

(No Model.)

4 Sheets—Sheet 1.

J. MONTGOMERY.
Stock Car.

No. 233,790.

Patented Oct. 26, 1880.

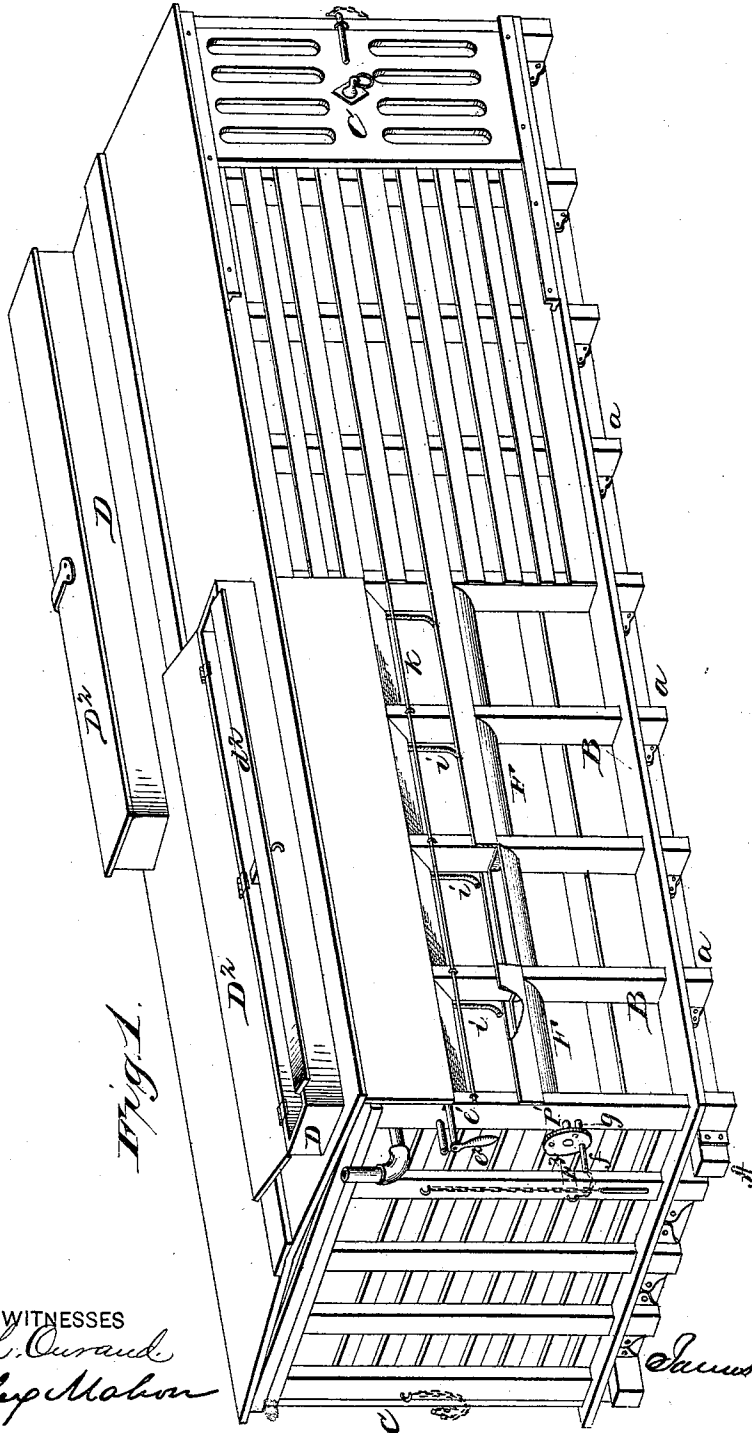


Fig. 1.

WITNESSES
P. L. Curand
Alex Mahon

INVENTOR
J. Montgomery

(No Model.)

