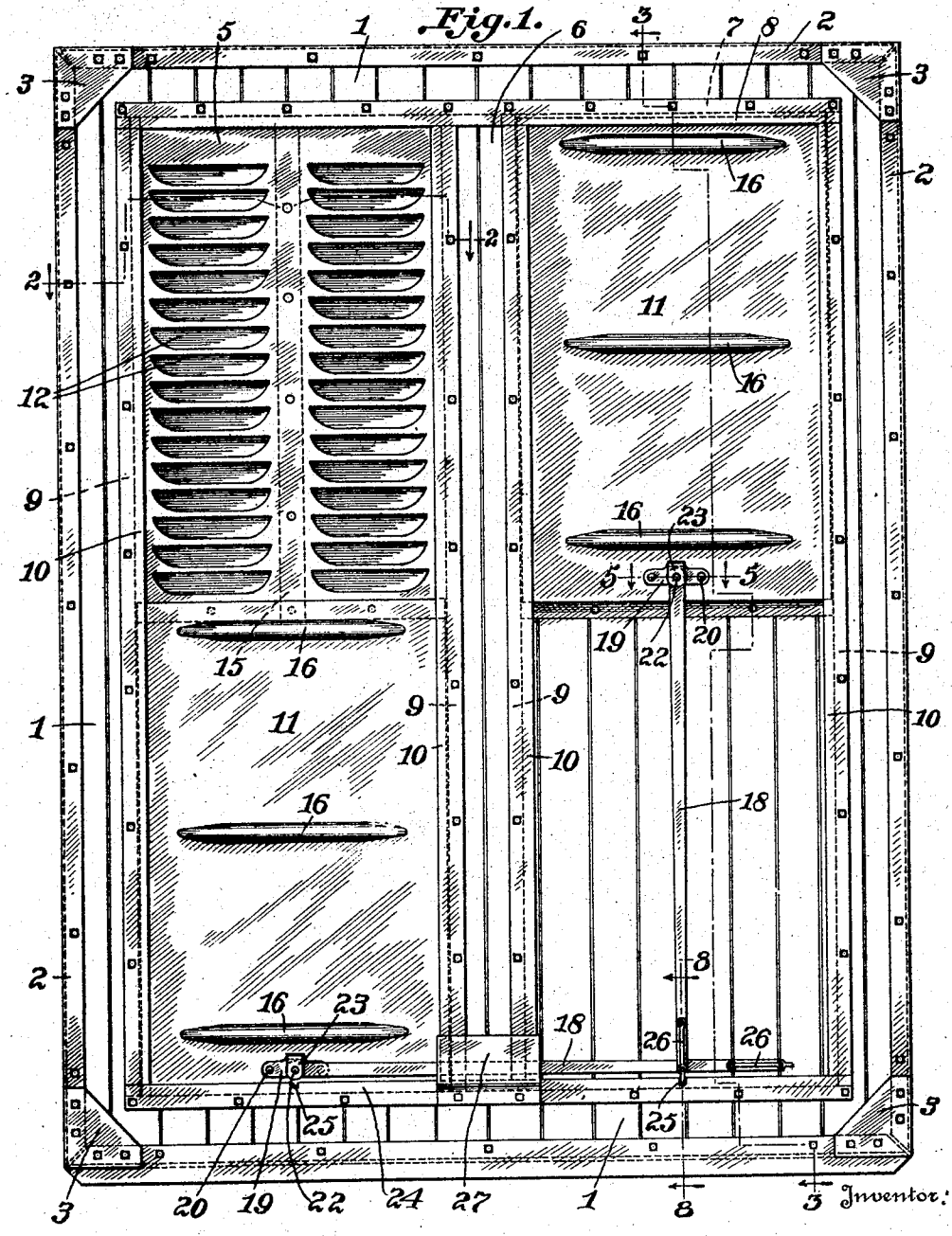
July 6, 1926. 1,591,198

W. E. WINE

VENTILATED CAR DOOR

Filed Oct. 8, 1925 2 Sheets-Sheet 1

Fig. 1.



