

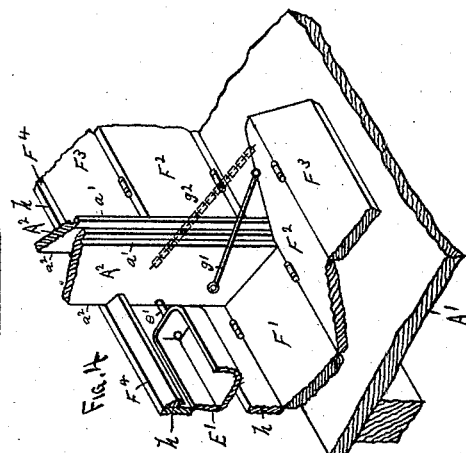
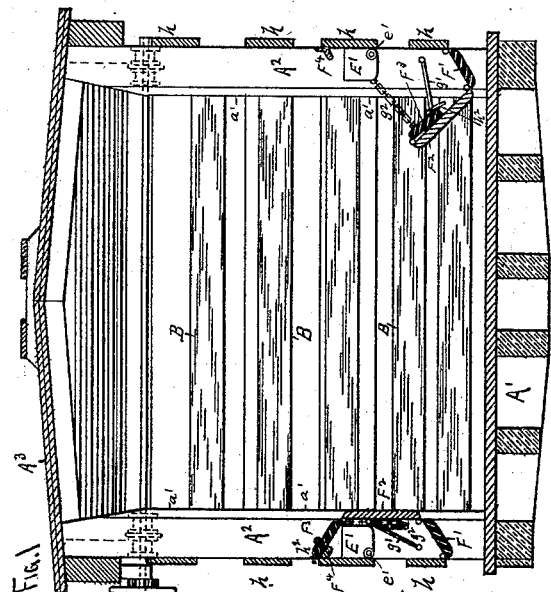
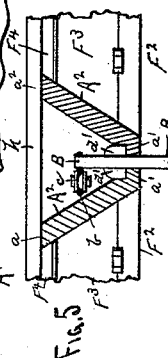
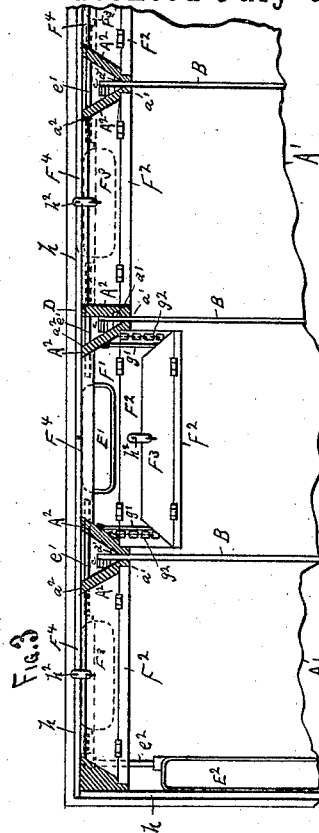
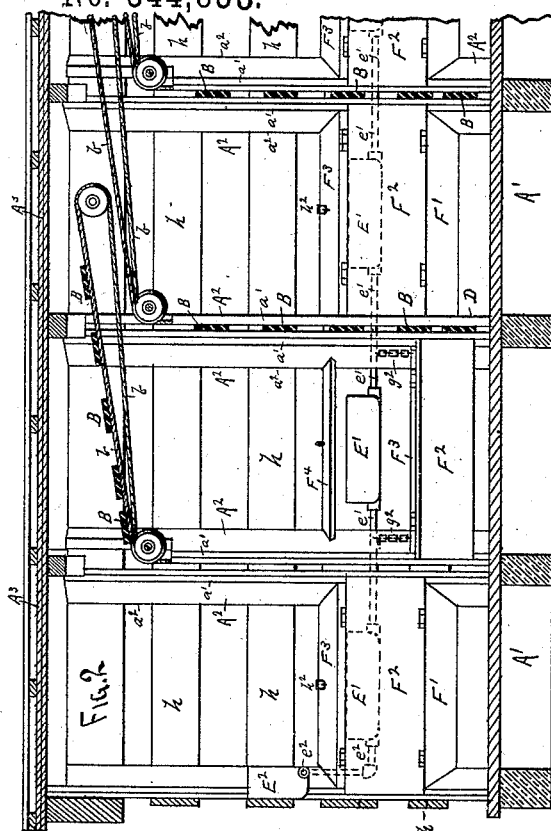
(No Model.)