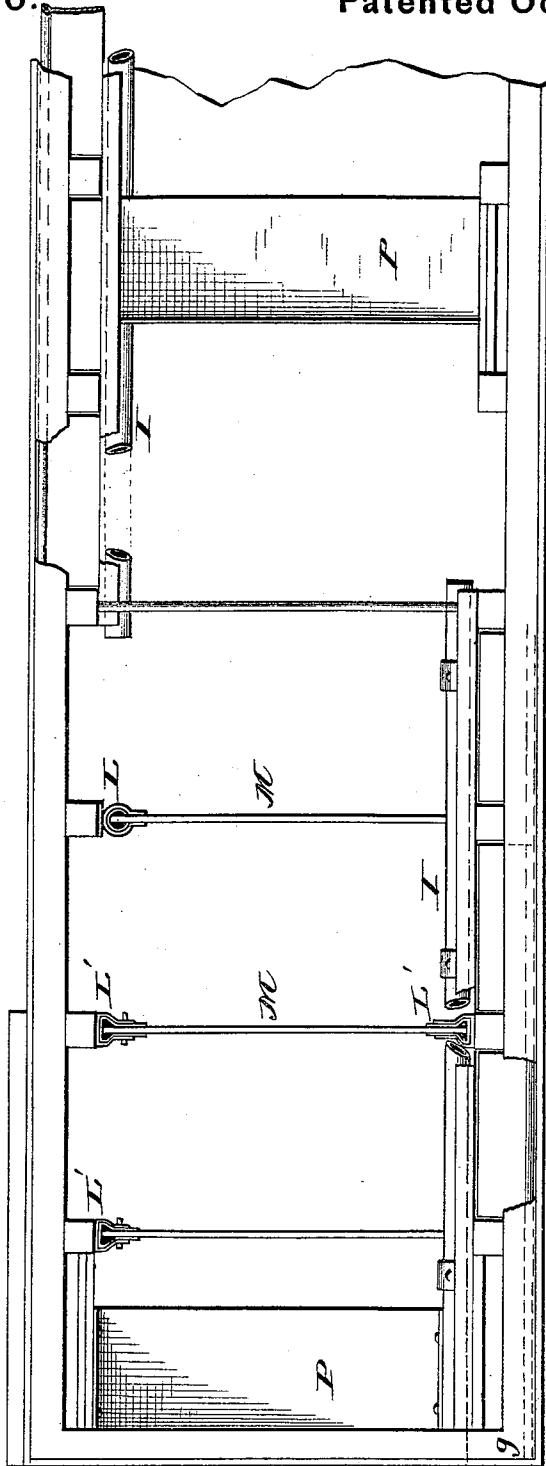
4 Sheets—Sheet 2.

J. MONTGOMERY.
Stock Car.

No. 233,790.

Patented Oct. 26, 1880.

Fig. 2.



Witnesses:
P. L. Ormaud
Alfred Mahon

Inventor:

