May 27, 1924. 1,495,836

W. FRIMMEL ET AL

CAR DOOR

Filed July 13, 1922 2 Sheets-Sheet 1

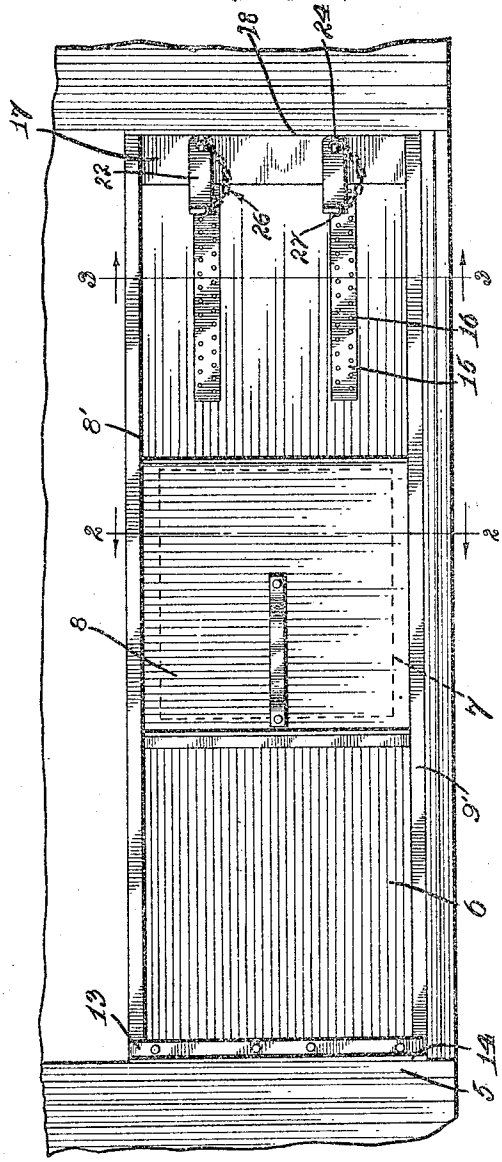


Fig. 1.

W. Frimmel and
W. D. Henderson, Inventors

By Atkinson & Co.
Attorney

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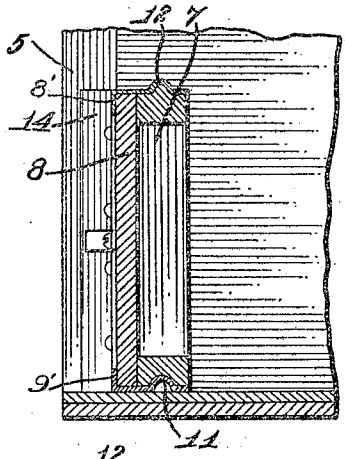


Fig. 2.

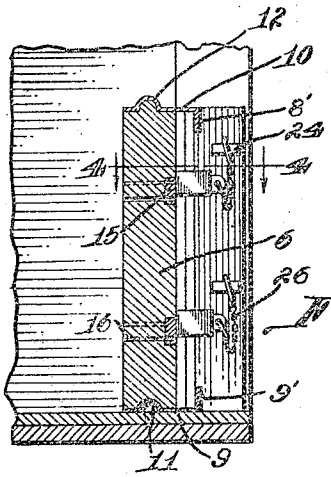


Fig. 3.

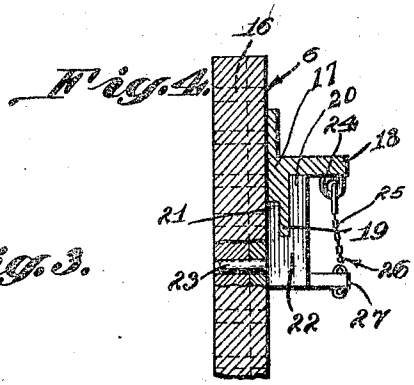
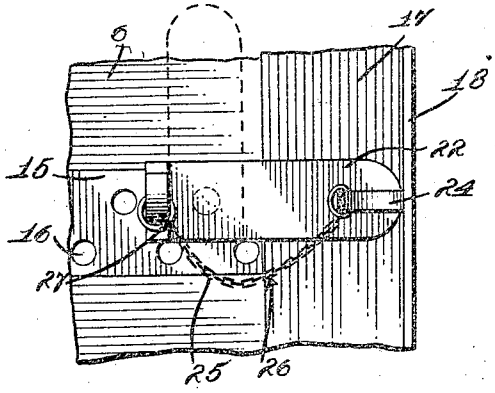


Fig. 4.

Fig. 5.