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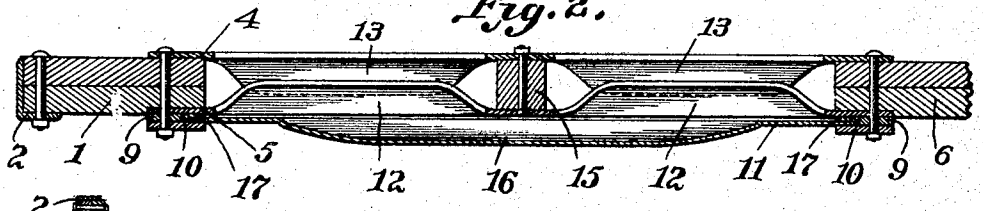
July 6, 1926. 1,591,198

W. E. WINE

VENTILATED CAR DOOR

Filed Oct. 8, 1925 2 Sheets-Sheet 2

Fig. 2.



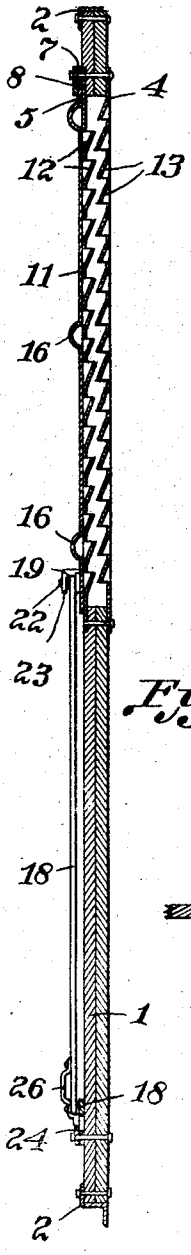


Fig. 3.

Fig. 4.

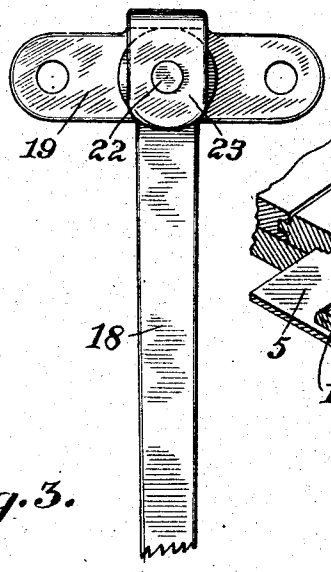


Fig. 6.

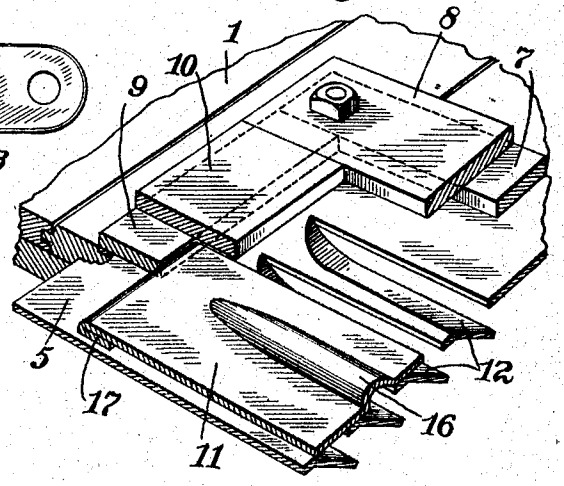


Fig. 5.

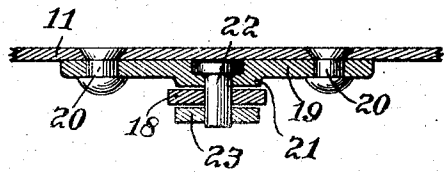
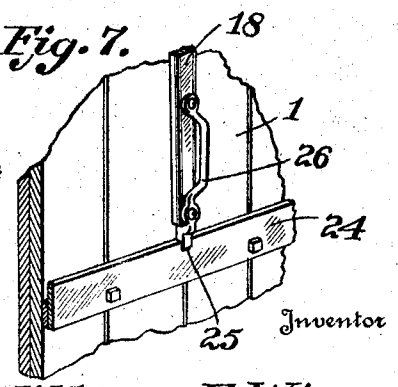


Fig. 7.



