(No Model.) 3 Sheets—Sheet 1.

J. M. BURTON.

STOCK CAR

No. 492,345. Patented Feb. 21, 1893.

Fig 1.

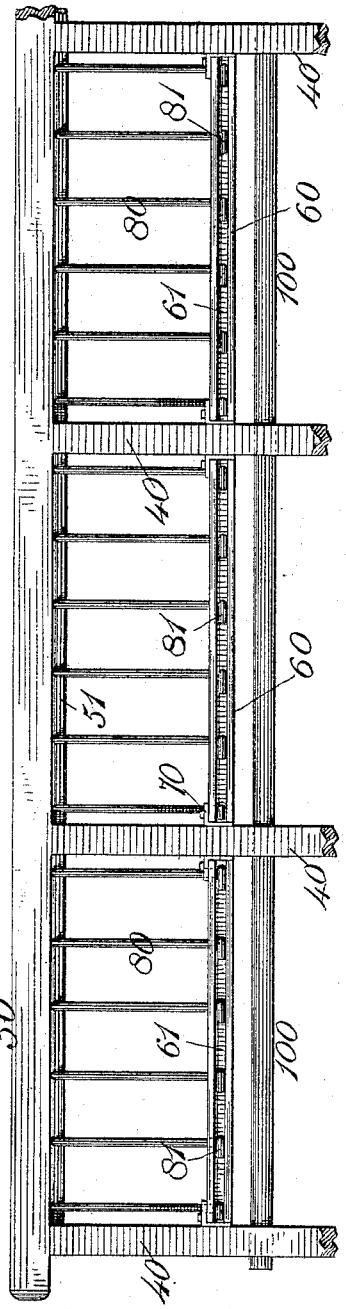
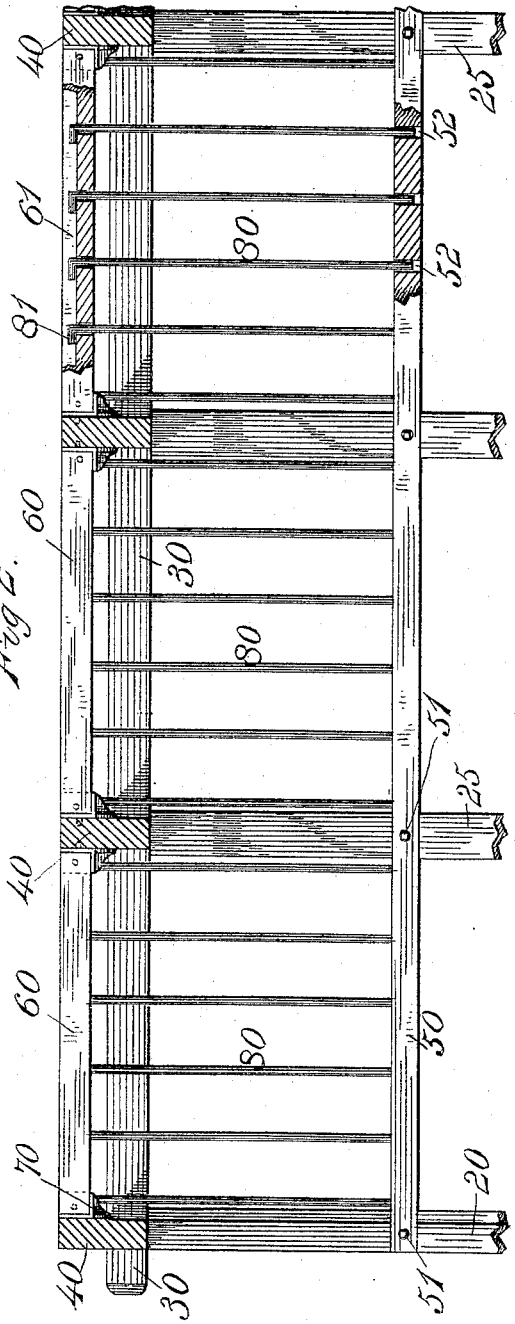


Fig 2.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 10.

