(No Model.)

2 Sheets—Sheet 1.

W. W. HERRON & A. B. WHITE.

STOCK CAR.

No. 371,501. Patented Oct. 11, 1887.

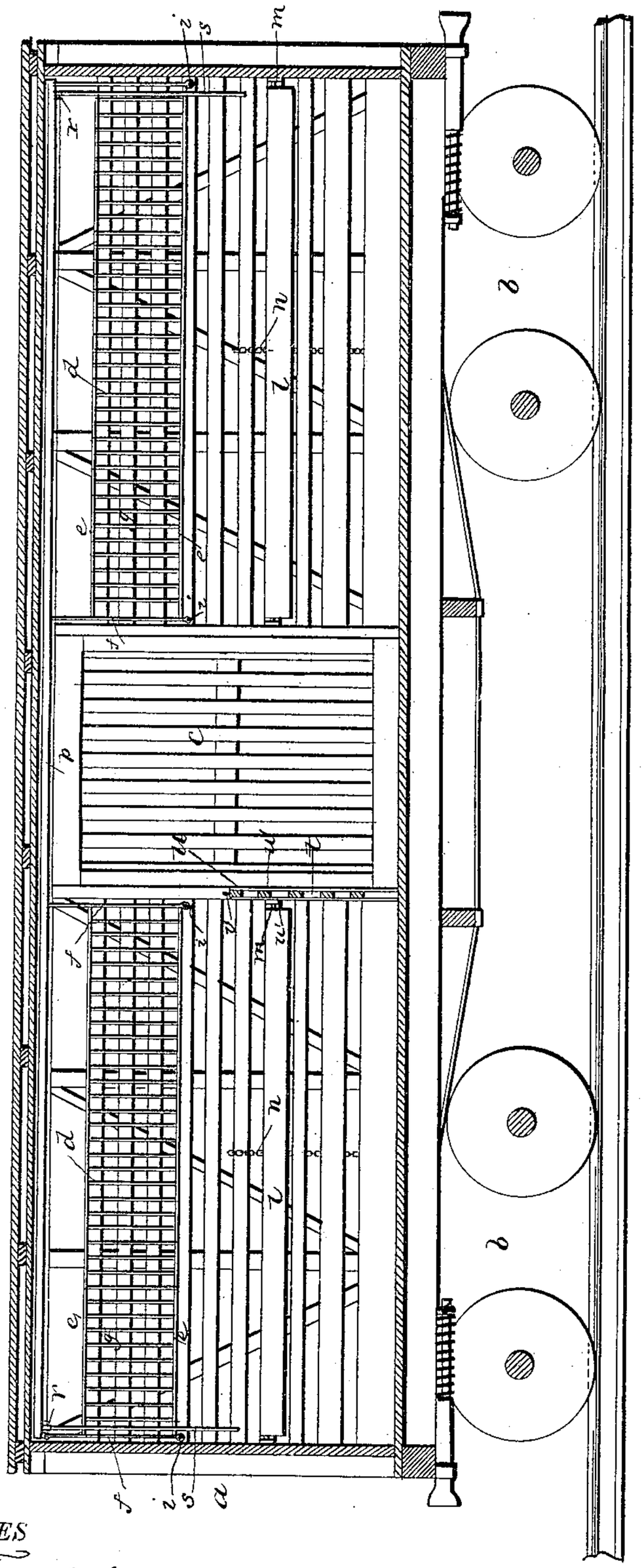

Fig. 1.

WITNESSES

Edwin A. Finckel.

