2 Sheets—Sheet 1.

W. H. HAYES.

Stock-Car.

No. 200,719. Patented Feb. 26, 1878.

Fig. 1.

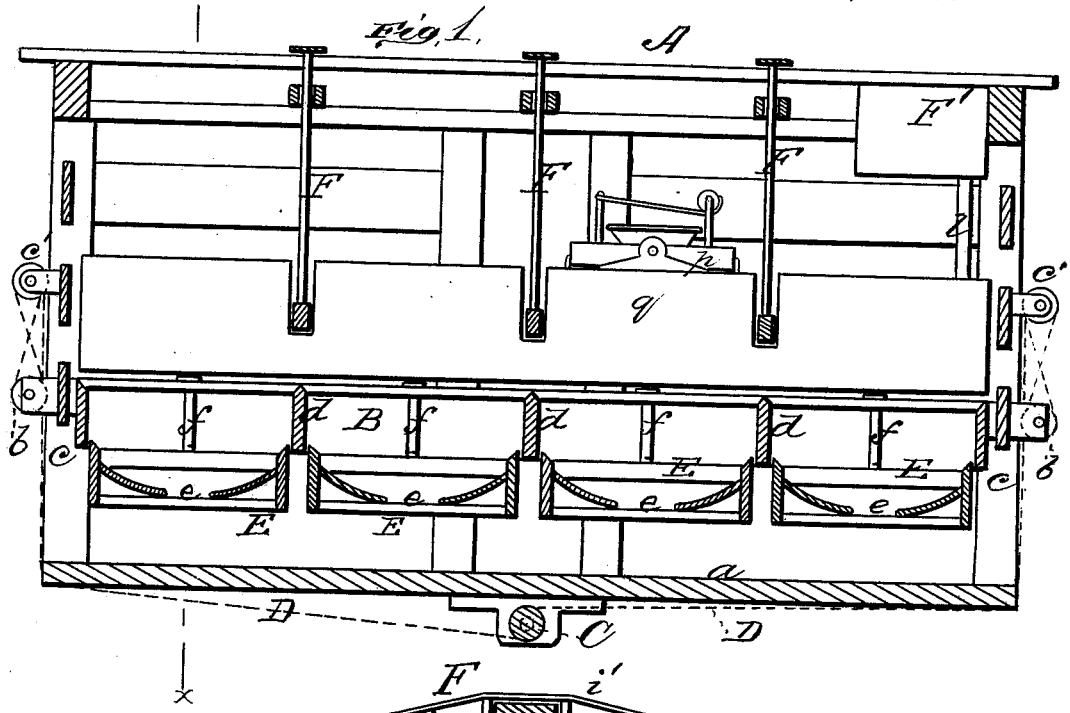
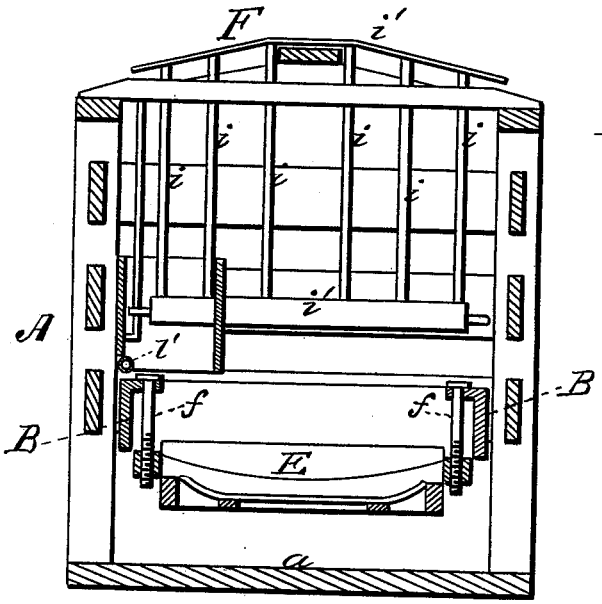


Fig. 2.



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2 Sheets—Sheet 2.

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Stock-Car.

No. 200,719. Patented Feb. 26, 1878.

