

No. 709,596.

Patented Sept. 23, 1902.

W. CLINE.

STOCK CAR.

(Application filed Nov. 13, 1899.)

(No. Model.)

3 Sheets—Sheet 1.

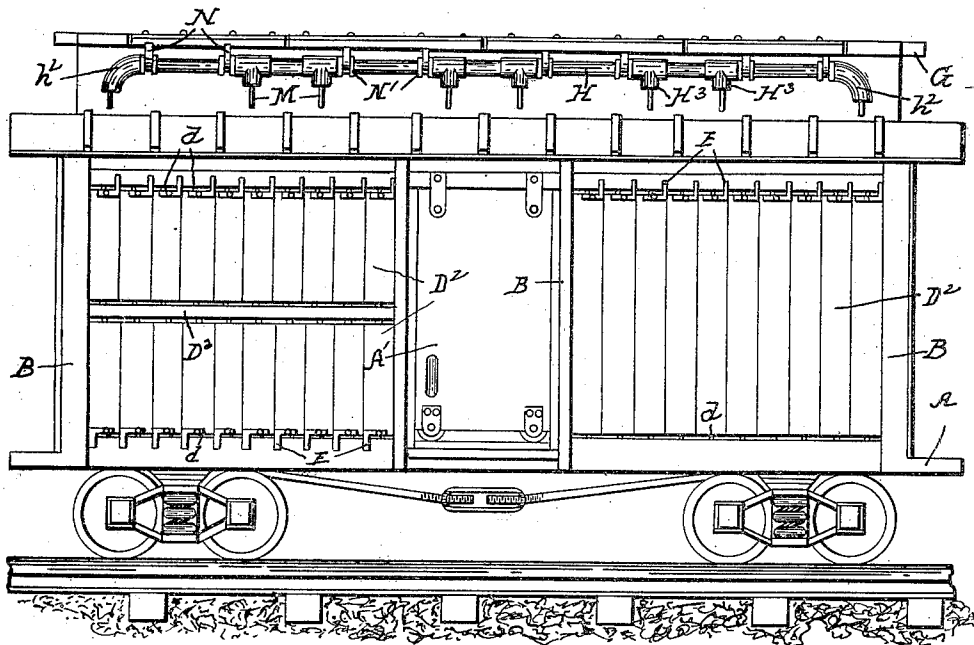


FIG. 1.

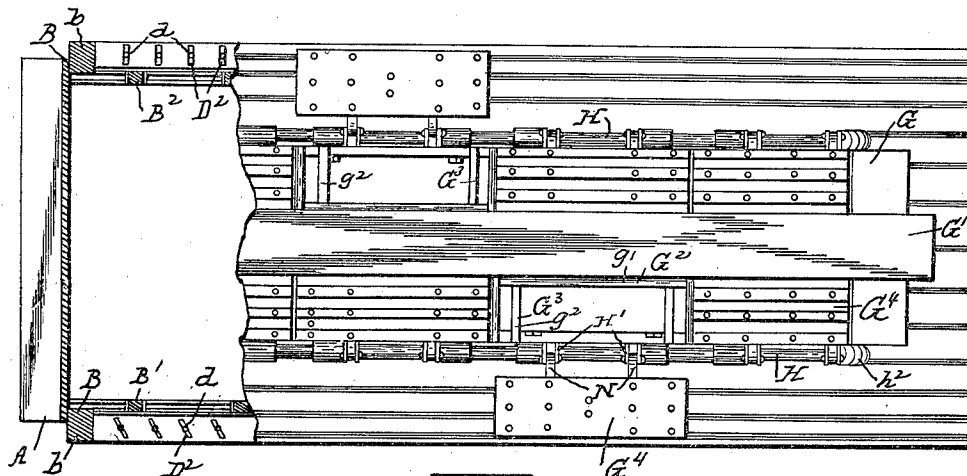


FIG. 2.