J. Montgomery

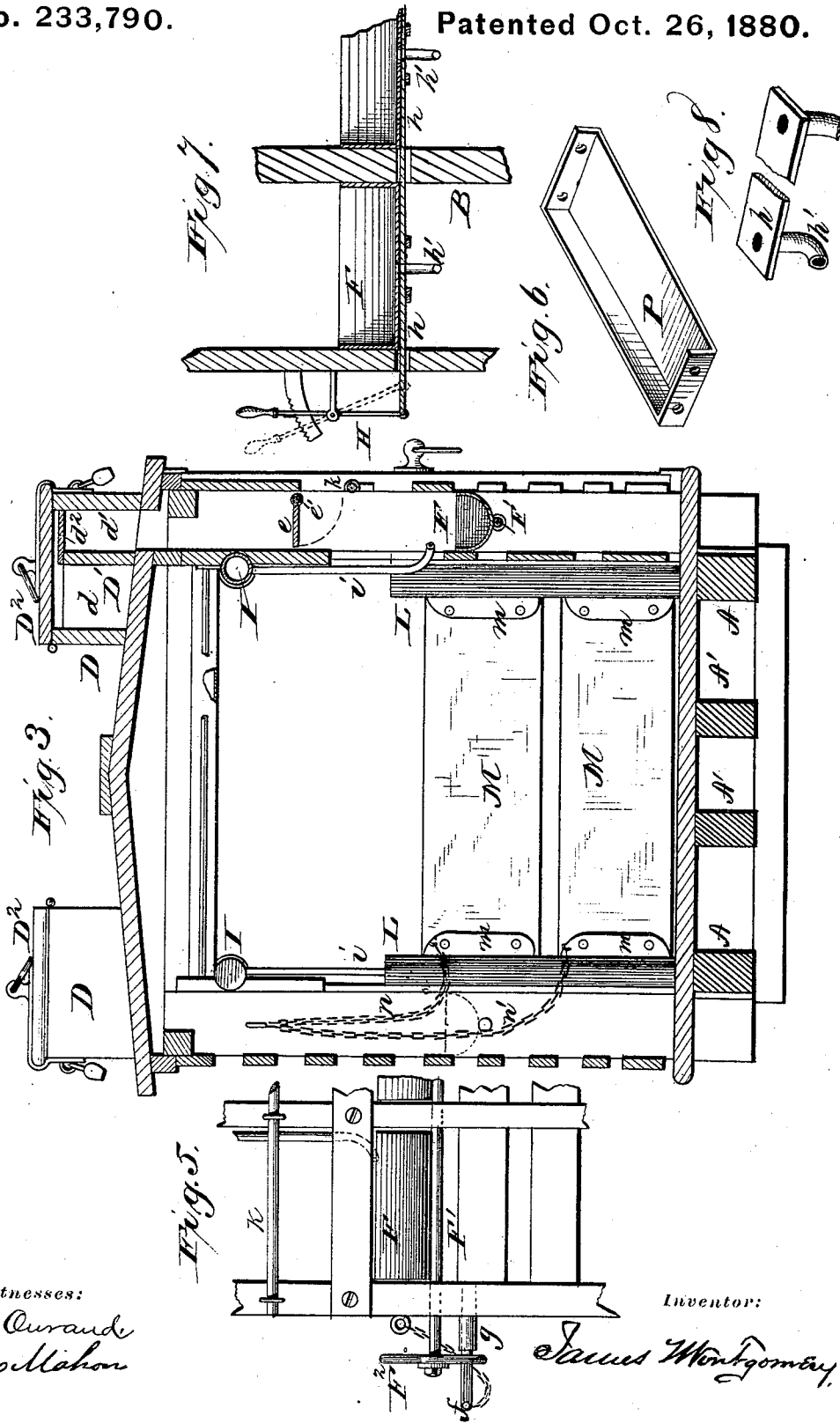
(No Model.)

4 Sheets—Sheet 3.

J. MONTGOMERY.
Stock Car.

No. 233,790.

Patented Oct. 26, 1880.



Witnesses:
P. L. Curande
Alex. Mahon

Inventor:
James Montgomery

(No Model.)

4 Sheets—Sheet 4

J. MONTGOMERY.
Stock Car.

No. 233,790.

Patented Oct. 26, 1880.

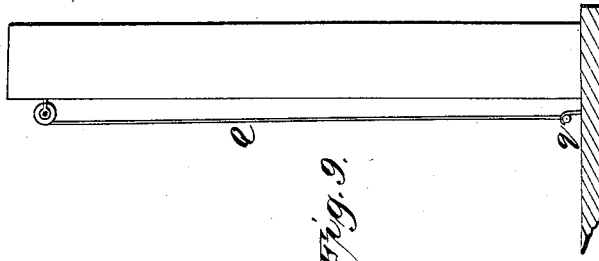


Fig. 9.

