

No. 792,173.

PATENTED JUNE 13, 1905.

J. B. SMILEY.
DOOR FOR FREIGHT CARS.
APPLICATION FILED OCT. 31, 1904.

FIG. 1.

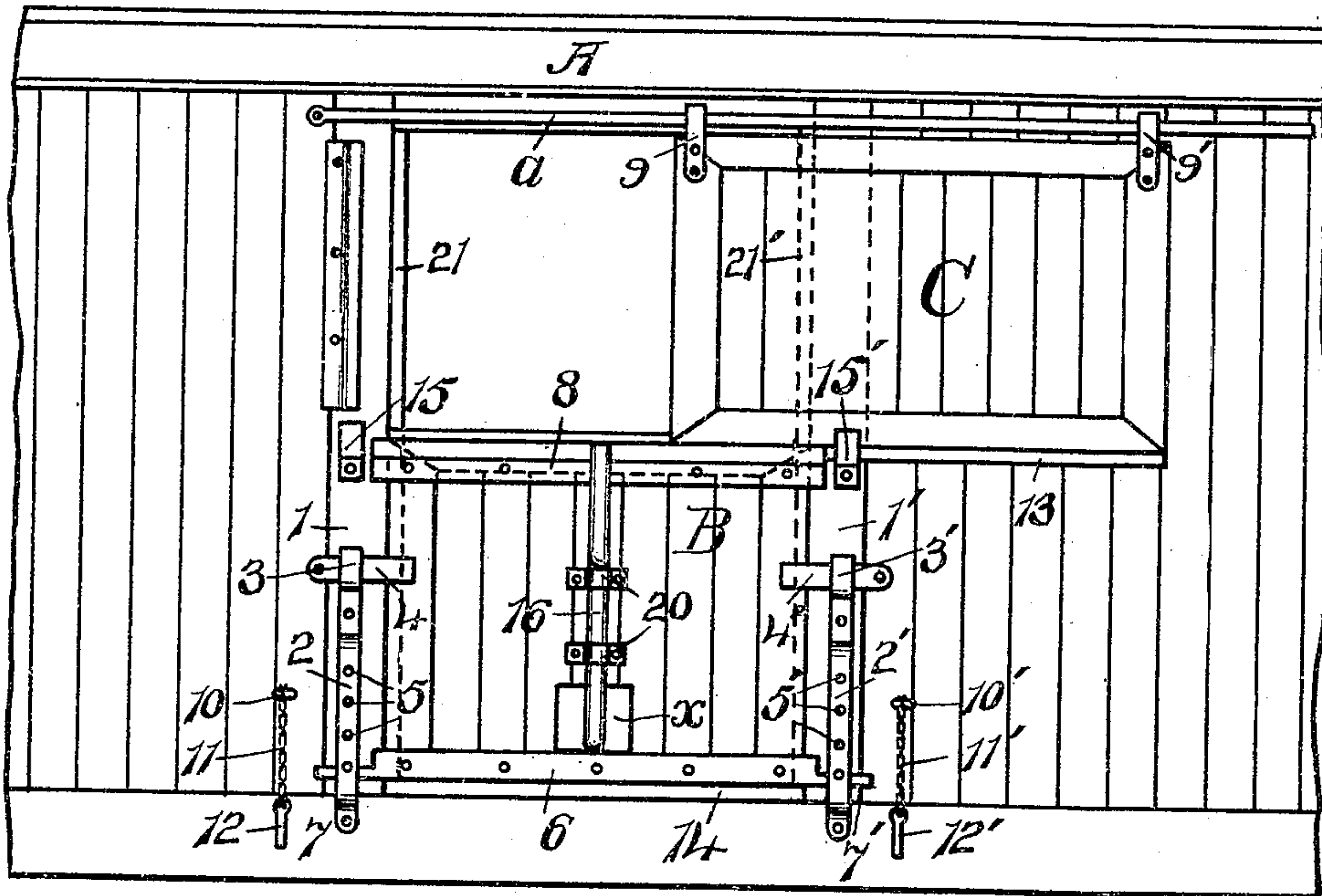


FIG. 2.