WITNESSES

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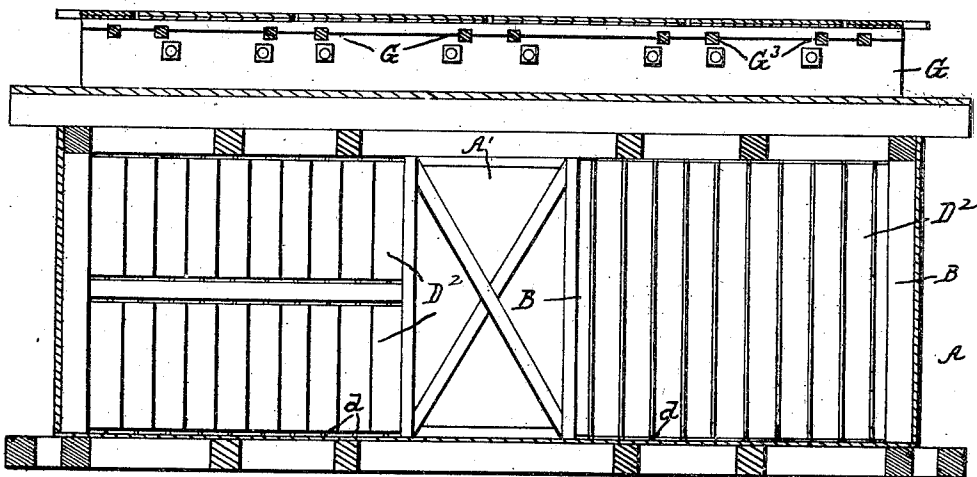
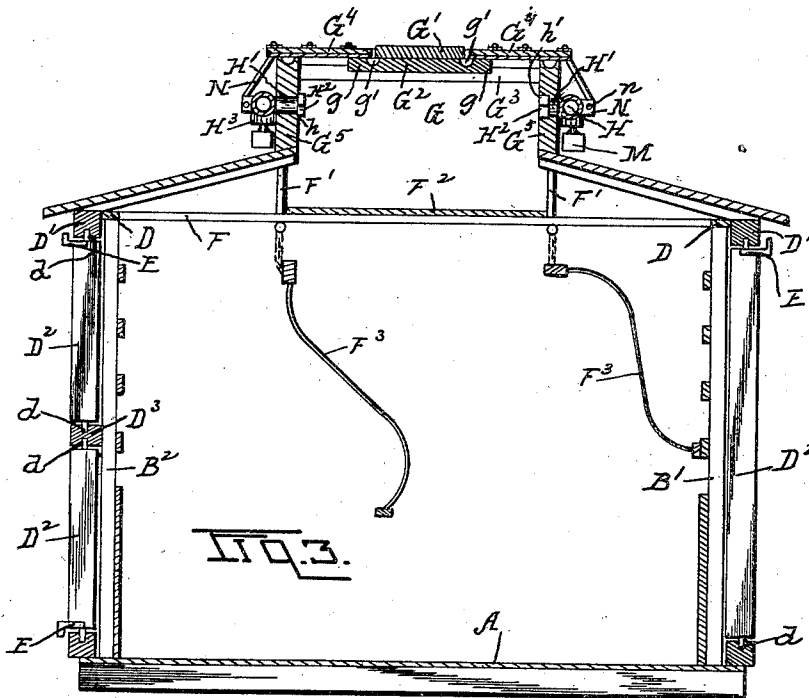
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3 Sheets—Sheet 2.