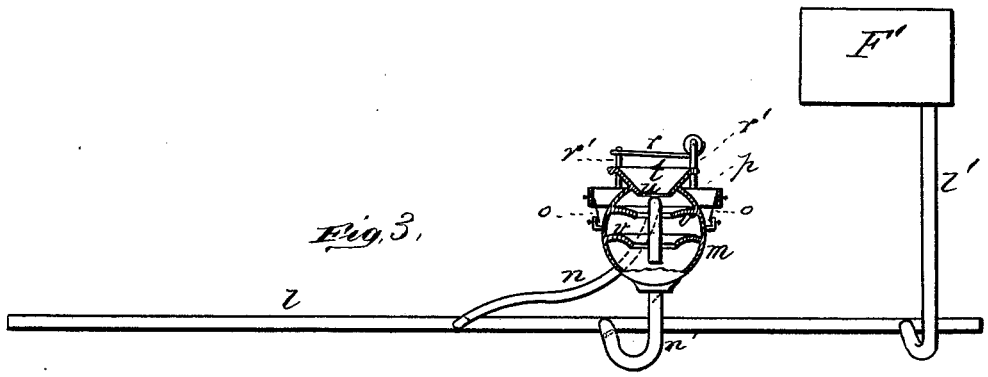

Fig. 3.

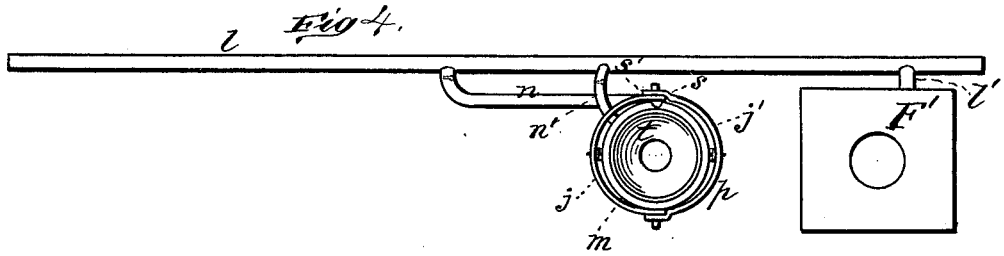

Fig. 4.

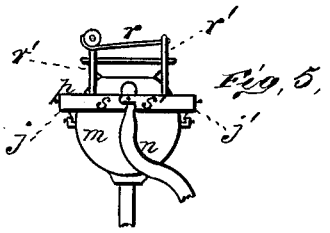

Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM H. HAYES, OF SALISBURY, MISSOURI.

IMPROVEMENT IN STOCK-CARS.

Specification forming part of Letters Patent No. **200,719**, dated February 26, 1878; application filed December 29, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. HAYES, of Salisbury, in the county of Chariton and State of Missouri, have invented a new and valuable Improvement in Stock-Cars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my improved stock-car. Fig. 2 is a cross-section thereof; and Figs. 3, 4, and 5 are detail views of the watering devices.

This invention has relation to improvements in stock-cars.

The object of the invention is to sustain cattle on their way to a market in such manner that they will be prevented from lying down and being trampled to death, without exposing them to inordinate fatigue; to provide means for watering them automatically; and to prevent the contents of the watering-vessel from being jostled out of the same.

The nature of the invention will be fully explained in the following description, and set forth in the claims appended thereto.

In the annexed drawings, the letter A designates an ordinary stock-car body, in connection with which I propose to illustrate my invention. This car is provided with a solid floor, *a*, and a door of the usual construction. Inside of the car, extending from end to end and from side to side thereof, is a strong rectangular frame, B, the side rails of which extend through the ends of the car-body, and are provided at each end with a pulley, *b*. These projecting rails extend through slots *c* in the ends of the car, which serve as guides during the vertical adjustment of the supporting-frame aforesaid. Under the car-body is a winding-drum, C, to which are rigidly secured the ropes D, arranged at each side of the bottom of the car-body. These ropes are four in number, and are designed to raise each a corner of the said frame. They extend outward from the winding-drum to the ends of the car-body, thence upward to a block, *c'*, thence downward around the pulleys *b*, thence upward to the block *c*. By actuating the windlass the cords D raise the frame B evenly at each end, and carry up the beds E, arranged across the said frame, and separated from each other by means of the bracing-boards *d*. These beds are concave in their general form, and are provided at the bottom of their concavities with an opening, *e*, extending from end to end thereof. They are supported from the frame by a strong screw or screws, *f*, at each end thereof, by the operation of which the said beds may be raised or lowered independently of each other.