Robt. L. Webb

INVENTORS

William W. Herron

Albert B. White

by Wm. N. Finckel Attorney

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

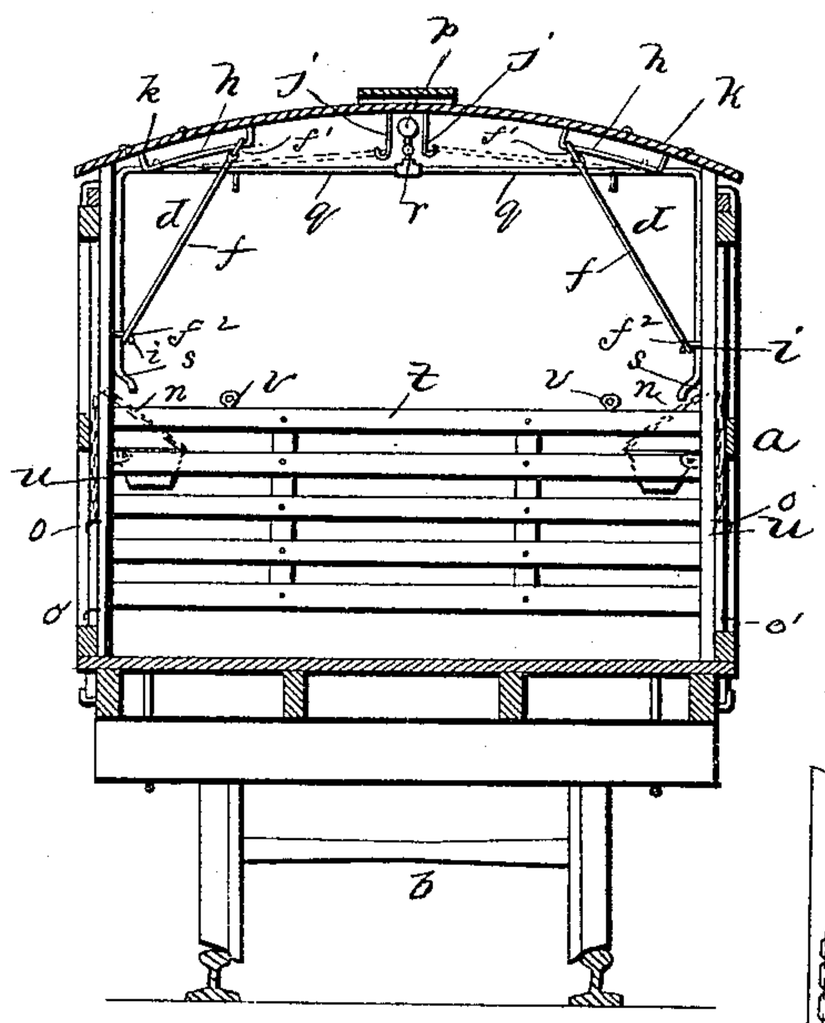


Fig. 3.

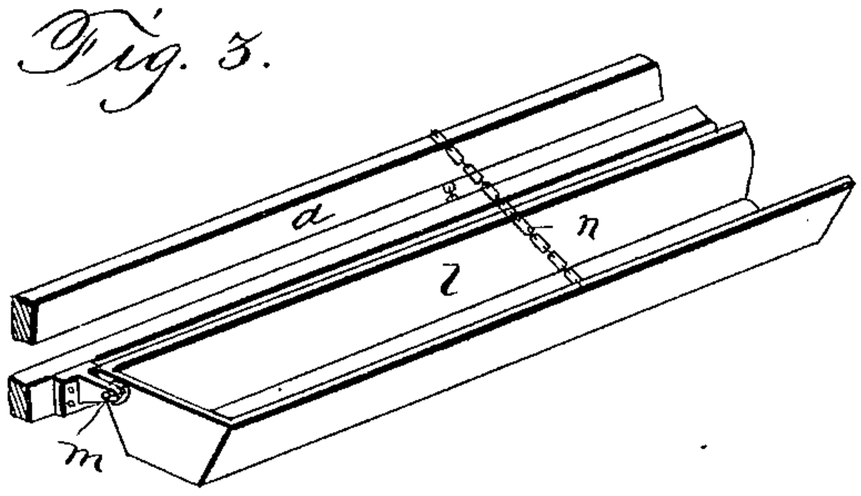


Fig. 4.

