G. L. McALLISTER.

GRAIN CAR DOOR.

APPLICATION FILED AUG. 27, 1919.

1,387,059.

Patented Aug. 9, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

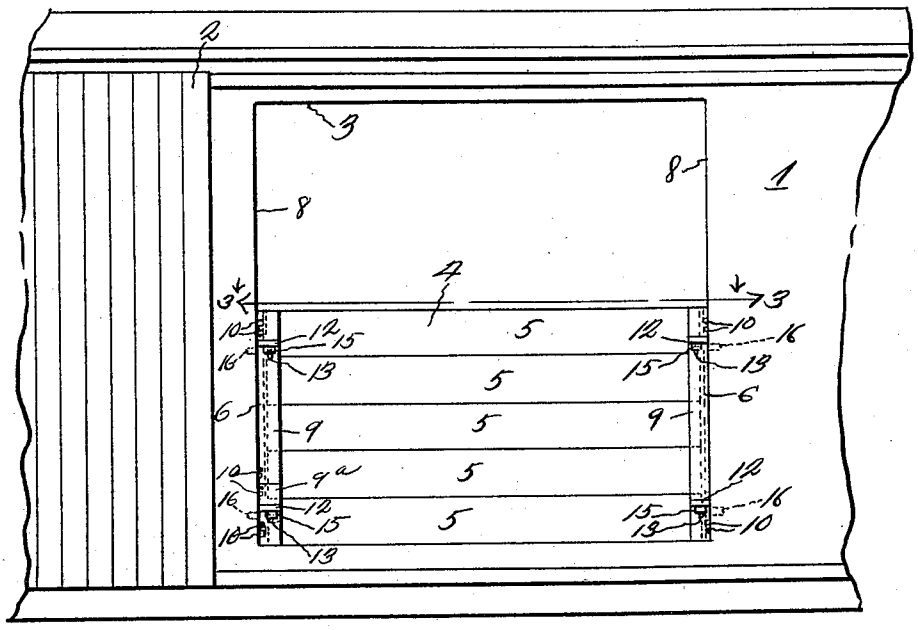
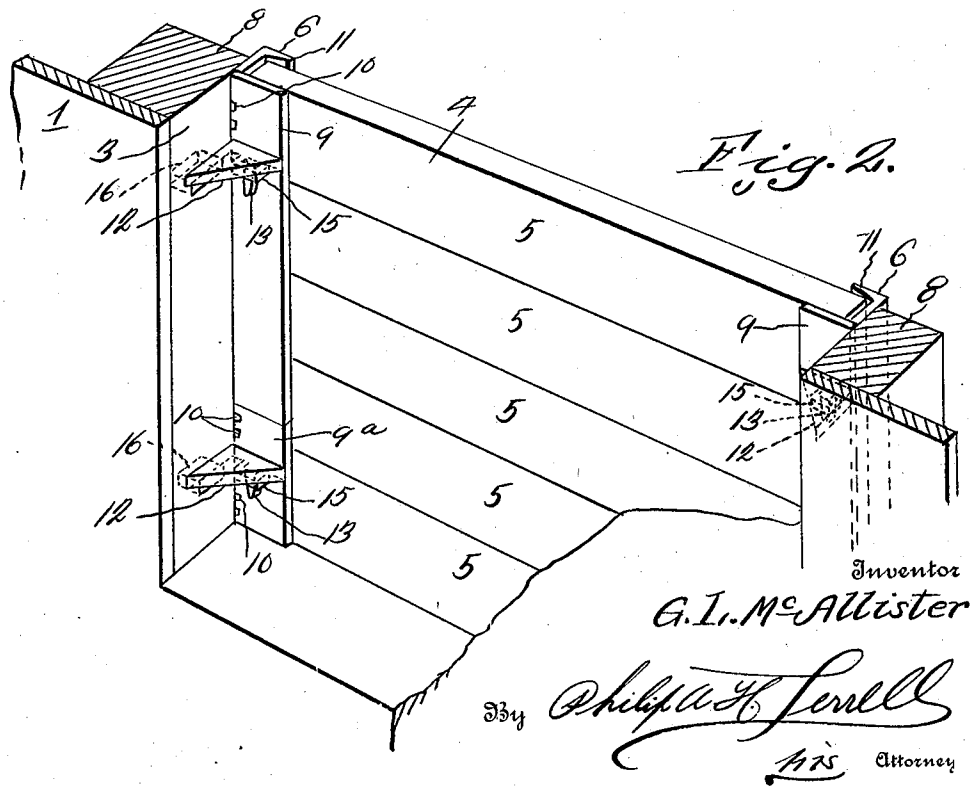