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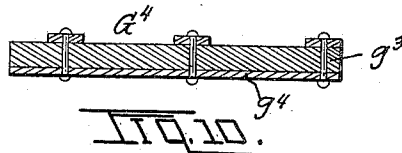
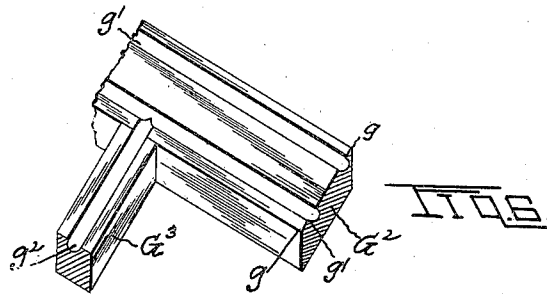
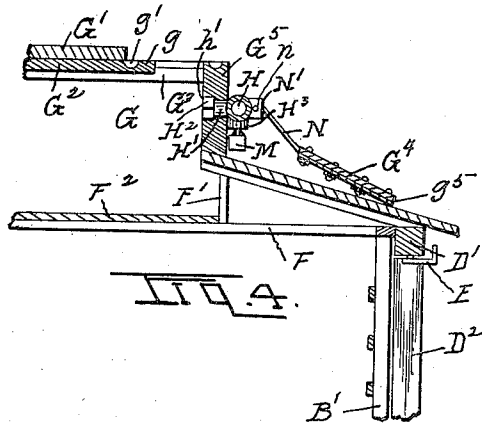
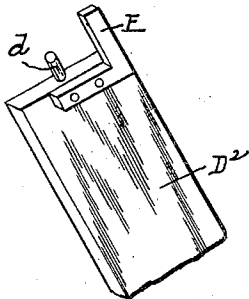
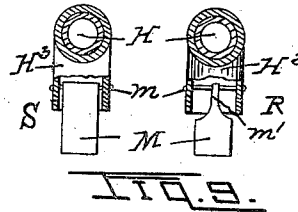
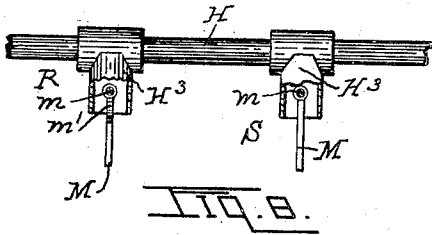
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(No Model.)

3 Sheets—Sheet 3.



WITNESSES.

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STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 709,596, dated September 23, 1902.

Application filed November 13, 1899. Serial No. 736,743. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CLINE, a citizen of the United States, and a resident of Lancaster, county of Lancaster, State of Pennsylvania, have invented certain Improvements in Stock-Cars, of which the following is a specification.

This invention relates to improvements in that class of cars designed more particularly for use in transporting horses and cattle; and it is an improvement on the construction shown and described in Letters Patent No. 575,429, dated January 19, 1897; and the object of these improvements is to facilitate the feeding of the animals.

The invention consists in the construction and combination of the various parts, as will be hereinafter fully described, and then pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side elevation of a car embodying my improvements, different arrangements of the slats being shown on opposite sides of the door. Fig. 2 is a top plan view of the car, parts being cut away and one of the doors of the clearstory being shown in an open position. Fig. 3 is a transverse section thereof; Fig. 4, a transverse section of a portion of the clearstory, showing one of the doors in the position occupied thereby when open; Fig. 5, a longitudinal section of the car. Fig. 6 is a perspective view of a portion of the roof-frame of the clearstory; Fig. 7, a perspective view of the upper end of one of the side slats; Figs. 8 and 9, respectively, side and front sectional views of the outlets of the ventilator-pipe; and Fig. 10 an enlarged section of one of the doors of the clearstory.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A indicates the body of the car; A', the side doors; B, the end posts of the frame and those adjacent to the side doors, which posts extend outward beyond the intermediate posts B' B', as seen at *b*, Fig. 2, and D D are the cap pieces or plates, resting on posts B, B', and B'.

D' D' are stringers connecting the out-

wardly-extending portions of posts B, and D² slats having in their ends centrally-located pins *d*, which are pivoted in the opposite faces of the upper and lower stringers D'. The length of these slats may be of the full height of the car, as seen on the right of Fig. 1, or they may be divided centrally into two rows and have their inner ends pivoted in an intermediate stringer D³, as seen on the left of Fig. 1. These slats are not connected in any other way than by the stringers in which they are hinged, and thus each slat can swing independently of all the others; but on the outer edge of one end of each slat is fixed an upwardly or downwardly extending arm E, which as the slats swing either one way or the other engage the adjacent stringer, serving as detents to limit the movement of the slats when they close upon each other. By this construction slats D² swing with the wind; but, while they do not at any time close tightly upon each other, they deflect the wind, rain, snow, cinders, and the like from the openings between them and between which ventilation of the car is had at all times.