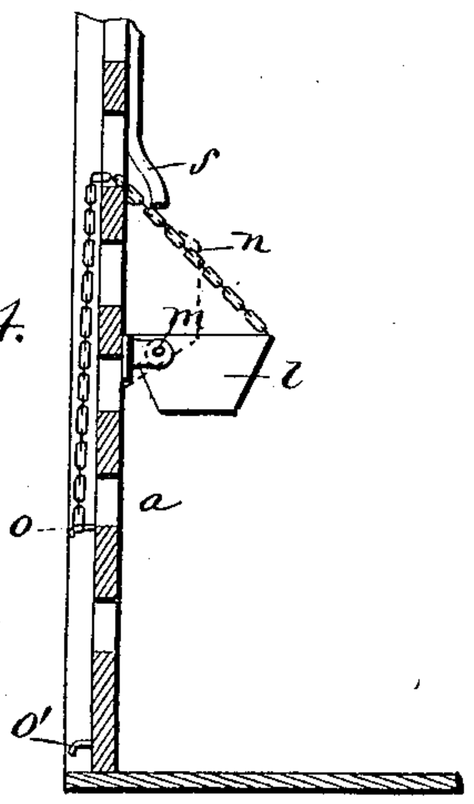
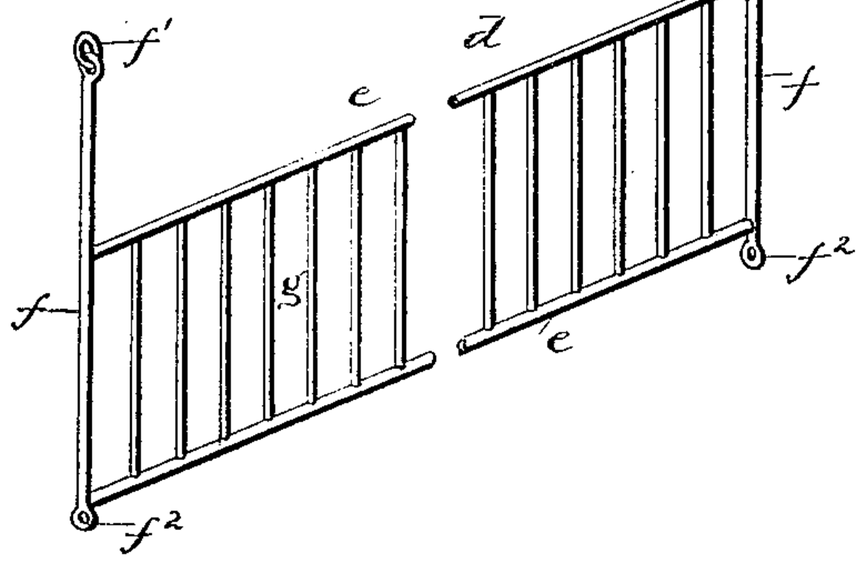


Fig. 5.



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Edwin A. Finckel.

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INVENTORS

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Albert B. White

by Wm. N. Finckel. Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM W. HERRON AND ALBERT B. WHITE, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNORS TO THE SHELLABARGER LIVE STOCK CAR COMPANY, (LIMITED,) OF SAME PLACE.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 371,501, dated October 11, 1887.

Application filed August 5, 1887. Serial No. 246,218. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM W. HERRON and ALBERT B. WHITE, citizens of the United States, residing at Washington, in the District of Columbia, have invented a certain new and useful Improvement in Stock-Cars, of which the following is a full, clear, and exact description.

One object of this invention is to adapt ordinary stock-cars—such as are in common use to-day on the railways in the United States—to the feeding and watering of cattle *en route* and while in the cars, or, in other words, without unloading the cars, and also separating the cattle in the cars.

Another and equally important object had in view is to supplement the fixtures of the Shellabarger stock-car system (see the Shellabarger patent, No. 256,389, dated April 11, 1882) with this particular form of feeding and watering apparatus.

The invention consists in a movable or adjustable feed-rack and in a swinging watering-trough, constructed and arranged as hereinafter more particularly set forth and claimed.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a longitudinal section of an ordinary stock-car or cattle-car supplied with our invention. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a perspective view of portions of the watering-trough and car-body. Fig. 4 is a vertical section of one side of the car, and Fig. 5 is a perspective view of the feed-rack.

The car-body *a*, trucks *b*, and their appurtenances may be of any ordinary or approved construction, the doors *c*, as usual, being arranged upon opposite sides and about midway of the car; and for simplicity's sake we will explain the principles of our invention and the best mode in which we contemplate applying that principle, so as to distinguish it from other inventions, as applied to such an ordinary stock-car or cattle-car as is found in common use on the railways of the United States, but without thereby limiting the extension of our invention to the Shellabarger system or other systems of stock-cars now existing, or which hereafter may be introduced and found to be susceptible of its utilization.