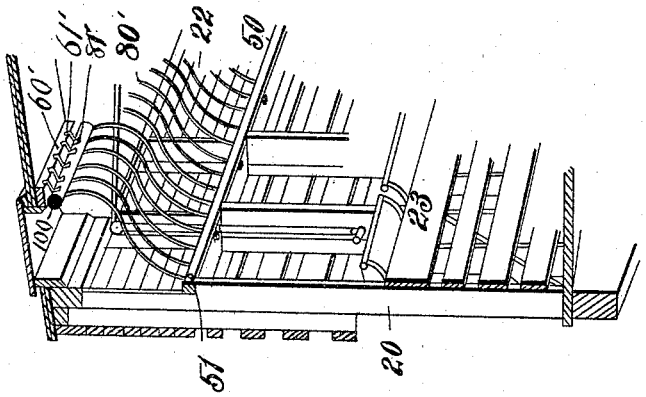


Fig. 6.

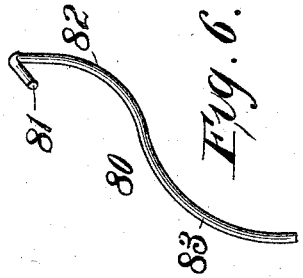
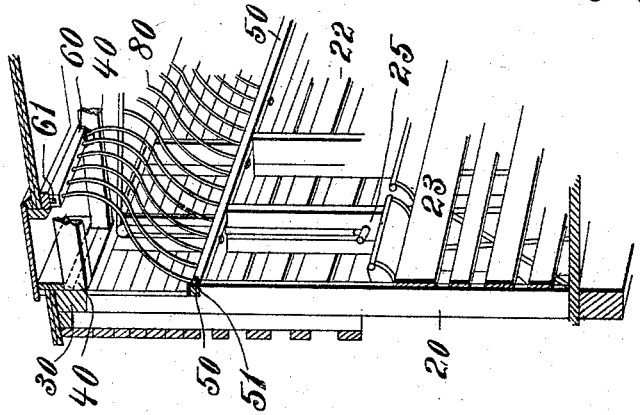


Fig. 3.



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(No Model.) 3 Sheets—Sheet 3.

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STOCK CAR.

No. 492,345. Patented Feb. 21, 1893.

Fig 7.

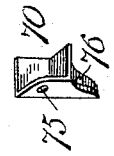


Fig 8.

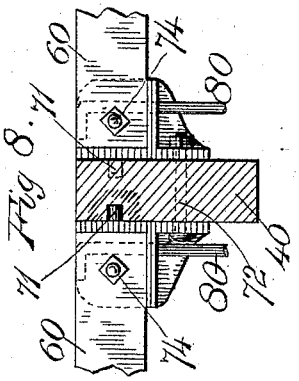


Fig 9.

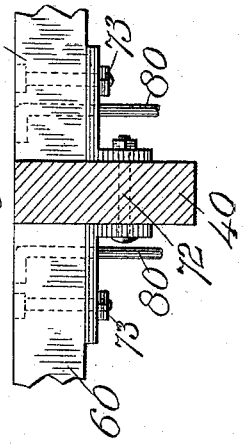


Fig 5.