B. C. HICKS.

STOCK CAR.

No. 344,833.

Patented July 6, 1886.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

BOHN CHAPIN HICKS, OF MINNEAPOLIS, MINNESOTA.

## STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 344,833, dated July 6, 1886.

Application filed March 8, 1886. Serial No. 191,504. (No model.)

*To all whom it may concern:*

Be it known that I, BOHN CHAPIN HICKS, a citizen of the United States, and residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Stock-Car Frames and Feed-Racks, of which the following is a specification.

This invention relates to that class of stock-cars in which provision is made for feeding and watering the animals while in transit and without removing them from the cars; and it consists in the construction and method of arranging a feed-rack which may be opened out when required for use, or folded up against the sides of the car when not in use.

The invention further consists in the manner of constructing the side frames of the car.

In the drawings, Figure 1 is a cross-sectional elevation, Fig. 2 is a longitudinal sectional elevation, and Fig. 3 is a plan view, in section, of a portion of one side of a car with my improvements arranged therein. Fig. 4 is an enlarged detail in perspective of a portion of the car-frame, watering-troughs, and feed-racks, illustrating more fully their construction and arrangement. Fig. 5 shows a horizontal section of one pair of stanchions on an enlarged scale.

A<sup>1</sup> represents the floor, A<sup>2</sup> the stanchions or side frames, and A<sup>3</sup> the roof, of the car. The stanchions A<sup>2</sup> are arranged in pairs at equal distances apart to form the stalls for the animals, and each pair of stanchions are set in an angular position, with their inner edges, a', close together, and with their outer edges, a<sup>2</sup>, diverging, as shown, so that the inner edges form guides for the stall-bars B, while the divergence of the outer edges form angular-shaped cavities or spaces between the stanchions for the reception of the cables b and pulleys c, by which the stall-bars are raised and lowered. Another important advantage gained by thus setting the stall-bars in an angular position is that the area of the ends of the stalls for the animals is increased, and no abrupt or sharp corners left, against which the heads or haunches of the animals can come in contact. The feeding-space is also materially increased, while at the same time the frame of the car is fully as strong, if not stronger, than if the stanchions were at right angles to the sides of

the car. If preferred, one of a pair of the stanchions may be set at right angles and the other at an angle to the sides of the car, as shown at D in Figs. 2 and 3; but generally this form will only be used at the sides of the doorway-openings. The principal advantage obtained, however, by setting the stanchions in the angular position is that their inner edges, being in close proximity, serve as guides for the stall-bars B without the interposition of any other medium, while at the same time ample space is left by the divergence of the outer edges for the insertion and operations of the cables and pulleys. This makes a very cheap and convenient arrangement, and dispenses with all extra pieces for guides or side supports for the stall-bars.

In Figs. 1, 2, 3, and 4 the outer corners of the inner edges, a', of the stanchions are shown grooved, to receive the ends of the central boards, F<sup>2</sup>, of the feed-racks, and the stall-bars B are shown provided with stops d', attached to their sides just inside the outer edges, a', of the stanchions, to prevent the stall-bars from being drawn inward from between the stanchions.

In Fig. 5 I have shown a slight modification in the manner of constructing the stanchions, consisting in forming the grooves or channels in the inner corners of the inner edges, a', of the stanchions, instead of in the outer corners, as in Figs. 1, 2, 3, and 4, and utilizing these grooves as guides in which the stops d' move up and down. The ends of the central boards, F<sup>2</sup>, of the feed-racks, when this construction is used, are formed angular, to fit in between the angular sides of the stanchions when folded up, as shown in Fig. 5.