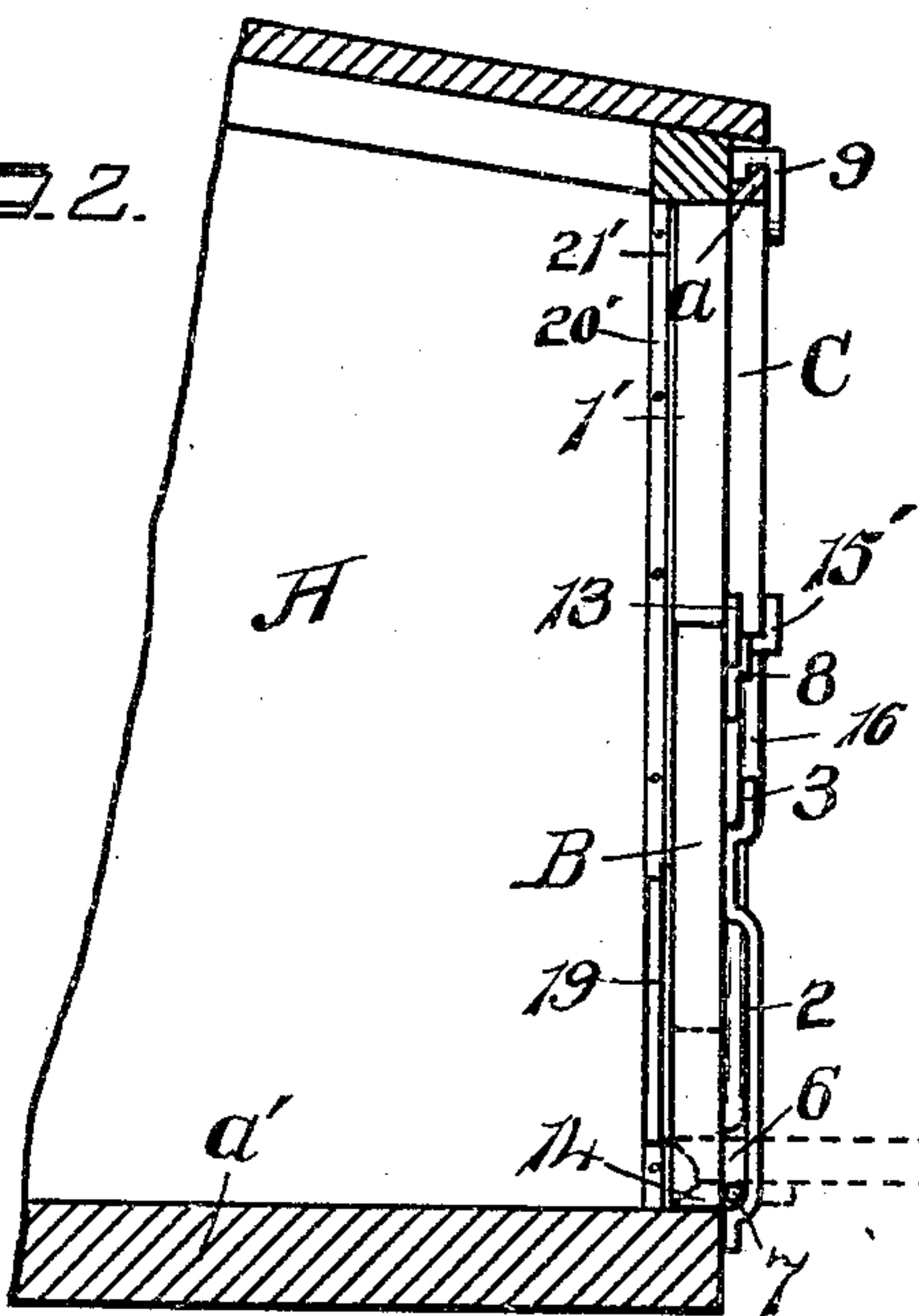


FIG. 3.