F indicates the joists extending transversely of the car; F', posts on said joists and supporting the roof beneath the sides of the clearstory; F², a horizontal partition which serves as the floor of a hay-loft and as a portion of the ceiling of the car, and F³, hay-racks located adjacent to the sides of the car, as shown on the right of Fig. 3, and constructed to have their lower edges detached from the side of the car and swung back into the body thereof, as shown on the left of Fig. 3. The hay-racks do not form any part of this invention, and therefore their construction and the manner of operating them are not further described.

G indicates the clearstory, closed at both ends and having on top and extending longitudinally of the center thereof a running-board G', resting on a similarly-disposed plate G², which is supported by the joists G³ of the clearstory. Plate G² is wider than running-board G' and has its longitudinal edges projecting on both sides of said running-board, and plate G² is let into joists G³ and has its

upper surface flush with the tops of said joists. To the longitudinal sides of the clearstory are hinged doors G^4 , adapted to close the openings in the top of said clearstory on the sides of running-board G' , and the ends of these doors when closed rest on said joists G^3 , and the inner edges thereof rest on the flanges g , formed by the edges of plate G^2 projecting beyond the edges of running-board G' . In the tops of flanges g are gutters g' , extending longitudinally thereof, which gutters connect with similar gutters g^2 , formed in the tops of joists G^3 and which extend outward from said gutters g' to the outside of walls G^5 of the clearstory. Thus water is prevented from passing into the clearstory through the joints in its roof.

Doors G^4 are constructed of thin boards g^3 , having a lining g^4 of sheet-iron, zinc, or other sheet metal riveted to boards g^3 , thus forming light and strong doors. When open, the swinging edges g^5 of the doors rest on the roof of the car, as shown in Fig. 4. By reason of the lightness of the doors and the arrangement of the parts supporting them the clearstory can be made wider than could otherwise be done, greatly facilitating the handling of hay in the loft and the transferring of the same from the loft to the hay-racks.

Along the longitudinal sides of the clearstory and on the outside of and below the tops of walls G^5 are located ventilator-flues H , extending the length of the clearstory and supported by branch flues H' , which are connected with flues H by T-joints and which pass through walls G^5 of the clearstory, whereby ventilation of the car is had through the roof thereof. Said branch flues H' also serve to support and secure in place the ventilator-flues H , nuts H^2 being screwed on the inner ends of said branch flues, which nuts bear against the inner faces of walls G^5 , as shown at h , or they may be countersunk in the inner faces of said walls, as shown at h' . At intervals outlet-pipes H^3 depend from ventilator-flues H , and the ends h^2 of said ventilator-flues are turned downward for the same purpose. As will be understood, ventilation is through branch flues H' to and through ventilator-flues H and to and out of outlet-pipes H^3 and h^2 . In outlet-pipes H^3 and h^2 deflectors M are pivoted at their upper ends. The lower ends of said deflectors extend below the bottoms of the outlet-pipes, and they are adapted to swing freely about their pivots m , so that they are blown backward from the direction in which the car moves and prevent the entrance through outlet-pipes H^3 and h^2 of cinders, dust, and smoke. Outlet-pipes H^3 and h^2 may be either circular in cross-section, as shown at R in Figs. 8 and 9, or they may be square, as shown at S in the same figures. In the circular outlet-pipes the deflectors have reduced stems m' , whereby said deflectors may have greater play about their pivots m , but in the square out-

let-pipes the deflectors may be of the same width throughout their entire length. These elongated flues H , with their branches and outlets, serve to create a current of air from the car much greater than can be created by simple outlet-flues opening from the car directly into space, and the strength of this air-current is much increased by the deflector M .