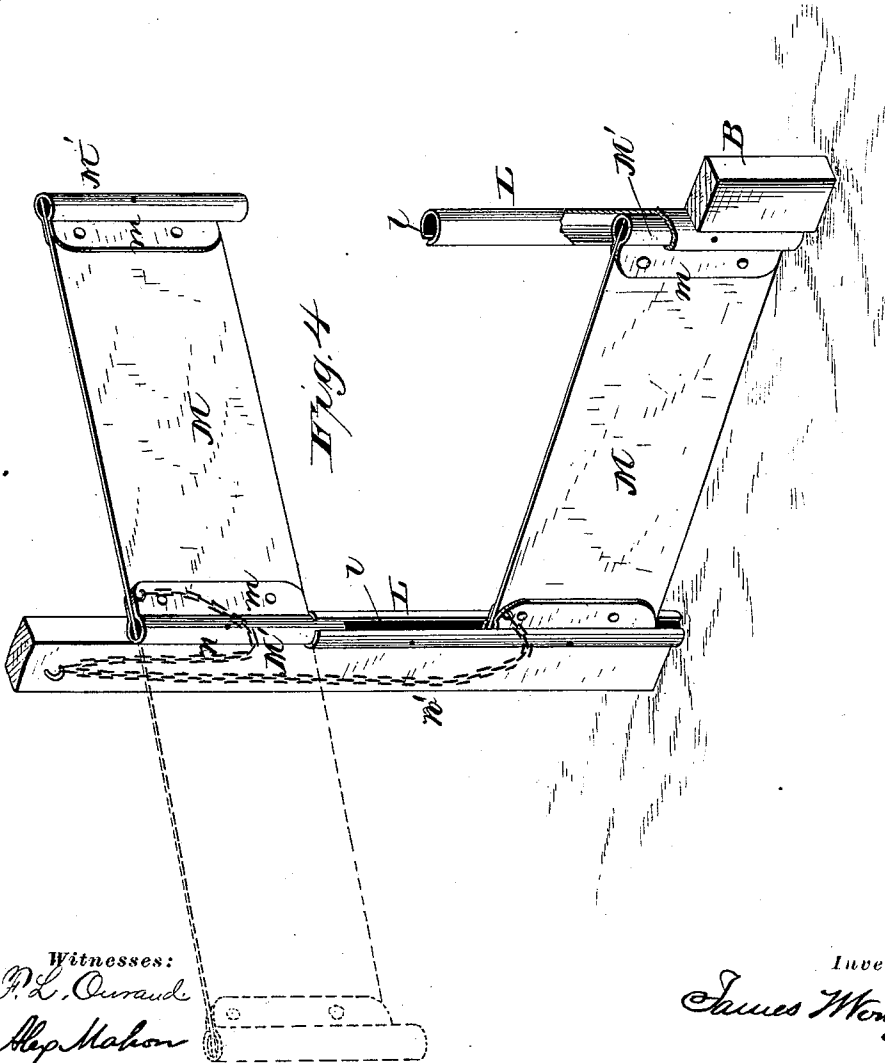


Fig. 4.

Witnesses:
P. L. Ousaud
Alex Mahon

Inventor:
James Montgomery

UNITED STATES PATENT OFFICE.

JAMES MONTGOMERY, OF CHICAGO, ILLINOIS.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 233,790, dated October 26, 1880.

Application filed March 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES MONTGOMERY, of Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Stock-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a stock-car with my improvements applied. Fig. 2 represents the same in horizontal section. Fig. 3 is a vertical longitudinal section through the same. Fig. 4 is a perspective view, showing the construction of the transverse flexible partitions, and Figs. 5, 6, 7, 8, and 9 represent certain details of construction hereinafter described.

My invention relates to certain novel features of construction and arrangement of parts of a stock-car for facilitating the feeding and watering of the stock, and for separating or stalling the same for preventing injury during transportation. The means employed will be best understood from the following description, with reference to the drawings, in which—

A A' represent the longitudinal sills or floor-frame bars, which are connected by transverse bars in any usual manner. To the outer face of the side bars, A, are secured angular metal brackets or sockets *a*, in which the lower ends of the uprights or wall-posts B are secured, this arrangement obviating the necessity for mortising and thereby weakening the sills, as is ordinarily done, and at the same time increasing the width of the car above the sills by the added width of the posts, as shown. These posts are ordinarily about eight inches in width—sufficient to accommodate the feed and water troughs hereinafter described—and they consequently add about sixteen inches to the width of the car, thereby increasing the space for and the consequent comfort of the stock.

