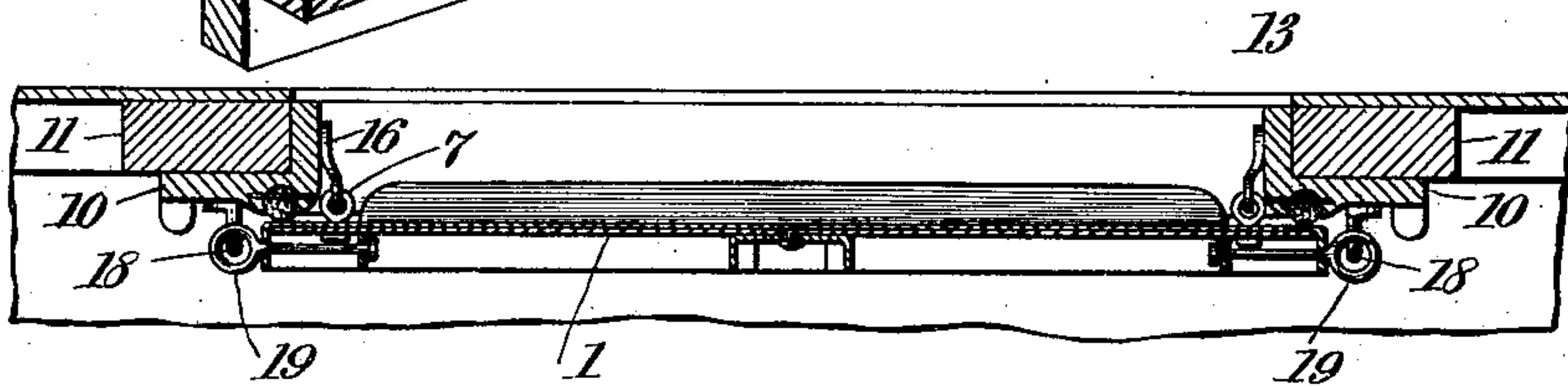
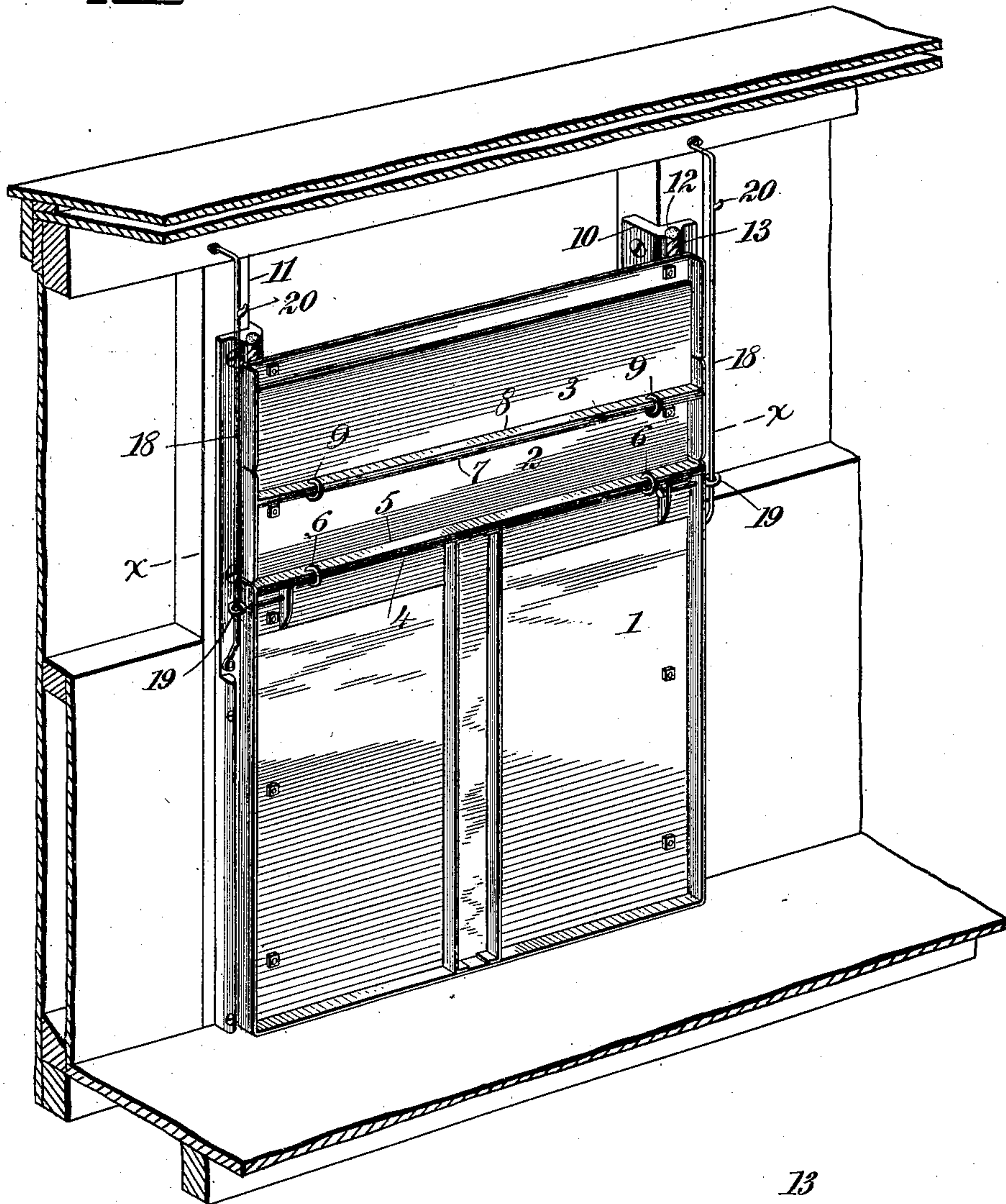
CAR DOOR.

