

(No Model.)

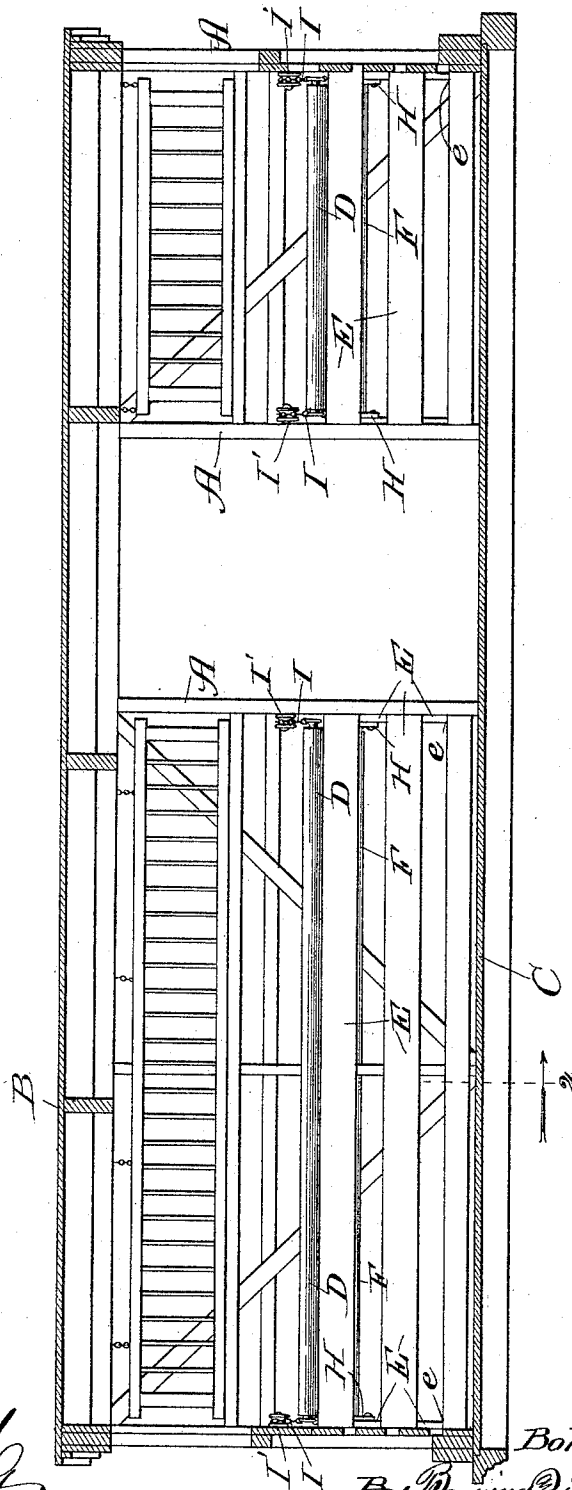
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B. C. HICKS.
STOCK CAR.

No. 495,586.

Patented Apr. 18, 1893.

Fig. 1.



Witnesses:
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Clifford A. White.

Inventor:
B. C. Hicks,
By *Samuel C. Dunning* & *Samuel C. Dunning*
Attorneys

(No Model.)