Fig. 2.



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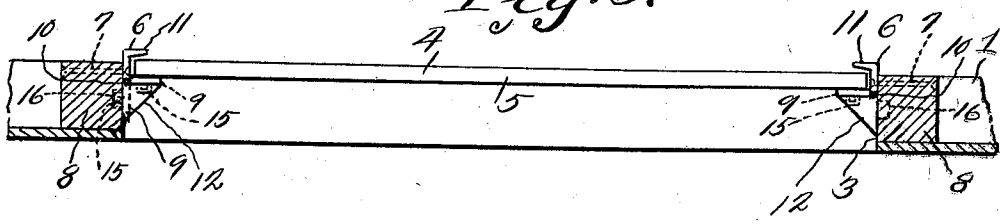
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2 SHEETS—SHEET 2.

Fig. 3.



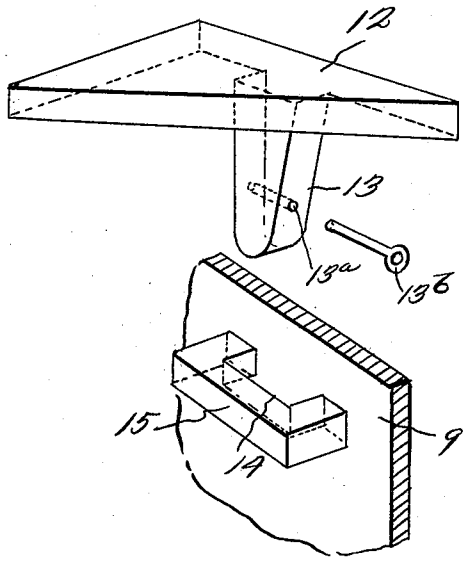


Fig. 4.

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GEORGE L. McALLISTER, OF OMAHA, NEBRASKA.

GRAIN-CAR DOOR.

1,387,059. Specification of Letters Patent. **Patented Aug. 9, 1921.**

Application filed August 27, 1919. Serial No. 320,162.

To all whom it may concern:

Be it known that GEORGE L. McALLISTER, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, has invented certain new and useful Improvements in Grain-Car Doors, of which the following is a specification, reference being had therein to the accompanying drawing.

The invention relates to auxiliary doors for grain cars and has for its object to provide a channel iron supporting means for a series of boards disposed one upon the other in said channel iron, thereby obviating the practice at the present time of nailing boards to the car door frame.

A further object is to provide channel irons wherein the outwardly disposed flanges thereof are hinged and to provide means disposed between said hinged flanges and the door frame for preventing movement of said hinged flanges, said means being so constructed that when it is desired to remove the boards forming the auxiliary door, the lower one of said hinged flanges of one of the channels may be allowed to swing outwardly so that the lower board may be removed thereby allowing the grain to flow through the opening.

With the above and other objects in view the invention resides in the combination and arrangement of parts as hereinafter set forth, shown in the drawings and claimed, it being understood that changes in the precise embodiment of the invention may be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings:—

Figure 1 is a view showing the door opening of a car and the auxiliary door in position.

Fig. 2 is a detail perspective view of the auxiliary door.