I have shown watering-troughs E' in each stall-space between the stanchions A<sup>2</sup>, all the troughs being shown connected together by tubes e', and the troughs next the ends of the car connected by a tube, e<sup>2</sup>, to a supply-tank, E<sup>2</sup>, on the end of the car.

I do not wish to be limited to the use of this form of trough, as I am aware that many other forms might be employed.

h h represent the side slats, which are secured across the stanchions A<sup>2</sup>, and form the side sheathing or covering to the car. To the bottom one of these slats h in each stall-space is hinged a board, F', the ends of the board

being angular, to fit between the angularly-set stanchions  $A^2$ . To the inner edge of each of these boards  $F^1$  is hinged by its lower edge another and wider board,  $F^2$ , and to the upper edge of this wider board is hinged still another and narrower board,  $F^3$ , the latter adapted to fit in between the angularly-set stanchions. The outer corners of the stanchions, or the corners next the stall-spaces, may be cut out to receive the ends of the central board,  $F^2$ , as shown, so that when the three boards are folded up, as shown on the left-hand side of Fig. 1, the outer surface of the center board,  $F^2$ , will be flush with the inner edge of the stanchions. Small rods  $g'$  will connect each of the boards  $F^2$ , near their upper edges, with the stanchions  $A^2$ , so as to support them when open in the position shown at the right in Fig. 1. Each set of the three boards  $F^1 F^2 F^3$ , when thus opened, as shown at the right of Fig. 1, forms a feed-rack for holding hay or other feed, and when closed up, as at the left of Fig. 1, they form covers or protectors to the watering-troughs, as well as being out of the way when not in use.

Each end of each stall-space will be provided with one of these feed-racks and watering-troughs, so that no matter in which direction the animal happens to face, it will have a feed-rack and watering-trough at its head, while the watering-troughs at the opposite end will be covered and protected from the excrement or other deleterious matter.

Small angular ribs  $F^4$  will be arranged between the stanchions in each stall-space, as a partial protection to the watering-troughs, and also as a stop on which the boards  $F^3$  will rest, and to which they may be connected by catches  $h^2$ , to hold the feed-racks closed when not in use.

Chains  $g^2$ , or jointed rods, will be arranged to connect the boards  $F^2$  with the stanchions  $A^2$ , to form end protectors to the racks when opened, to keep the hay from falling out, these chains or rods folding up inside the racks when the latter are closed.

Having thus described my invention, what I claim as new is—

1. In a stock-car, the stanchions or perpendicular members of the side frames of the car arranged in pairs, with inwardly-converging sides, whereby the inner edges of the stanchions form guides for the ends of the stall-bars, and the stall-area is increased, substantially as set forth.

2. In a stock-car, the stanchions or perpendicular members of the side frames of the car arranged in pairs, with inwardly converging sides, in combination with movable stall-bars whose ends are held and slide between the inner ends of said converging sides, and the operating cords and pulleys which occupy the spaces between the outer ends of said sides, substantially as set forth.

3. In a stock-car, the stanchions or perpendicular members of the side frames arranged in pairs, in combination with a folding feed-rack composed of boards  $F^1 F^2 F^3$  and supporting-rods  $g'$ , said boards being hinged together between each of said pairs of stanchions, and adapted to be folded up between said stanchions when not in use, substantially as set forth.

4. In a stock-car, the stanchions or perpendicular members of the side frames of the car arranged in pairs, in combination with a watering-trough between each pair of said stanchions, and a folding feed-rack composed of boards  $F^1 F^2 F^3$  and supporting-rods  $g'$ , said boards being hinged together, and the lower board being hinged between said stanchions beneath said watering-trough, substantially as set forth, whereby the feed-rack may be folded up between said stanchions to cover and protect said watering-trough.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BOHN CHAPIN HICKS.

Witnesses:

C. N. WOODWARD,  
H. S. WEBSTER.