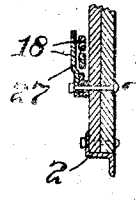


Fig. 8.

Inventor

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Patented July 6, 1926. 1,591,198

UNITED STATES PATENT OFFICE.

WILLIAM E. WINE, OF TOLEDO, OHIO.

VENTILATED CAR DOOR.

Application filed October 8, 1925. Serial No. 61,294.

My invention relates to new and useful improvements in car doors and more particularly to a door for freight cars, baggage cars, or other types of cars wherein it is desired to supply a door which is provided with means for ventilating the interior of the car and at the same time add but little excess weight to the car door as a whole.

Still another object of the invention is to provide a car door wherein the upper part of the door is ventilated by providing a plurality of vents or louvers which may be stamped or pressed from sheet metal and to furnish a cover or shield for the ventilator so that the louvers may be opened or closed as desired and at the same time to form this ventilating means of relatively light material.

Furthermore, a freight car door is subjected to not only the rough usage and shocks incident to the car as a whole, but the doors are, of course, subjected to the shocks incident to being forced open or slammed shut, and it is therefore necessary to provide some form of ventilator or ventilating means which will withstand this rough treatment.

Another one of the objects, therefore, of the invention, is to provide a car door, wherein the upper half or a quarter of the door may be ventilated and wherein there is only one moving part such as a shutter or shield for each ventilator to close or open the respective ventilators and these shutters or shields sliding in a vertical manner, assure a long life to the ventilators, and to the car door and call for but little repair or replacements.

With these and numerous other objects in view, the invention consists in certain new and novel arrangements and combination of parts, as will be hereinafter more fully described and pointed out in the claim.

Referring now to the drawings,

Fig. 1 is a view in elevation of my improved car door, one ventilator being shown open and the other closed.

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1 looking in the direction of the arrows.

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

Fig. 4 is a fragmentary view of the support or handle for the shutter or cover for the ventilators.

Fig. 5 is a sectional view of the portion of the above support, taken on line 5—5 of Fig. 1.

Fig. 6 is a fragmentary perspective of an upper corner of a ventilator and the manner of supporting one of the louver plates, and also the manner of forming the track or guide for the shutter or cover of the ventilator.

Fig. 7 is a fragmentary perspective showing how the support is held in its upright position, and

Fig. 8 is a fragmentary section of the rest plate for holding the supports when not in use.

Referring now more specifically to the several figures, and to Fig. 1 in particular, I have shown a car door formed of a plurality of wooden strips or boards 1, the several outer edges of the door being reinforced by the metal strips 2, while the gussets or angle plates 3 are shown to reinforce the door at its corners.

The upper half of the door is provided with two large rectangular openings in each of which are situated the metal plates 4 and 5 that form the ventilator (see Fig. 3), a central support 6 being left between the two rectangular openings to brace the door and receive the adjacent edges of the ventilators. Across the top of these two openings there is placed a strip 7 which in turn is slightly overlapped by the strip 8, the detail construction being clearly shown in Fig. 6. Also, as may be seen in Fig. 6, (and Fig. 1) the sides of the opening for each ventilator are provided with a strip 9 and an overlapping strip 10 to hold the plates of the ventilator in their position and to also protect the edges of the ventilator from the weather, and to furthermore form guides or tracks for the shutters or covers 11 which are adapted to slide vertically as will be shortly described. It will be understood as the specification proceeds, that the openings in the upper part of the door, the ventilators and shutters are all similar in their respects, so that a description of one ventilator, opening and shutter, is a description of both of them.