To the under sides of doors G^4 of the clearstory are attached outwardly and downwardly extending hinge-straps N , in the outer ends whereof are formed openings, and on ventilator-flues H are outwardly-projecting jaws N' , also having openings in their outer ends. The hinge-straps N and the jaws N' are connected, and the hinges of the doors are formed by hinge-pins n passing through said openings in the hinge-straps and in the jaws, the hinge-straps engaging between said jaws. By reason of this construction of the hinges said doors, when open, not only have their free edges supported by the roof of the car, but they entirely uncover the sides of the clearstory and allow unimpeded access to the hay-loft, so that hay can be more readily fed to the hay-racks than could otherwise be done. In addition to this the door-hinges are more securely attached to the sides of the clearstory, and the material of said sides of the clearstory is less apt to be splintered or strained than when the hinges are attached to the edges of said sides. Flues H and their branches H' also serve not only as ventilators, but as hinge-supports for said doors G^4 .

I do not restrict myself to the details of the construction herein shown and described, as it is obvious that many alterations may be made therein without departing from the principle and scope of my invention.

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

1. The combination, in a car, of a clearstory, a running-board extending lengthwise of the top of the clearstory, outwardly-projecting flanges on the sides of the running-board and having gutters lengthwise thereof, joists supporting the running-board and having gutters that connect with the gutters in the running-board, and doors hinged to the side walls of the clearstory and adapted, when closed, to have their swinging edges rest on said flanges of the running-board.

2. The combination, in a car, of a clearstory, joists extending across the clearstory and having gutters, a plate countersunk in the joists and extending lengthwise of the clearstory, a running-board of less width than said plate and resting on the center thereof, gutters longitudinally of the projecting edges of said plate and connecting with gutters in the joists, and doors hinged to the side walls of the clearstory and adapted, when closed, to have their edges rest on the projecting edges of said plate.

3. The combination, in a car, of a clearstory, a door on the top of the clearstory, a

rod or tube extending along the side of the clearstory, and hinge-straps connecting said door and the rod, for the purpose specified.

4. The combination, in a car, of a clear-story, a door on the top of the clearstory, jaws projecting outward from the side of the clearstory, hinge-straps projecting from said doors, and a hinge-pin connecting the outer ends of the jaws and of the hinge-strap, for the purpose specified.

5. The combination, in a car, of a clear-story, a door on the top of the clearstory, a rod or tube extending along the side of the clearstory, jaws projecting outward from the rod or tube, hinge-straps projecting from said doors, and a hinge-pin connecting the outer ends of the jaws and of the hinge-strap, for the purpose specified.

6. The combination, in a car, of a clear-story, a running-board extending lengthwise of the center of the clearstory and having outwardly-projecting flanges provided with gutters, joists supporting the running-board and having gutters connected with the gutters in the flanges, series of doors at the sides of the running-board and having their edges adapted to rest on said flanges and on the joists, jaws projecting outward from the sides of the walls of the clearstory, outwardly-projecting hinge-straps on the doors, and hinge-pins connecting the outer ends of said jaws and of the hinge-straps, for the purpose specified.

7. The combination, in a car, of a clear-story, a door on the top of the clearstory, a ventilator-flue extending along the outside of a wall of the clearstory, branches of said flue and extending through the wall of the clear-

story and supporting said flue in place, jaws on said flue, hinge-straps on the door, and hinge-pins connecting the outer ends of said jaws and of the hinge-straps, for the purpose specified.

8. The combination, in a car, of a clear-story, a door on the top of the clearstory, a ventilator-flue extending along the outside of a wall of the clearstory, branches of said flue and extending through the wall of the clearstory and supporting said flue in place, outwardly-projecting jaws on said flue, hinge-straps extending outward from the door, and hinge-pins connecting the outer ends of said jaws and of the hinge-straps, for the purpose specified.

9. The combination, in a car, of a clear-story, a running-board extending lengthwise of the clearstory and having outwardly-projecting flanges provided with gutters, joists supporting the running-board and having gutters connected with the gutters in the flanges, series of doors at the sides of the running-board and having their edges adapted to rest on said flanges and on the joists, ventilator-flues extending along the outside of the walls of the clearstory, branches on said flues and extending through the walls of the clearstory and secured therein by nuts, outwardly-projecting jaws on said flue, hinge-straps extending outward from the doors, and hinge-pins connecting the outer ends of said jaws and of the hinge-straps, for the purpose specified.

WILLIAM CLINE.

Witnesses:

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WM. R. GERHART.