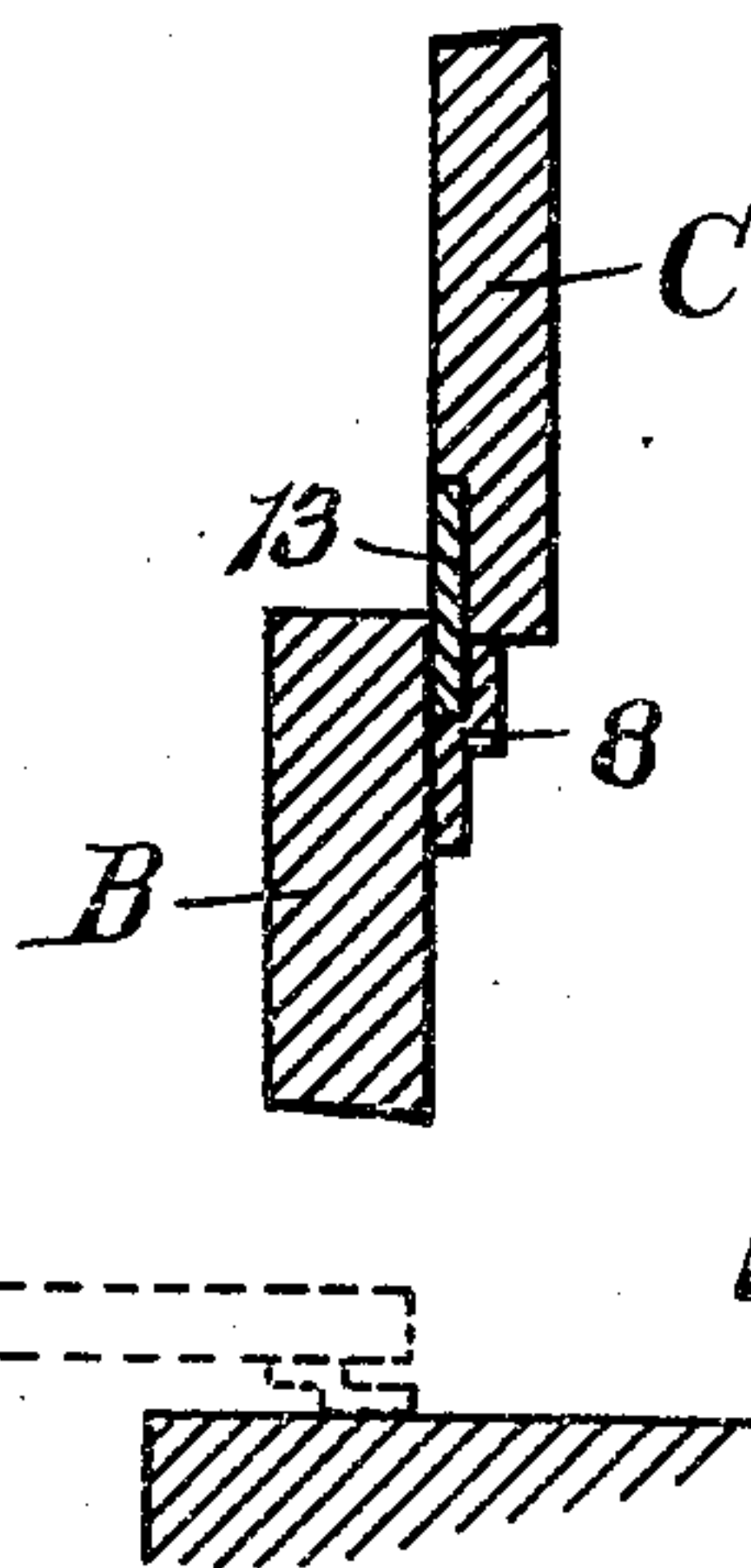