Aside from the feature above noted, the frame of the body of the car may be of any usual or preferred construction.

The doors C are arranged, by preference, on opposite sides and at opposite ends of the car, as shown, and by preference also the feeding and watering devices are arranged to correspond with the arrangement of the doors opposite thereto, and extending one-half the

length of the car on opposite sides, as shown, though they may be made to extend the whole length of the car and upon both sides thereof, if desired.

The feed-bins D are arranged, by preference, on the top or roof of the car, extending longitudinally one-half the length thereof on opposite sides, as shown; but they may be arranged under the roof, where the latter is sufficiently high to accommodate them, and they may also be extended the whole length of the car upon both sides thereof, if desired. These bins are divided by longitudinal partitions D' into two compartments, *d d'*, the former for the storage of feed for the stock during transportation, and the latter forming a chute, through which the feed is passed down into the feed-troughs. The partition is arranged directly over the inner edges of the wall-posts B, and the latter are sheathed inside and outside at their upper ends to form extensions of the chute-compartments *d'*, as shown, the feed passing down between the wall-posts until it is caught and held by a series of valves, *e*, arranged between the wall-posts, and connected at their outer edges with a rock-shaft, *e'*, by means of which they can be operated simultaneously. Thus the feed is taken from the compartments *d*, passed into the chute-compartments *d'*, and there held upon the valves *e* until all the compartments *d'* are supplied, when, by rocking the shaft *e'* by means of a crank arm or lever, *e*², the valves *e* are simultaneously thrown down out of the way and the feed is dropped into the feed-boxes F below.

The partition-wall D' is a little shorter than the outer walls of the feed-bin, and accommodates a hinged cover, *d*², extending only over the chute-compartment, as shown, and opening outward, while the main cover D² extends over both compartments and is hinged to the inner wall of the bin. By this arrangement the feed-chutes are closed while the storing-compartments are being filled, and the position of the covers *d*² when the feed is being placed in the chute prevents the feed from being accidentally thrown over the side of the car, waste being thus prevented in both cases.

The feed and water troughs F may either be made to dump in emptying their contents, as shown in Figs. 1, 3, and 5, or they may be

made stationary and provided with discharge-outlets in their bottoms, which can be opened or closed at will, as hereinafter described. In either case they are made in short sections fitting between the wall-posts, and of a width conforming thereto, so as not to project beyond them, as shown in Fig. 3, and where pivoted so as to dump they are secured to a longitudinal shaft, *F'*, passing underneath them and through perforations in the wall-posts about centrally of their width, all upon the same side being connected with a single shaft, so that they can be operated simultaneously. The outer end of this rock-shaft is provided with a hand wheel or disk, by means of which it is operated, and this disk has a number of perforations, (see Fig. 1.) through any one of which a pin, *f*, may be passed into a socket-piece, *g*, for holding the troughs at any required adjustment.

Where the troughs are made stationary, as shown in Fig. 7, the bottom of each is perforated about midway of its length, to permit the emptying or cleaning of the trough, and underneath the series of troughs, in the same line, is a slide, *h*, perforated at intervals corresponding to the distance between the discharge-openings in the troughs. This slide passes through central perforations in the intervening wall-posts *B*, (see Fig. 7,) and is otherwise supported snugly against the bottoms of the troughs by suitable angular brackets attached to the lower face or sides of the troughs.

Any suitable packing may be employed for making a tight joint between the trough and slide, and each perforation in the slide may be provided with a spout, *h'*, (see Fig. 8,) turned outward, so as to discharge the water outside clear of the car.

The slide is connected at one end with a lever, *H*, by means of which the attendant can simultaneously close or open the discharge-outlets in an entire series of troughs.

The water-supply pipes *I* are arranged horizontally under the roof of the car, either inside the wall-posts, as shown, or outside of the same; or they may pass through perforations in the posts near their upper ends, as preferred. These are arranged on opposite sides and ends, extending half-way upon each side, as shown; or they may extend the entire length of the car on both sides, if desired. One end of each is turned upward at the end of the car, (see Figs. 1 and 2,) adapting it to receive water through a hose or pipe connecting it temporarily with a tank or other source of supply.