By way of explanation it is proper to note here that one of the main requirements, in an economic sense, of the railway managers is, that stock-cars shall not be returned empty by reason of any peculiarities in their construction; or, in other words, in order to meet the exigencies of railway traffic and management, stock-cars must be so constructed as, after having carried to destination a load of cattle, to be capable of receiving a return load of other merchandise—such as rails, lumber, ties, and so forth. In this same connection it is proper also to note that, in the same sense and for the same reasons, it is desirable, if not necessary, to provide feeding and watering facilities which may be applied to rolling-stock already constructed and in use, at an expense little, if anything, above and beyond the bare cost of their manufacture, and without material alteration of such rolling-stock in other respects. We deem our invention a satisfactory, if not complete, answer to these requirements.

Cattle, unless confined in stalls, usually travel crosswise the car, and hence we arrange our feeding and watering apparatus along the sides of the car. The feeding apparatus consists of adjustable racks *d*, which are constructed of cross-pieces *e*, secured to end pieces or hangers, *f*, and receiving transverse bars or rods *g* between them, so spaced as to pass the mouths of the cattle to the hay contained in the rack. The upper ends of the hangers *f* are provided with suitable suspending devices, *f'*—such as eyes or rings or hooks—permanent or detachable, and capable of disconnection from their suspending devices or not, as the requirements may be. The lower ends of said hangers are also provided with eyes, hooks, or rings f^2, capable of connection with and disconnection from retaining devices in either of the two positions presently described. The hangers *f* project sufficiently far beyond the top cross-piece, *e*, to provide a space adequate to the filling of the rack with hay from inside the car when said rack is in position to receive it. In the example of car shown these racks are four in number—two on opposite sides of the car at either end of the door. Traveler-

rails *h*, substantially rectangular in outline, depend from the roof of the car, two being used for each rack; and the racks are suspended from these rails by the engagement therewith of the suspending devices *f'*, while an equal number of hooks or catches are arranged upon the sides of the car to receive the eyes, hooks, or rings f^2 at the lower end of the hangers *f*, to secure the rack in the inclined position to receive and hold hay. (Indicated in Fig. 2.) When the racks are not required for feeding purposes, they are disengaged from the retaining devices *i*, their upper ends slipped back on the traveler-rails *h* toward the sides of the car, and then their lower ends elevated and caught onto hooks or equivalent suspending devices *j*, depending from the roof. In other words, our racks have the capacity of being adjusted into position for use for feeding, and then, when not so needed, of being folded or stowed away up against the roof, leaving the car free to be loaded with other merchandise than cattle. Instead of having the traveler-rails for the racks to move toward and from the sides of the car in arranging them in position, the said racks may be suspended from the roof at a fixed point by any suitable hinging device capable of admitting of their being swung into the positions of use and disuse. We esteem our invention in this particular to be a swinging or adjustable rack capable of being given these two positions, irrespective of the mere details of construction or mechanical elements whereby these adjustments may be obtained.

Doors *k* may be provided in the roof of the car over the racks, so as to permit the introduction of hay into the racks from outside the car, as is necessary when the car is loaded with cattle. In the Shellabarger system these racks will run crosswise of the car, and in order to snugly fold them up against the roof it may be necessary to bulge or bow them centrally so as to fit around the ordinary central water-conveying tube or reservoir in the roof of the car; but they may be folded back flat against the ends of the car, and be thus equally out of the way.

The watering apparatus consists of a trough, *l*, made rather shallow, but wide, and constructed in any well-known water-tight manner. This trough is secured to the sides of the car—one below each feed-rack—by pivots *m*, arranged at its upper rear ends, (see Figs. 3 and 4,) the trough being capable of rotation upon such pivots. These pivots may be in the nature of castings or forgings composed of gudgeons to be applied to the ends of the trough, and ears or eyes or sockets of similar production applied to and projecting from the sides of the car, all of ordinary construction. The trough is made substantially in the shape of a truncated V—that is to say, its front and rear walls slope or incline from each other from the bottom. Said trough is pivoted to the longitudinal slats or timbers of the sides with such relation to the openings between such slats or timbers as that when the trough is tilted or rotated to bring its mouth flat against the side (see dotted lines, Fig. 4, which is the position of disuse,) its rear edge will enter such opening, and thus cast out the water from the car, instead of throwing or dropping it into the car. The trough is provided with a chain or other flexible operating medium, *n*, attached to the inner edge of its mouth, and extending thence outside the car, and adapted to engage hooks or the like, *o o'*, to hold the trough in positions of use and disuse, respectively. It is to be noted that the trough is operable thus from outside the car, and most readily and simply so. Water is supplied to these troughs in ordinary manner. For example, the car may be provided with a main pipe, *p*, in its roof, and from this main pipe extend branch pipes *q q*, with an interposed controlling cock or valve, *r*, and from these branch pipes extend the down pipes *s*, opening into the troughs. The main pipe may be filled at any suitable watering-tank. The means for supplying the troughs with water may be varied as circumstances require. The system we have described is well adapted for that class of cars where the main pipe is a fixture in each car, and the pipes of the several cars composing a train are adapted to be coupled together so that all the pipes may be filled from one point on the train. Such watering-troughs as these may be applied to the ends of the Shellabarger car; but it will be found advantageous to some extent to retain in that system the bodily removable central trough or troughs.