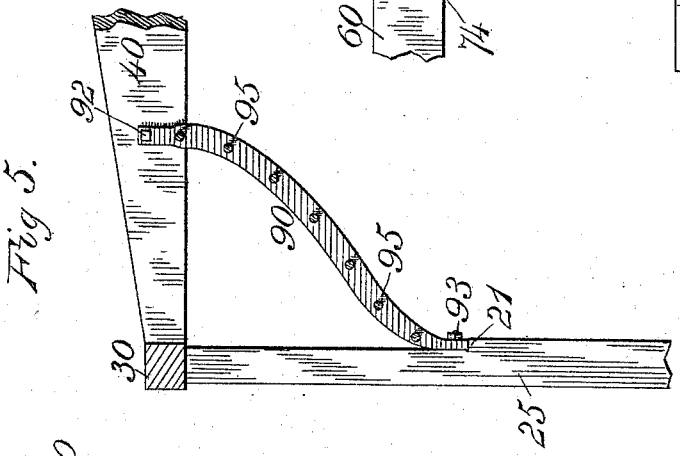
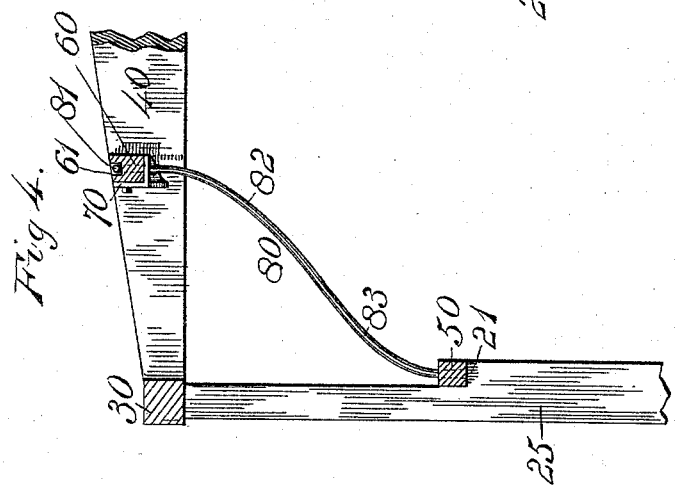


Fig 4.



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UNITED STATES PATENT OFFICE.

JOHN M. BURTON, OF WICHITA, KANSAS.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 492,345, dated February 21, 1893.

Application filed February 12, 1892. Serial No. 421,292. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. BURTON, a citizen of the United States, residing at Wichita, in the county of Sedgwick, State of Kansas, have invented a new and useful Improvement in Stock-Cars, of which the following is a specification.

This invention relates to a stock car provided with means for feeding and watering horses, cattle or other live animals transported therein.

The object of the invention is to provide a hay-rack of a capacity for storing a large quantity of hay sufficient for the longest journey, accessible to all the animals in the car, and of a form that will not obstruct the interior of the car, and that will serve to strengthen the frame of the car.

Figure 1 of the accompanying drawings represents a plan of a portion of a car frame and this improved hay-rack disposed thereon. Fig. 2 represents a rear elevation thereof. Fig. 3 represents a perspective view thereof. Fig. 4 represents a transverse section thereof. Fig. 5 represents a transverse section thereof in a modified form. Fig. 6 represents a perspective view of all the bars of the rack shown in Figs. 1 to 4. Fig. 7 represents a perspective view of one of the brackets for supporting the longitudinal upper bars of the hay-rack. Fig. 8 represents a transverse section through one of the carlings showing a means for supporting the upper rail of the hay-rack. Fig. 9 represents a transverse section of one of the carlings and brackets of another form attached thereto supporting the ends of the upper rails of the hay-rack. Fig. 10 is a perspective view of a portion of a car frame and this improved hay rack disposed thereon.

Similar numerals of reference indicate corresponding parts in the different figures.

A portion of the frame of a stock car is represented in the drawings, 20 being a corner post, 25 a body post, 30 a plate and 40 fragments of carlings. The side posts comprising the corner posts, body posts, and door posts, are all recessed at their upper parts on their inner faces, forming shoulders 21 at a height about equal to two-thirds the length of said posts.

The car is provided with four hay-racks, two on each side of the car, each extending between the door and one end of the car. An outer sheathing 22 extends from the plate 30 to or below the bottom of the hay-racks and the ordinary inner slatting 23 extends from the bottom of the hay-racks to the floor.