APPLICATION FILED NOV. 15, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

*Fig 1*



WITNESSES:

*J. A. Brophy*  
*C. R. Starguson*

*Fig. 5*

INVENTOR

*Frank L. Monson*

BY

*Munn*

ATTORNEYS.

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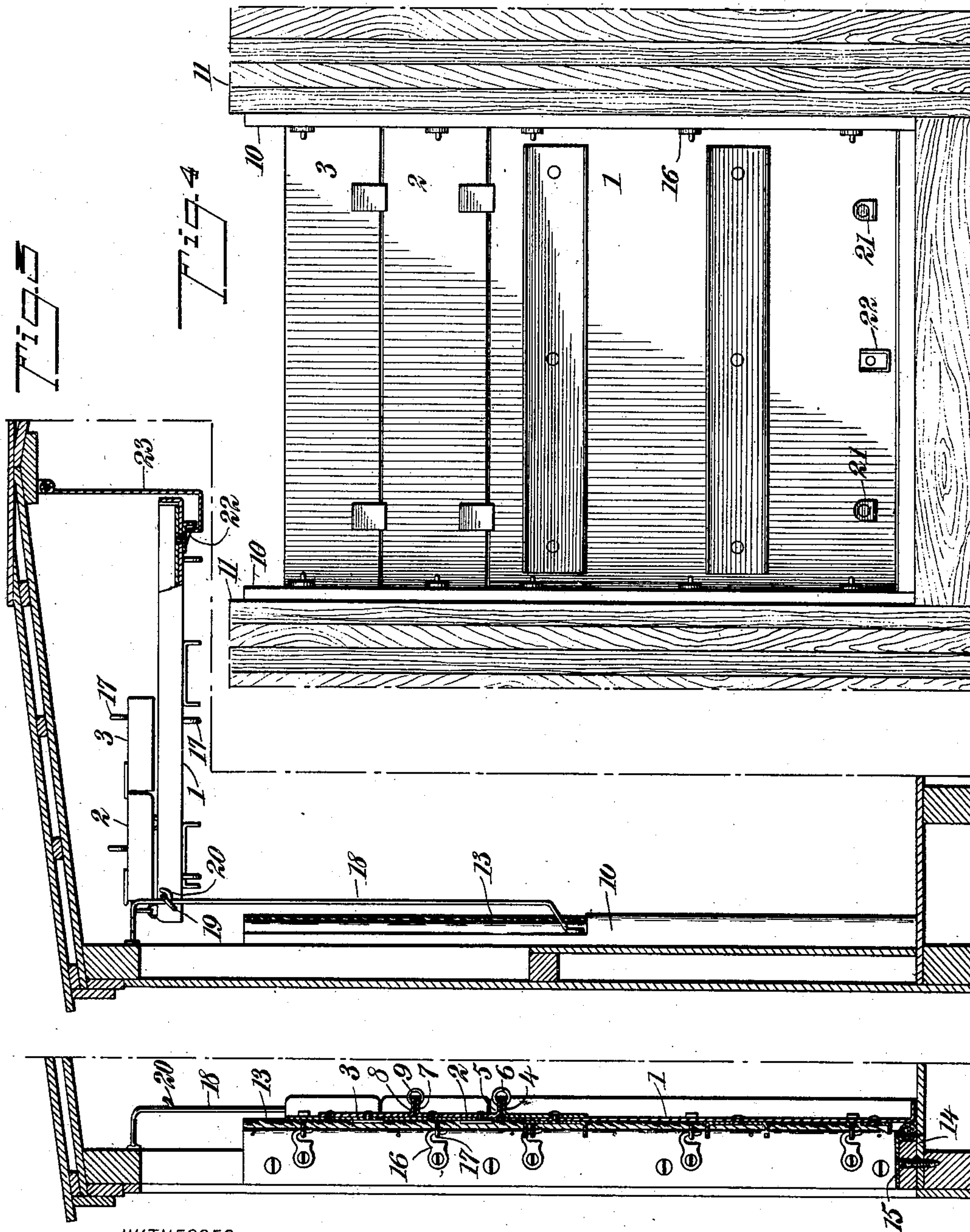
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2 SHEETS—SHEET 2.