It is desirable to separate the cattle in a car to an extent at least where the shocks of starting and stopping a train will not impose the weight and thrust of all the other animals in the car upon those at or near the ends. With this object in view a gate or partition, *t*, removably arranged in guides *u* on the door-frame, at one end of the door, may be provided. These guides may be conveniently made by nailing cleats *u' u'* to the door-posts on opposite sides of the car and closing the space between the said cleats at about a foot and a half, or thereabout, above the floor. This gate is provided with suspending devices *v*—such as hooks, rings, or eyes—whereby when the gate is most stably supported by guides and it is not to be used it may be hung up out of the way against one end of the car. The gate is introduced into and removed from its guides by movement in a vertical direction.

It is obvious that the feed-racks, water-troughs, and the gate may be readily placed in position for use, and as readily removed, so as to fit the car for the reception of other freight—such, for example, as railway-iron, ties, lumber, &c. Furthermore, it will be seen that these several parts may be applied to rolling-stock already constructed without altering the cars themselves in the way of reconstructing them—that is to say, they may be applied to such cars simply as additions to

them, rather than as involving changes in their building—and they may be so applied at a very trifling expense of time and labor in addition to the first cost of their manufacture, which, as will be understood, is rather insignificant. In short, the appliances herein described are essentially so many articles of manufacture, merchantable and applicable as such, without the intervention of skilled car-builders.

What we claim is—

1. A stock-car having a feed-rack freely suspended from the roof at its upper edge, and provided with hooks, rings, or eyes at its lower edge, to engage hooks or catches on the sides of the car to connect it detachably at its lower end, so as to adapt it to receive hay, combined with other hooks or catches on the roof, to secure the feed-rack to the roof when detached from the side hooks or catches and when undesired for use, substantially as described.

2. A feed-rack for use in stock-cars, composed of a substantially flat or plane barred frame having end bars or hangers to suspend it from the roof of the car, such end bars or hangers projecting beyond the barred portion of the frame, to afford a space above the said barred portion between the end bars for the introduction of hay into the rack from inside the car, substantially as set forth.

3. In a stock-car having slatted sides of usual and ordinary construction, such as shown and described, the watering-trough *l* and its pivots *m*, arranged at the upper corners of its rear ends and secured to the slatted sides of the car, with the trough wholly within the car, and so as to bring the rear upper edge of the trough when tilted in line with the space between the slats of the car-sides, combined with the chain *n*, attached to the inner edge of the trough, and hooks *o* o^2, operable from outside the car, to support the trough in its positions of use and disuse, substantially as set forth.

In testimony whereof we have hereunto set our hands this 3d day of August, A. D. 1887.

WILLIAM W. HERRON.
ALBERT B. WHITE.

Witnesses:
CHAS. S. DRURY,
ARTHUR J. BACHE.

Correction in Letters Patent No. 371,501.

It is hereby certified that in Letters Patent No. 371,501, granted October 11, 1887 upon the application of William W. Herron and Albert B. White, of Washington District of Columbia, for an improvement in "Stock Cars," an error appears requiring the following correction, viz: In line 119, page 2, the words "most stably supported by guides, and it is" should be stricken out and inserted before the word "introduced" in line 122 same page; and that the Letters Patent should be read with this correction therein to make it conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 1st day of November, A. D. 1887.

[SEAL.]

D. L. HAWKINS,
Acting Secretary of the Interior.

Countersigned:

BENTON J. HALL,
Commissioner of Patents.