The pipe *I* has a number of pendent distributing-pipes, *i*, conforming to the number of troughs to be supplied. These are placed against the wall-posts, or may be let into them so as to be entirely out of the way, and they terminate in curved lower ends overhanging the troughs, but sufficiently above the latter, where dumping-troughs are used, to prevent

interference with the rocking or dumping of the trough.

By this arrangement of supply and distributing pipes they are made to instantly empty themselves into the troughs when the supply of water is discontinued, and all danger of freezing is effectually obviated. Another advantage of this arrangement of the pipes is that they are effectually guarded against becoming filled up or clogged by the feed or other obstructing matter.

The wall-posts immediately above the feed and water troughs *F* and between said troughs and the valves at the bottom of the feed-chutes *d'* are left without the slats or sheathing employed elsewhere, and in lieu thereof one or more longitudinal rods, *k*, are attached to the outer face of the wall-posts, about evenly dividing the open space thus left in the sheathing. This allows the stock to get at the feed or water in the troughs, as their horns can pass through the side of the car, either above or below the rod *k*, as need be, while at the same time the rod effectually prevents them from thrusting their heads through. This is regarded as important, as in the feeding arrangements heretofore employed, so far as I am acquainted with them, great difficulty has been experienced in feeding horned cattle in consequence of their horns coming in contact with the sides of the car, and thereby preventing them from reaching the food and water in the troughs.

Another feature of my improvement relates to the construction of the transverse partitions for separating or stalling the stock. By preference they are arranged two or four in a stall; but more may be put together, or they may be placed in individual stalls, if desired. My arrangement for effecting this consists in providing the wall-posts on their inner faces with vertical socket-pieces *L*, made cylindrical in form, with a slit cut in the inner side and extending from the top to (or nearly to) the bottom, as shown at *l*, Fig. 4. These socket-pieces are made of metal and firmly secured to the posts or side of the car upon both sides. The partitions are made, by preference, of india-rubber, rubber belting, rubber packing-cloth, leather, or other strong flexible material, such as will support and cushion the animal without hurting or injuring it, and strips *M* of such material have their ends secured between lips or flanges *m* formed on tubular, or nearly tubular, rods *M'*, conforming in size to and adapted to slide into the socket-pieces *L*. The rods *M'* are made a little longer than the width of strip *M*, (of which two at least will be used for each partition,) and project below the lower edges thereof, as shown in Fig. 4.

By this construction of the partition several advantages are gained, as follows: The lower edge of the lower strip is kept up clear of the filth and dirt upon the floor of the car, the two strips are separated by an intervening

space, which permits the adjacent sides of the animals in contiguous stalls to cushion each against the other, while the partition-walls prevent the animals from being thrown one against another by any sudden jerk of the cars with such force as to cause them to be thrown down, and the projecting end of rod M' , when the strip is raised to clear the socket-piece L , serves as a pivot or hinge, upon which the partitions can be turned out of the way against the side of the car, as shown in Fig. 4, to permit the stock to pass in or out.

By longitudinally dividing the partitions also the handling of the same is facilitated, and the lower part may be made of such width as that the cattle can readily step over it, thus necessitating the handling or turning and fastening of the upper section only in stalling or releasing the stock.

A modification in the form of the socket-piece and of the rod to which the ends of the flexible strips are secured is shown at L' , Fig. 2, where said parts are made in dovetail form, one fitting within the other. This form will answer well where the function of the hinge or pivot is not required; but the cylindrical or pivot form is preferred. The partition-strips are secured at one end by chains $n n'$ to the wall-posts near their upper ends, to prevent their becoming displaced or lost when not in use, and near the roof of the car are a series of pockets or horizontal shelves, P , (one of which is shown detached in Fig. 6,) open on one side, and in or upon which the partition-strips are placed when not in use, or when it is desired to clear the car for the reception of ordinary or return freight. The flexible partitions, raised slightly above the floor, as described, facilitate the lying down and rising of the stock and prevent injury to the limbs that may be projected under the partition.