Each hay-rack comprises a longitudinal rail 50 supported within the recesses of the side posts on the offsets 21 thereof, flush with the inner faces of said posts, and extending from one of the door posts to one of the corner posts; longitudinal rails 60 supported between the carlings by means of brackets 70; curved bars 80 extend from the lower longitudinal rails 50 to the upper rails 60, and are disposed at proper distances apart to hold the hay and permit the entrance of the noses of the animals between them. The lower rails 50 which rest on the offsets 21 are fastened to the side posts by means of bolts 51 or other suitable fastening devices, the heads or nuts of said bolts resting in recesses in said rails. These rails are provided with vertical holes 52 disposed at the required distances apart to receive the vertical bars 80. Each of the upper rails 60 which spans the space between the carlings is provided with a longitudinal groove 61 and with holes extending from the bottom of said groove to the lower face of the rail, said holes being disposed at certain distances apart corresponding with the holes 52 in the lower rail 50. The brackets 70 which support the ends of the top rails 60 are provided on their rear faces near their upper ends, with studs 71 and below said studs with bolt holes 76. Two of these brackets are placed opposite each other on opposite sides of a carling, the studs 71 entering sockets in said carling. A bolt 72 passes through the holes 76 in both the adjacent brackets and through the intermediate carling and serves to clamp said brackets to the carling. The ends of the rails 60 are disposed in the brackets and clamped therein by horizontal bolts 74 which pass through the ends of said rails and through holes 75 in the side flanges of said brackets. The upper ends of two of the curved bars 80 may also pass through holes in the shelves of the brackets as indicated in Fig. 8.

The brackets shown in Fig. 9 are not provided with side wings and the ends of the

rails 60 are held on the shelves thereof by means of vertical bolts 73 which pass through said shelves and through said rails. The bars 80 are substantially or approximately ogee shaped, being curved inward in their lower portions and curved outward in their upper portions. Each bar is provided at its upper end with a lateral stud 81 which rests in the longitudinal groove of the upper rail 60 and locks the bar in position.

A modified construction is shown in Fig. 5 in which vertical curved rails 90 are attached at their lower ends to the side posts by means of bolts 93 and at their upper ends to the carlings by bolts 92, said rails being bulged outward in their upper portions and bent inward in their lower portions and resting on the offsets 21 of the side posts. Longitudinal bars 95 are passed through the vertical curved rails at proper distances apart to permit the noses of the animals to enter between them.

Another construction which is in the general scope of this invention is illustrated in Fig. 10 where the upper hayrack-rails 60′, corresponding to the upper rail 60 of some of the other figures, is provided with transverse grooves 61′ in lieu of the longitudinal groove 61 of the rail 60. In this construction ogee curved bars 80′ used in lieu of the curved bars 80 in the other construction, are provided with lateral studs 81′ which extend in line with the plane of the curve instead of at an angle thereto as in the case of the bars 81. As shown in said Fig. 10, the grooves 61′ of the upper rail 60′ are disposed on the underside of said rail instead of on the upper side thereof and a water pipe as 100 for supplying water to the troughs extends along the underside of said grooved rail. In this case the water pipe serves as a support for the upper ends of the hayrack bars, and the lateral studs thereof are bent down and hooked over said pipe, the transverse or angular grooves in said rails serving to lock the bars in position.

The outward bulging of the upper portion of the hay rack increases its capacity for hay and the inward curving of the lower portion thereof avoids interference with the heads and horns of the animals. The lower rails 50 serve as braces for the side posts and the upper rails 60 act as braces between the carlings, hence the framing of the car is stiffened and strengthened by the hay racks. A quantity of hay sufficient for the longest journey can be stored in the racks where it is accessible to all the stock in the car.

The parts of the hay-rack can be easily removed for repairs and it does not present sharp angles or projections which will tend to bruise the animals in transit.

I claim as my invention—

1. The combination with the frame of a stock car, of a hay-rack, the inner side of which is of ogee form, being convex in its upper portion and concave in its lower portion, substantially as set forth.

2. The combination of a stock-car frame whereof the side posts are provided with offsets, an upper hayrack-rail attached to the carlings, a lower hayrack-rail resting on said off-sets flush with the inner faces of said posts, and ogee bars spanning the space between said rails and forming the inner side of a hayrack which is convex in its upper portion and concave in its lower portion, substantially as set forth.

3. In a stock car, the combination with the frame thereof, of an upper rail supported by the carlings and provided with a longitudinal groove, a lower rail provided with sockets and vertical curved bars supported in said rails and provided at their upper ends with lateral studs which rest in said groove and serve to lock the bars in position, substantially as set forth.

4. In a stock car the combination with the frame thereof of a hayrack comprising a grooved rail, a socketed rail, and curved bars supported in said rails and provided with lateral end studs engaging the grooved rail, substantially as set forth.

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E. F. BURTON.