Fig. 3 is a horizontal sectional view taken on line 3—3 of Fig. 1.

Fig. 4 is a detail perspective view of the means for maintaining the hinged flange in normal position against the ends of the board.

Referring to the drawings, the numeral 1 designates a conventional form of grain car and 2 the usual sliding door adapted to slide over and cover the door opening 3. The auxiliary grain door 4 comprises a series of super-imposed boards 5, their ends being disposed in channels 6 secured by rivets or the like 7 to the vertical post 8 of the door frame. Channels 6 have their outwardly disposed flanges 9 hinged as at 10, so that said flanges may be pivoted outwardly against the vertical posts 8 of the door frame, thereby allowing the lower board 5 to be easily removed from the door opening when it is desired to allow the grain to flow from the car, the lower board being allowed to be removed by the opening of the section 9^a of the flange 9.

Boards 5 are preferably made to loosely fit within the channels as shown in Fig. 3, so that the same will not become jammed and the lower one may be easily removed when section 9^b of the flange 9 is open, also allowing the placing of a tool between the flanges 11 and the ends of the boards so that the boards may be forced outwardly into engagement with the hinged flanges 9 and 9^a thereby preventing leakage of the grain. It is to be observed that by this loose construction that it may be only necessary to hinge one flange 9 of the channels 6. If this is done the hinged flange 9^a is moved into engagement with the vertical post 8, and the end of the lower board 5 thus released is pulled outwardly. The other end of the board being loosely mounted in the other channel 6 may be easily removed from said channel thereby allowing the grain to flow from the car, however it is thought desirable to pivot both flanges 9. Flanges 9 and 9^a are maintained in normal positions by means of right angle brackets 12, said brackets being adapted to fit into the corners formed by the flanges 9 and the faces of the vertical post 8. The lower surfaces of the right angle brackets 12 are provided with downwardly extending tapered lugs 13, which lugs are adapted to be received by openings 14 formed by U-shaped members 15 carried by the pivoted members 9. It will be seen that when the lugs 13 are in place that the hinged members 9 will be prevented from pivotal movement, thereby preventing displacement of the transversely disposed boards 5, there being apertures 13^a in the ends of the lugs 13 for the reception of pins 13^b for preventing the displacement of the members 12. U-shaped members 15, when the hinged flanges 9 or 9^a are folded outwardly are received by apertures 16 in the vertically disposed post 8 thereby allowing the pivoted flanges 9 to come into close en-

gagement with said post so that they will not obstruct the passage and removal of the transversely disposed board 5, if it is desired to place them in place in that manner or to remove them.

It is customary to only fill a grain car substantially half full, therefore channels have only been shown as extending about half up the opening, however it is to be understood that these channels may if so desired extend to the top of the door opening.

From the above it will be seen that an auxiliary door for grain cars is provided which will prevent the loss of grain and at the same time relieve the weight of the grain from the main door, thereby allowing the usual access to the car and easy removal of the auxiliary door and contents of said car.

The invention having been set forth what is claimed as new and useful is:—

An auxiliary door for grain cars comprising vertically disposed channels having their body portions secured to the vertical sides of the door opening, a series of superimposed boards of less width than the space between the channel iron flanges, each of said channels having its outer flange pivoted to the outer edge of the body portion thereof, a U-shaped member carried by each of said outer flanges, right angled flange holding members horizontally disposed in the corners between the outer flanges and the vertical posts of the door opening, a depending lug carried by each of said right angle flange holding members and adapted to engage the U-shaped member of the adjacent outer flange to hold said outer flange in parallel relation to its mating inner flange and apertures in the faces of the vertical post for receiving the U-shaped members of the flanges when the right angled holding members are removed, thereby allowing the hinged flanges to be placed in the same vertical plane as the body portions of the channels, and the superimposed boards to be easily removed from the channels.

In testimony whereof I hereunto affix my signature.

GEORGE L. McALLISTER.