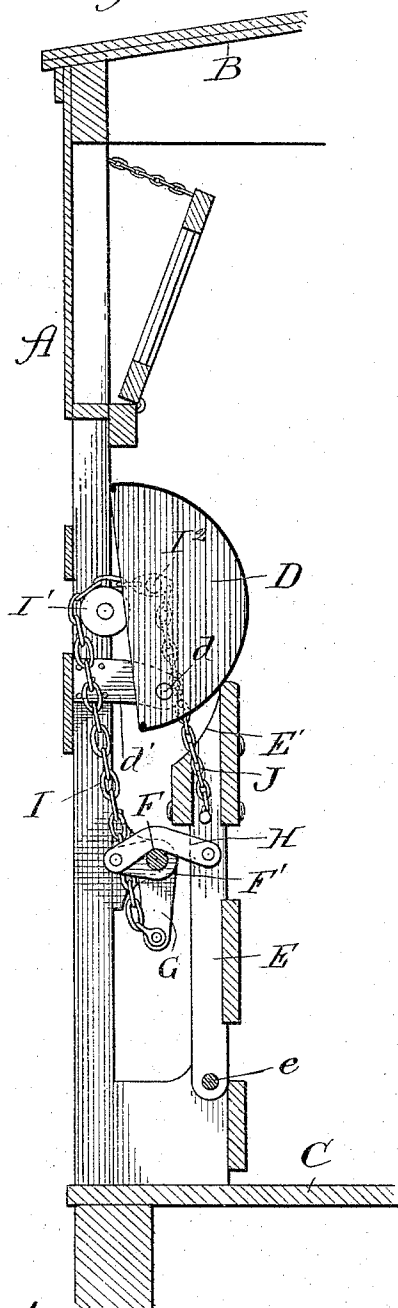
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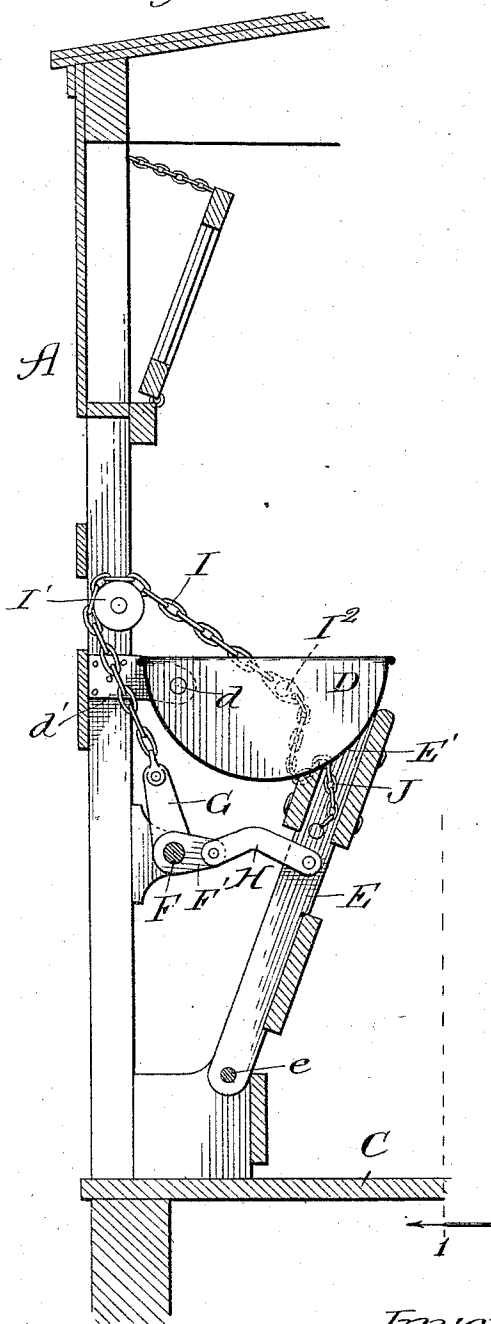
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Fig. 2.



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Fig. 3.



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UNITED STATES PATENT OFFICE.

BOHN C. HICKS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE HICKS STOCK CAR COMPANY, OF WEST VIRGINIA.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 495,586, dated April 18, 1893.

Application filed September 22, 1892. Serial No. 446,546. (No model.)

To all whom it may concern:

Be it known that I, BOHN C. HICKS, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Stock-Cars, of which the following is a specification.

Stock cars of various constructions are largely and extensively used throughout the country. Competition between the various lines of stock cars is brisk and eager, and there is accordingly a constant endeavor to improve upon the construction of these cars in every possible manner, the aim being to produce a car which, with a minimum expense and labor in construction shall present a maximum of advantages, tending to insure the easy and free transportation of the live stock.

The lines of improvement followed relate to the general construction of the car, aiming to secure lightness and cheapness, together with strength, durability and adaptability for the purposes of business, and to what may be called the "internal arrangements" of the car. Among these internal arrangements may be classed means for separating the stock, by providing the car with two decks or floors, and by separating the animals on the floor or floors; and means for providing the animals with food and water. It is to the last class, viz., that relating to the proper feeding of the animals, that my present invention more particularly relates.

In watering the stock, the common practice is to make use of the trough or troughs supported in suitable positions along the sides or ends of the car and upon the interior thereof. These troughs are so arranged in many cases as to be capable of assuming two positions, viz., a position of use, and a position of non-use, being moved from one position to the other in a variety of ways and by a variety of means.

Speaking generally in regard to my invention, and without intending to limit the claims hereinafter to be made therefor, I may say that such invention consists in arranging and combining a trough or troughs, suitably positioned and supported, with a movable part or section of the side wall of the car, in such manner that this section of the side wall shall operate simultaneously with the

trough or troughs, and further, that such side wall shall act as a guard for the trough to protect it from injury; and my invention consists in the features, combinations and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of the interior of a car provided with my improvements; Fig. 2 a vertical sectional view of one side thereof on line 2 of Fig. 1, looking in the direction of the arrow, said improvements being in the position of non-use; and Fig. 3 a similar section with the parts in a position for use.

The side posts A, roof B, floor C, and other parts of the car not hereinafter more particularly described may be made in any desired manner, which, being well known and forming no part of my invention, require and will receive no further description.