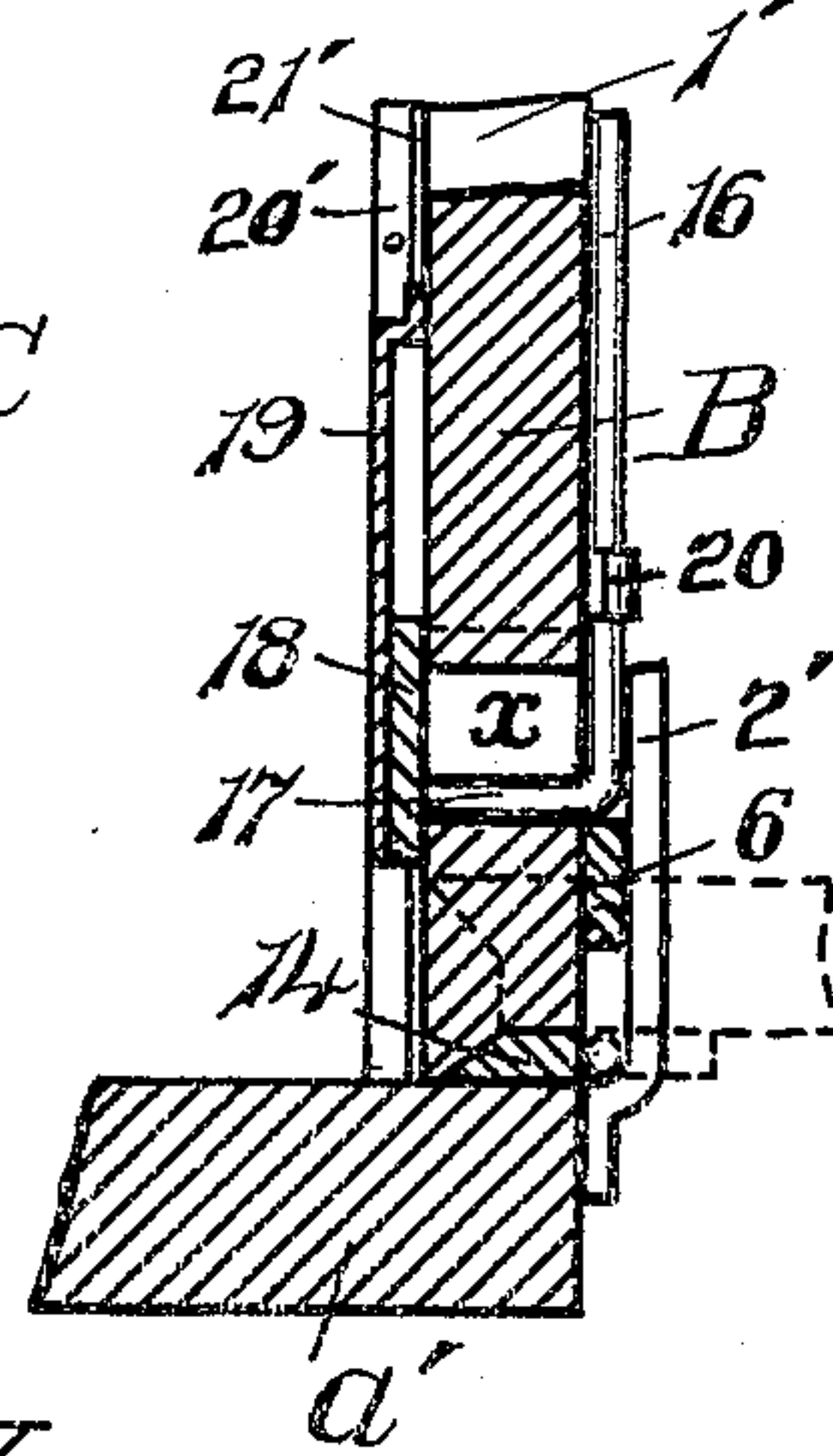