W. F. Frimmel and
W. D. Henderson,
Inventors

By Atwood & Co.
Attorneys

Patented May 27, 1924. 1,495,836

UNITED STATES PATENT OFFICE.

WENZEL FRIMMEL AND WILLIAM D. HENDERSON, OF DORRANCE, KANSAS.

CAR DOOR.

Application filed July 13, 1922. Serial No. 574,769.

To all whom it may concern:

Be it known that we, WENZEL FRIMMEL and WILLIAM D. HENDERSON, citizens of the United States, residing at Dorrance, in the county of Russell, State of Kansas, have invented a new and useful Car Door, of which the following is a specification.

This invention relates to car door constructions and more particularly to grain car doors, the primary object of the invention being to provide an adjustable door of this character wherein the same may be used in connection with door openings of various widths.

Another object of the invention is to provide a novel locking means, whereby the door may be locked within a door opening and held in such position until the car has been filled.

A still further object of the invention is to provide a sectional door of this character supplied with novel means for preventing grain from passing between the sections of the door.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:

Figure 1 is a side elevational view disclosing a door constructed in accordance with the present invention as positioned in a door opening.

Figure 2 is a sectional view on line 2—2 of Figure 1.

Figure 3 is a sectional view on line 3—3 of Figure 1.

Figure 4 is a sectional view on line 4—4 of Figure 3.

Figure 5 is an enlarged detail view of the locking lever.

Referring to the drawings in detail, the reference character 5 designates the side members of a car door frame, between which the door, forming the subject matter of the present invention is positioned.

The door or closure is indicated at 6 and is formed with an opening 7 intermediate its ends, which opening is closed by the sliding closure 8, which has its upper and lower ends positioned behind the flanges 8′ and 9′ respectively, forming parts of the plates 9 and 10, secured along the upper and lower edges of the door 6.

These plates 9 and 10 form a part of each section, the plate 9 being formed with a depression 11 to accommodate the rib 12 of the adjacent section, it being understood that while we have shown one of the sections, it is contemplated to employ a number of these sections sufficient to close the door opening.

Secured in spaced relation with one end of the door 6, is a plate 13 which has a right angled flange 14 adapted to abut one of the walls of the door frame. Secured to the door and arranged in parallel relation with each other, at a point adjacent to the opposite end of the door, are plates 15, each of which being provided with a plurality of openings 16 that register with suitable openings formed in the door, which openings may have their inner ends closed by suitable means not shown, to prevent grain from falling therethrough. The openings 16 are disposed in staggered relation with each other to insure a wide range adjustment of the movable clamping member to be hereinafter more fully described.

This movable clamping member is indicated at 17, and has its ends disposed behind the flanges 8′ and 9′ to secure the clamping member to the closure 6 and at the same time permit the clamping device to be moved longitudinally of the door. A right angled flange 18 forms a part of the clamping member 17 and is adapted to be moved into close engagement with the opposite wall of the door frame as shown in Figure 1 of the drawings.

The clamping member 17 is also formed with a cut out portion providing an extension 19 adapted to cooperate with the extensions 20 and 21 formed on the pivoted locking arms 22, which arms carry pins 23 adapted to be positioned in predetermined openings 16 of the plates 15 to adjust the locking arms with respect to the clamping member. Ears 24 are formed on the clamping member, which ears have openings to accommodate the connecting links 25 of the chain 26, which chains also have connection with the locking arms as at 27, thereby insuring against the locking arms becoming displaced.

In the use of the device, the flange 14 is

moved to engage one wall of the door frame. The movable clamping member 17 is now moved to bring the flange 18 thereof into engagement with the opposite side of the door frame. With the clamping member in this position, the locking arms are positioned on the plates 15, the pins 23 thereof being positioned in predetermined openings of the plates so that when the locking arms are swung to engage the clamping member, they will force the clamping member into engagement with the wall of the door associated therewith, consequently setting up a binding action between the clamping member and wall of the door to hold the device against movement.

It is obvious that as a car is being filled with grain, sections of this character are added one on the other, until the car has been filled.

If it is desired to remove the grain from the car, the sliding closure 8 is moved to permit a quantity of grain to discharge therethrough, the sections being removed in succession as the level of the grain in the car falls.

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

In a grain car door securing device, a door section, a vertical flange secured adjacent to one end of the door section, said door section having a plurality of openings disposed adjacent to the opposite end of the door, a removable flange member having a cut out portion providing an extension, pivoted locking members having pins adapted to be positioned in the openings adjacent to the flange member, said locking members having tongues adapted to move under the extension of the flange member, to cause the flange member to bind against the wall of the door opening to secure the door against movement.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WENZEL FRIMMEL.
WILLIAM D. HENDERSON.

Witnesses:
CHARLY KAUFMANN,
H. T. MANDERSON.