In Fig. 9 I have shown an arrangement for protecting stock during transportation from heavy storms of rain, sleet, or snow, or from very inclement weather, the same consisting of a curtain, Q , of canvas or other flexible material, adapted to be folded or rolled up beneath the roof out of the way when not in use, and to be drawn down and attached at its lower end to hooks q on the sill or floor of the car, or at the lower ends of the wall-posts. These curtains are so arranged either inside or outside of the wall-posts as to entirely cover and protect the sides and ends of the car when required. I may also have outer casings for the car, of wood or other firm material, so arranged in sections as to slide like sliding doors or Venetian blinds, or otherwise adjusted or secured. In this way I may, in cases of violent storms of wind or rain from fixed directions and not accompanied by too great cold, inclose all sides but one, leaving that side unexposed to the weather entirely open or partially open, or I may entirely close the car in severe weather. I may also have one or more ventilators, either at the top, like a very low

chimney, or underneath the eaves of the roof of the car, or at any other point or points, so as to allow for ventilation at all times, but especially in very inclement weather, when the car must be entirely inclosed, except for ventilation. I am thus enabled to carry cattle at much greater advantage in long storms than would otherwise be possible. I may also, in extreme weather, heat the car by means of a stove having suitable chimney-pipes, or by steam-pipes connecting with the engine, or by other suitable means, so that in extremely inclement weather I may greatly modify the effect of changes of weather.

The pins for securing the hand-wheels F' at the required adjustment, also those for securing the valve-lever e^2 in place, are attached to the body of the car by chains, which retain them always in convenient position for use and prevent their loss. A hand-wheel similar to F' may be used in lieu of the lever e^2 on the rock-shaft e' for opening the valves e .

Parts of the car not particularly described may be constructed and arranged in any usual or preferred way.

Having now described my invention, I claim—

1. In a stock-car, the upright or wall posts permanently secured to the outer side of the sills or floor-frame bars by means of the metal socket-pieces, substantially as above shown, whereby greater strength is attained and an inclosed space or car-room of greater dimensions is secured than would be practicable by the usual construction.

2. The longitudinal feed-bins at the top of the car, having partitions separating the storing-compartment from the feed-chute compartment, the latter having an independent lid beneath a common lid which covers both compartments, substantially as described.

3. The longitudinal feed-bins having the storing and feed-chute compartments, separated by a longitudinal partition, the latter filling the entire space between the wall-posts, and provided with valves at their bottoms, connected with a pivotal shaft for actuating them, substantially as described.

4. The water and feed troughs arranged above and removed from the car-floor and having the discharge openings or outlets in their bottoms, as described, in combination with the spouted slides, whereby all in the same series can be simultaneously closed or opened and their contents discharged at the sides of the car and clear thereof, substantially as described.

5. The flexible partition-strips permanently secured at their ends to fastening-rods, which project at one end beyond the edge of the strips, for separating them from the floor and from each other, substantially as described.

6. The flexible strips M , permanently secured at their ends to the fastening-rods M' , in combination with the retaining sleeves or sockets L , substantially as described.

7. The slotted vertical sleeves or socket-pieces L, attached to the wall-posts or sides of the car, for the reception and retention of the rods on the ends of the flexible partition-strips.

5 8. The socket-pieces L, made in cylindrical or nearly cylindrical form, in combination with the projecting ends of the rods attached to the partition-strips, for forming a pivotal or hinge connection of the strip with the side of
10 the car, substantially as described.

9. A stock-car provided with rolling curtains arranged and operating substantially as described, whereby the sides and ends of the the car can be covered for protecting the stock.

10. The disk or hand-wheel F², provided 15 with a series of perforations, and applied to the rock-shaft for dumping the valves or feed-troughs, either or both, in combination with the socket-piece and retaining-pin for holding
20 said wheel and shaft at any desired adjustment, substantially as described.

JAMES MONTGOMERY.

Witnesses:

ALEX. MAHON,
J. M. YZNAGA.