Referring now to the form of ventilator for these several openings, it has been stated that two plates 4 and 5 have been inserted and it will be noticed that these plates are provided with a plurality of louvers, the plate 5 having the louvers 12, while the plate

4 has the louvers 13, the said louvers being so arranged that the louvers in one plate, when the plates are in position, extend slightly below the corresponding louvers in the other plate, so that it will not be possible for any driving rain to be forced through the louvers to the interior of the car. These louvers may be in two vertical series, so that a reinforcing post 15 may be placed between the two plates as may be clearly seen in Fig. 2.

This is a relatively cheap manner in which to form the ventilators inasmuch as these plates may be put in, say, a hundred ton press, with suitable dies and the plates may then be rapidly struck out. As it is often desirable to vary the amount of ventilation or to stop any ventilation, I have provided a very cheap means which comprises a shutter or cover 11 which may be reinforced by the horizontal corrugations 16, while the edges of this shutter may be turned over as at 17 to thus compensate for the thickness of the strip 9 and to make a tight fitting or tight running shutter within its track. It will be noticed that the strips 9 and 10 extend substantially the vertical height of the door so that the shutter 11 may be pushed to the upper position as shown to the right of Fig. 1, or it may be lowered to its open position, as shown in the left hand corner of Fig. 1.

Inasmuch as the shutter 11 would be (or is) a little high for an operator to reach from the ground, I have provided a combined support and handle 18 which is pivoted at its upper end in a bracket which latter is riveted as at 20 to the shutter. As shown in Fig. 5, this bracket may consist of the plate 19 having the boss 21 thereon in which will fit the pin or pivot 22, the outer end of the pin being supported in the overlapped ear 23. Mounted on this pin is the supporting bar or handle 18, as may be clearly seen in Figs. 1 and 4. In Figs. 1 and 7 there is shown, along the lower portion of the door, a strip 24 which is provided with two notches 25 to receive the lower end of a grab-iron 26 so that when the support or handle 18 is in the position as shown to the right of Fig. 1, there is no possibility of the same moving laterally to thus allow the shutter or cover to drop.

As may also be seen in Figs. 1 and 8, centrally of the width of the door and at its bottom, there is provided a rest plate 27, so that when the shutter 11 is in its lowermost position the support or handle 18 will fit behind the same to prevent it from rattling or becoming damaged or prevent it from swinging downwardly from the lower portion of the door.

It will be understood that although in Fig. 1 I have shown one of the shutters in its lowered position and one in its upper position; this is simply for the purpose of illustration as it will be appreciated that both shutters may be in their upper position at the one time or both may be lowered together.

From the foregoing it will be seen that the door is inherently strong, the lower portions being solid and the upper portions being provided with openings for the reception of the ventilators formed of metal plates having louvers and that these louvers may be opened or closed by sliding the shield or shutters to a raised or lowered position.

Furthermore the shutters or covers may be conveniently supported in their uppermost position by the use of the support or handle shown, and making it possible for a person on the ground to raise or lower the shutters without being elevated from the ground or track bed.

It will also be seen that the door, although having ventilating means therein, may be a relatively light one and that there is only two main movable parts, that is, the covers for each of the ventilators, which of course, carry their respective supports, thus doing away with various complicated means for opening and closing the louvers when desired.

The arrangement of the guides or tracks for the doors are extremely simple, and also prevent any water from entering around the edges of the ventilators.

Many slight changes might be made without in any way departing from the spirit and scope of the invention.

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

A car door having two fixed ventilators in its upper portion, said ventilators occupying the greater part of the upper portion of the door, each of said ventilators comprising two plates with louvers therein, a plurality of overlapping strips for protecting the several edges of the ventilators and also for forming shutter tracks, a shutter movable in said tracks for each of said ventilators, a bracket secured near the bottom of each of the shutters and provided with a hanging support, separate means for retaining the supports in an upright position to hold the shutters in place, and means located between the paths of travel of the two said shutters for holding and nesting both of the supports together and at right angles to the vertical axis of the shutters when the said shutters are in their lowermost position.

In testimony whereof I affix my signature.

WILLIAM E. WINE.