FIG. 4.



WITNESSES:

J. P. Larson.

Grace E. Gatewood

INVENTOR:

BY,

John B. Smiley.
Geo. W. Sues
Attorney.

UNITED STATES PATENT OFFICE.

JOHN B. SMILEY, OF SOUTH OMAHA, NEBRASKA.

DOOR FOR FREIGHT-CARS.

SPECIFICATION forming part of Letters Patent No. 792,173, dated June 13, 1905.

Application filed October 31, 1904. Serial No. 230,876.

To all whom it may concern:

Be it known that I, JOHN B. SMILEY, a citizen of the United States, and a resident of South Omaha, in the county of Douglas and State of Nebraska, have invented a certain new and useful Improvement in Doors for Freight-Cars, of which the following is a specification.

My invention embodies a combination grain and stock door which may be used as a running-board and embodies certain other combinations more fully described hereinafter.

In the accompanying drawings I have shown in Figure 1 a side elevation of a broken portion of a freight-car provided with one of my combination-doors. Fig. 2 shows a transverse sectional view of my car-door. Fig. 3 shows an enlarged detail of the lower and upper door-sections, while Fig. 4 shows an enlarged sectional detail disclosing the arrangement to relieve the pressure of grain from the lower door.

In carrying out the aim of my invention I provide an ordinary freight-car A at a suitable point upon the outside and above with the guide-rail *a*. Secured to this guide-rail are the hangers 9 and 9', supporting the upper door-section C, as shown in Figs. 1 and 2. At a suitable point I provide the freight-car with the flanged stop-bar *t*, against which the upper door-section C abuts when the upper door-section is closed. Below I provide at suitable points the supporting-ears 15 and 15', which securely hold the upper door-section C when the same is closed, these supporting-ears being secured to the car-door frames 1 and 1', as shown more clearly in Fig. 1, so that this upper door-section is securely locked and held by means of the flanged stop-bar *t*, the supporting-ears 15 and 15', and the guide-rail *a*, as shown.

Secured to the inner door-frame are the flanges 21 and 21', secured by means of their webs 20 and 20', as shown in Figs. 2 and 4. Upon the exterior the door-frame is provided with the brackets 2 and 2', provided with suitable perforations 5, adapted to receive the pins 12 and 12', held by means of the chains 11 and 11', secured by the staples 10 and 10', as shown in Fig. 1.

Secured to the side of the car by means of

suitable pins are the latches 4 and 4', which serve as keepers to prevent the lower door 3 from being forced outward by the weight of grain, for instance, or any other freight that may be hauled within the car. This lower door-section B is provided below with the pivot-bar 6, also serving to strengthen the lower edge of the door-section B, while also serving as a fulcrum or rest against which to force the crowbar in raising and starting the door. This pivot-bar 6 is provided with the pivot ends 7 and 7', which work within the loop portion 2 of the bracket, as shown more clearly in Fig. 2, so that this door may be raised and held and adjusted at different heights by inserting the pins 12 and 12' into the openings 5 and 5' of the brackets. The pins 12 are held by the chains 11, secured to the staples 10 and 10'. Near the upper edge the lower door B is reinforced by means of the rail 8, into which rail slides the lower, preferably metallic, shoe 13, which shoe is secured to and forms part of the lower edge of the upper door-section C, as disclosed more clearly in Fig. 3.

As the pressure of the grain within the car is quite severe against the door-sections C and B and in order to form a grain-tight union between these doors, I reinforce the door C by means of a bolt-bar 16, which slides within the hasps 20, as shown in Fig. 1, and is adapted to receive the pressure upon the central portion of the upper door-section C. Below I provide the lower door-section B with the opening *a*, closed by means of the shutter 18, guided by means of the hood 19, and this shutter 18 is secured to the lower recurved end 17 of the bolt-bar 16, as shown in Fig. 4. By means of this shutter the grain may be taken out to relieve the pressure against the door, thus enabling the door to be opened easily without breakage.

When the car is used in carrying stock and the stock is to be unloaded, the upper door C is shoved to one side, so that the rail 13 escapes, permitting the lower door-section B to drop down to form a runway for the cattle or for the trucks used in removing the goods from the car, as shown in dotted lines in Fig. 2, where the lower door is shown thrown out

as a runway. From this it will be noticed that this door serves as a grain-tight holder when grain is shipped, while being adapted to be thrown down as a runway when cattle and other freight are shipped and are loaded.

Having thus described my said invention, what I claim as new, and desire to secure by United States Letters Patent, is—

In a device of the character described, the combination with an upper supporting-rail, of an upper door-section pendent from said rail, ears to receive the lower end of said upper door-section, a projecting plate, extending from the lower edge of said upper door-section, a lower door-section, a rail secured to the upper edge of said lower section, adapt-

ed to be engaged by said plate, a pivot-bar, secured to the lower end of said lower door-section, brackets to slidably and pivotally engage said pivot-bar, said lower grain-door, being provided with an opening, a shutter closing said opening, a bolt-bar, extending upward from said shutter and locking against said upper door-section, and means to slidably secure said bolt-bar.

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

JOHN B. SMILEY.

Witnesses:

P. M. RULEAU,
FREDERICK J. LARSON.