WITNESSES:

*J. T. Brophy*  
*C. R. Ferguson*

*Fig. 5*

INVENTOR

*Frank L. Monson*

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# UNITED STATES PATENT OFFICE.

FRANK L. MONSON, OF CHRISTINE, NORTH DAKOTA.

## CAR-DOOR.

SPECIFICATION forming part of Letters Patent No. 735,556, dated August 4, 1903.

Application filed November 15, 1902. Serial No. 131,554. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK L. MONSON, a citizen of the United States, and a resident of Christine, in the county of Richland and State of North Dakota, have invented new and useful Improvements in Car-Doors, of which the following is a full, clear, and exact description.

This invention relates particularly to doors for grain-cars, the object being to provide a door of very light material, and therefore easy to handle or operate, and, further, to provide means to make the door grain-tight.

I will describe a car-door embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a car-door embodying my invention. Fig. 2 is a vertical section thereof. Fig. 3 indicates the door in its raised or open position. Fig. 4 is an outside elevation thereof, and Fig. 5 is a section on the line *x x* of Fig. 1.

The door comprises a lower or main section 1 and upper sections 2 3, mounted to swing with relation to the lower section. These several sections preferably consist of metal, but they may be formed of wood without departing from the spirit of my invention. At the upper edge of the section 1 is a flange 4, engaging with a flange 5 on the lower edge of the section 2, and rings 6 are passed through perforations in these flanges, thus forming hinges. The upper edge of the section 2 is provided with a flange 7, engaging with a flange 8 on the lower edge of the section 3, and rings 9 are passed through perforations in these flanges to form hinges. It will be noted that the sections 2 3 are each formed of two plates, the outer plate being extended below the inner plate, so as to break or close the joint, thus preventing escape of grain through the joint.

The door-posts consist of angle-irons 10, secured to the frame-posts 11, and these posts 10 are provided with channels 12 for receiving a packing 13, consisting of rope or similar material, and this packing also extends along the lower edge of the door and is engaged thereat on its upper side by a metal

plate 15. The rope is held in place by means of nails or pins passing through perforations in the metal parts and also through the rope. When the door is closed, the several sections are held in close connection with the packing by means of hooks 16, attached to the door-posts and engaging with eyes 17 on the door-sections.

Arranged on the inner side of the car are guide-rods 18, which pass through eyes 19, attached to the upper portion of the lower section 1 of the door and having a rotary motion. At the upper ends of the rods 18 are hooks 20, with which the eyes 19 may be engaged when the door is in an open position, as indicated in Fig. 3.

For convenience in raising the door hand-pieces 21 are attached to the outer side of the lower section, and also attached to the lower portion of the lower section is a yoke 22, designed to be engaged with a hook 23, attached to the car-ceiling.

In operation when loading a car with grain the lower section of the door is to be closed and fastened. Then as the grain approaches the top thereof the upper sections are to be swung upward and secured by the fastening devices. When the door is to be opened, the upper sections are to be turned down upon the inner side of the lower section, and then the whole is to be moved up on the rods 18, so as to engage the eyes 19 with the hooks 20, and then the hook 23 is to be engaged with the yoke 22.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A car-door, consisting of a plurality of sections, inwardly-extended flanges at the abutting edges of the sections, and hinge connections between connecting-flanges, rods arranged at the sides of the door, eyes on the lower section of the door through which said rods pass, said eyes being mounted to rotate, hooks on the upper ends of the rods, and a hook attached to the car-ceiling for holding the door in a suspended position, substantially as specified.

2. A car-door constructed of metal and comprising a lower section having a flange on its upper edge, an upper section having a flange at its lower edge for engaging with the first-named flange, the said flanges being per-

forated, and rings passing through the perforations, substantially as specified.

3. A car-door constructed of metal and comprising a lower section and upper sections, 5 the said upper sections each consisting of two plates, one plate being extended below the other plate, to break the joint, inwardly-extended flanges at the abutting edges of the sections and hinge connections between adja- 10 cent flanges.

4. A car-door constructed of metal and comprising a plurality of sections, inwardly-

extended flanges at the abutting edges of the sections and hinge connections between adjacent flanges, metal door-posts, hooks at- 15 tached to the posts, and eyes on the door for receiving said hooks.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK L. MONSON.

Witnesses:

J. S. JOHNSON,

L. A. LUCKASON.