Troughs D, made of any suitable dimensions and material, and preferably semi-circular in cross section are provided, and are supported by means of trunnions *d*, working in arms *d'*, or in any other manner which will permit them so to operate as to accomplish the objects of my invention. That portion of the side wall beneath this trough, lettered E in the drawings, is pivoted at points preferably a short distance above the floor of the car, as at *e*, in such manner as to be capable of rocking either into a vertical or into an angular position, as shown respectively in Figs. 2 and 3. This rocking side wall may be operated directly by hand if desired, but I prefer to provide means for simultaneously operating all of the sections into which this side wall is preferably divided, such means consisting of the following devices. Supported in suitable journals attached to the sides of the car, are shafts F, there being preferably one of these shafts at each side of the car, extending from the doorways to the ends of the car, and which may be, if desired, so connected by sprocket wheels and chains or otherwise as to be simultaneously rotated by a suitable crank, though the method of rotating these shafts is not an essential feature of my invention. To these shafts I fix cranks F' and G. The cranks F' are connected by means of suitable links H with the rocking

side walls; these links being preferably shaped as shown in the drawings, whereby in either position of the side walls, the shaft, the pivotal connection between the crank and link 5 and between the link and side wall shall always be substantially in line. By this construction, as will be evident, the side wall may be moved in and out by means of positive force, and will be locked in either position by 10 means of the peculiar formation of the links. To each of the crank arms G is attached one end of a chain I, which chain passes over a suitable roller, pulley or drum I', and is connected at its other end to a pin I² secured to 15 the trough. There may be one or more of these chains to each trough, as desired. I also prefer to connect the trough to the rocking side wall by means of a chain J, attached at one end to the side wall, and at the other 20 end to the trough. It should be understood that I prefer to have the side wall and the trough so located and arranged relatively to each other that when the parts are in a position for use, as shown in Fig. 3, the upper 25 ends of the side wall will rest against the side of the trough at a point somewhat below the upper edge of such trough, part of the side wall being preferably curved, as shown at E', to fit the curvature of the trough. Also 30 the side wall and trough are preferably in continual contact.

The parts having been constructed and put together in the manner above described, are operated as follows, supposing them to be in 35 a position for use, as shown in Fig. 3. If, now, the shaft F be revolved toward the left, it will carry the crank arms F' and G in the same direction. The latter crank arm will act, through its connection to the trough, to 40 rock the same upon its trunnions or supports, and raise it into the position indicated in Fig. 2. At the same time the crank arm F' will act through its connections to rock the side wall toward the left, raising it into a substantially vertical position, following after the 45 trough, and bringing all of the parts into the position indicated in Fig. 2. With the parts in this, the position of non-use, if it be desired to bring them into a position for use, the 50 shaft F may be revolved toward the right, when the crank F' operates to throw or move the rocking side wall toward the right. As this wall moves toward the right, the trough will move down into the position shown in 55 Fig. 3. This motion of the trough may be accomplished in either of two ways: (1) By so pivoting it that its center of gravity will be on the side of the pivot calculated to cause the trough to fall through its own weight, 60 when the side wall which supports it in a raised position is withdrawn; or (2) the trough may be connected to the side wall by any suitable means, as the chain J already described, whereby as the side wall is moved inward, the trough will be drawn to its raised 65 position by the action of positive force, either of these methods being within my invention.

By this means it will be perceived that I provide a greatly improved method of operating and protecting the troughs, the trough being 70 substantially in contact with and protected and supported by the side walls, since in the up-position the trough is partially supported by the side wall and its pivot; and in the down-position, or position of use, may be supported 75 entirely by the trunnions and the side walls, or partially also by means of the chains I. It is impossible for the stock to get at the trough in such a way as to injure it, since when the trough is down the side wall is firmly locked 80 in a position where it practically surrounds the trough or incloses it at the point where it is most liable to be injured.

Another advantage incident to this construction is that while affording plenty of 85 space for proper watering of the stock when the parts are in position for use, when not in use they are adapted to be stowed away compactly and securely in a minimum space.

While I have described more or less precise forms, it is not my intention to unduly 90 limit myself thereto, but I contemplate all proper changes in form, proportion, and the substitution of equivalent members, as may be desirable or necessary. 95

I claim—

1. In a stock car, the combination of a trough pivotally supported within such car, an inwardly rocking side wall pivotally supported inside of and below such trough, and 100 means whereby the trough and side wall are rocked in both directions, substantially as described.

2. In a stock car, the combination of a trough pivotally supported within such car, 105 a side wall pivotally supported beneath such trough and in proper position relatively thereto as to engage therewith, and means whereby the said wall is rocked positively in both directions and the trough is moved positively 110 in one direction and by gravity in the other, substantially as described.

3. In a stock car, the combination of a trough pivotally supported within the car, a 115 side wall pivoted beneath the trough, and means whereby the side wall and trough are rocked into a position for use or a position for non-use, the trough being in continual contact with the side wall and supported and 120 protected thereby, substantially as described.

4. In a stock car, the combination of a trough pivotally supported within the car, a 125 rocking side wall pivotally supported beneath such trough, a shaft mounted in suitable journals in the car and provided with crank arms connected respectively with the side wall and trough, whereby when the shaft is rotated in 130 one direction the wall will be positively rocked out and the trough positively raised, and when the shaft is rotated in the other direction the side wall will be positively rocked in and the trough allowed to fall, substantially as described.

5. In a stock car, the combination of a piv-

oted trough, an inwardly rocking side wall pivotally supported inside of and below such trough, an operating shaft suitably journaled within the car and carrying two cranks, one
5 of such cranks being connected to the trough and the other to the side wall, whereby as the shaft is revolved in one direction or the other, the side wall and trough will be positively op-
erated to bring them into a position for use or a position of non-use, substantially as described.

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Witnesses:

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