In filling the car each bed is designed to support a steer; and when the said beds are all full the windlass C is actuated and the frame raised, carrying them upward against the bodies of the cattle, whose legs project through the openings *e* and bear upon the bottom of the car. Should a steer be thus raised too high, so that his hoofs are off the car-floor, the bed which he occupies may be lowered until they rest thereon by operating the screws pertaining to the said bed; and should his body not receive the required support, the said bed may be raised by the same means. As each steer is in his bed or cradle a grating, F, preferably of metal, is lowered, and separates him from the rest in the car. These gratings are always raised while cattle are being loaded in the car, and successively lowered as each animal occupies his bed.

The gratings are composed of spaced vertical rods *i* and of end transverse bars *i'*, and they are guided during their ascent and descent in any suitable manner. As the hoofs of the cattle rest upon the car-floor and their bodies are supported by the beds aforesaid, they are unable to lie down, but when fatigued rest contentedly in the said beds. They are also prevented from becoming disfigured by their droppings.

At one end of the car, near or above the roof thereof, is a tank, F', for storing water in the summer time. This tank is connected with a metallic pipe, *l*, extending from end to end of the car, by a tube, *l'*, and the latter with the watering-bucket *m* by a flexible tube, *n*. The bucket is suspended by means of hangers *o* from a ring, *p*, formed in two sections, hinged together and seated in a casing,

q. The two sections are held at an angle to each other by a spring, *r*, connecting arms *r'* rising from the ring-sections. The tube *n* is received between the jaws *s s'* of the ring-sections, and as the bucket is filled its increasing weight causes the said jaws to bite upon and compress the pipe *n* and cut off the supply of water. As the bucket is emptied by the cattle drinking its weight is lessened, and the spring *r* causes the ring-sections to flex upward, thereby releasing pipe *n* from the gripe of the jaws of the ring-sections *j j'*, and re-establishing the flow of water automatically.

In winter the tank will not be used; but the pipes *l* of each car will be coupled together by flexible connections, and carried to the tender, and water will be forced by a pump through pipe *n* into the bucket *m*, and through a pipe, *n'*, connecting the main pipe *l* and the bottom of the bucket. This pipe *n'* has at its end next the said bucket a valve, opening downward, which is closed during the pumping, but, after the cattle are watered, and the pumping has ceased, swings downward, and allows the unconsumed water to run back into the tender. The body of the bucket *m* is spherical or oval, and has at its upper end a funnel-shaped cup, *t*, the reduced lower end of which extends down into the body of the bucket, forming an inside annular flange, *u*, below which are other annular flanges, *v*, arranged in tiers. The flanges *u v* prevent the water in the bucket from splashing out and wasting during the moving of the car by breaking up the waves therein caused by jolting.

I claim as new and desire to secure by Letters Patent—

1. The combination, with a stock-car body, A, of the vertically-adjustable frame B and its independent beds E, substantially as specified.

2. The combination, with a car-body and its adjustable bed-frame B, of the adjustable beds E, substantially as specified.

3. The combination, with a car-body, its adjustable bed-frame, and its beds E, of the vertical and adjustable gratings F, substantially as specified.

4. A watering-bucket for stock-cars, of spherical form, having the spaced flanges *u v* and the funnel *t*, as and for the purpose specified.

5. The combination of the bucket *m* and its feed-pipe *n* with the jointed ring *p*, having jaws *s s'*, adapted to gripe said pipe, substantially as specified.

6. The combination, with a stock-car body, of the vertically-adjustable frame, extending the length of the car, and sustaining independent beds or cradles, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM H. HAYES.

Witnesses:
ISAAC N. MOORHEAD,
L. C. MOORE.