(No Model.)

A. C. MATHER.

STOCK CAR.

No. 411,462. Patented Sept. 24, 1889.

Fig. 1.

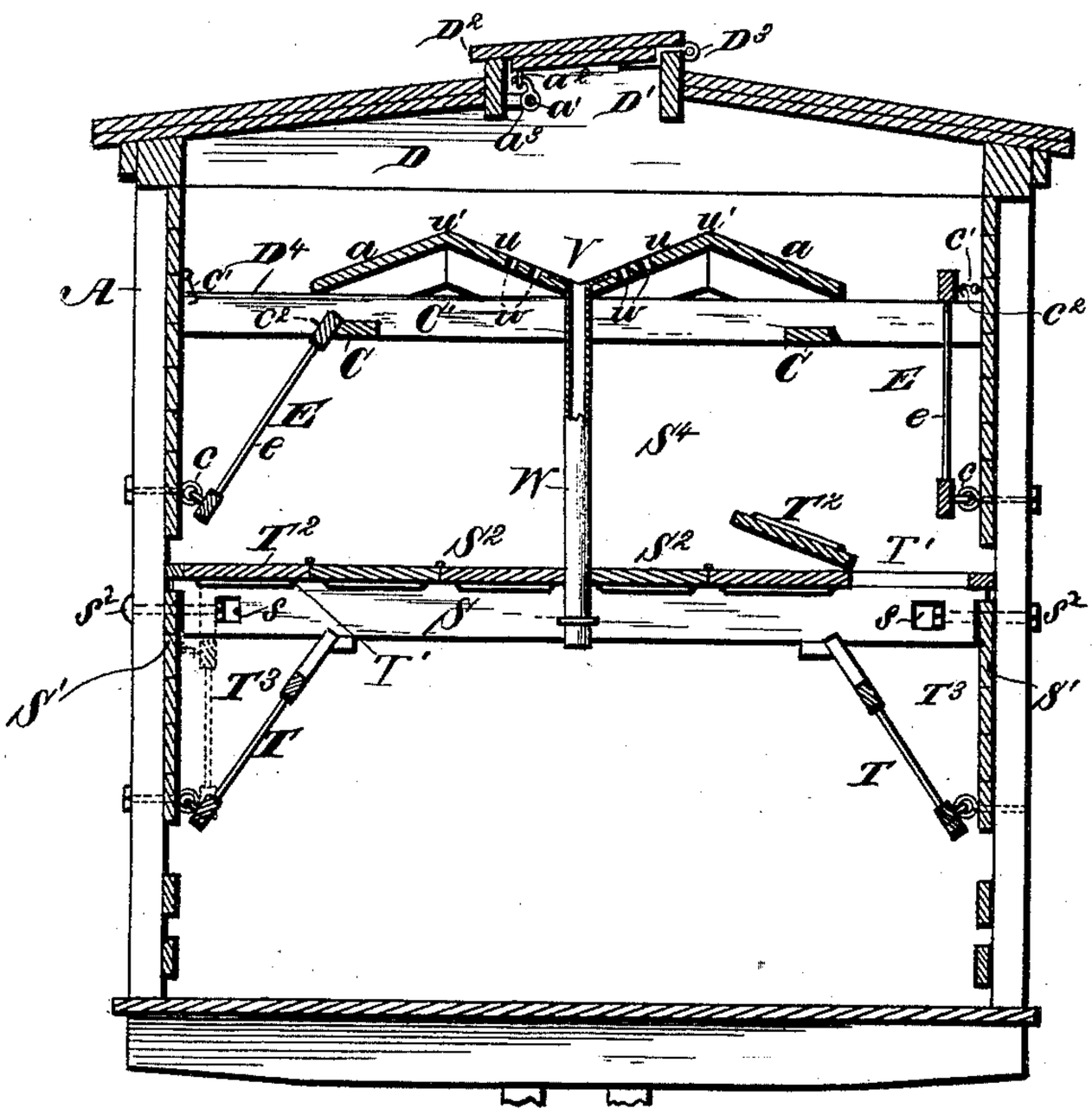
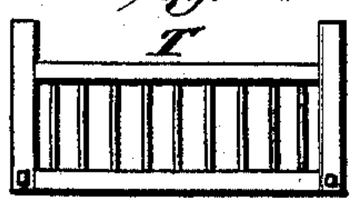
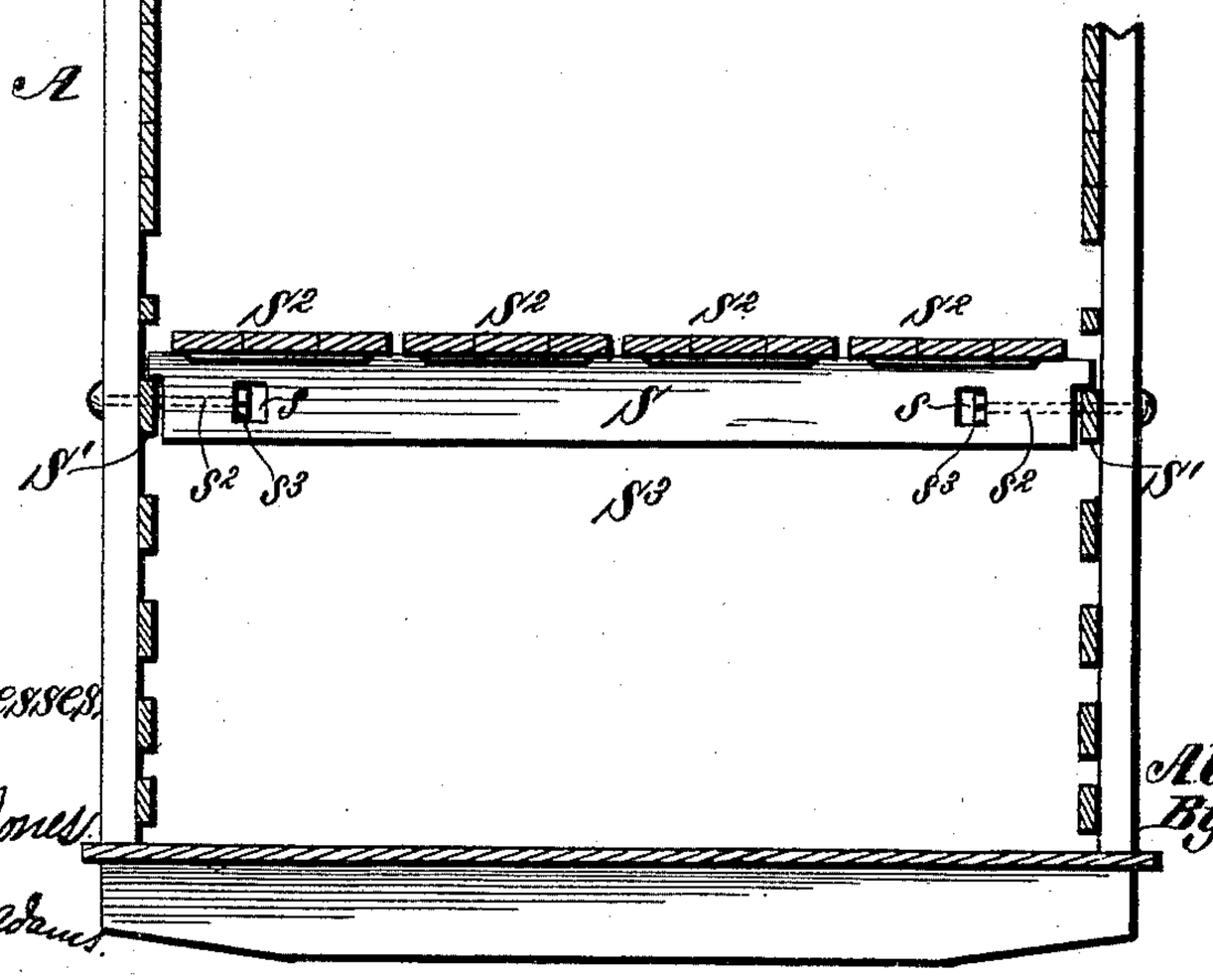


Fig. 2.

Fig. 3.

Fig. 4.





Witnesses.
H. F. Jones.
Albert H. Adams.

Inventor.
Alonzo C. Mather.
By West & Bond
Attys.

UNITED STATES PATENT OFFICE.

ALONZO C. MATHER, OF CHICAGO, ILLINOIS.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 411,462, dated September 24, 1889.

Original application filed January 18, 1888, Serial No. 261,109. Divided and this application filed September 18, 1888. Serial No. 285,726. (No model.)

To all whom it may concern:

Be it known that I, ALONZO C. MATHER, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Stock-Cars, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in stock-cars having upper and lower compartments arranged for shipment of small animals, such cars being commonly known as "double-deck stock-cars;" and the invention consists in the construction and combination of parts, as hereinafter described and claimed.

In the annexed drawings, Figure 1 is a vertical cross-section of my improved double-deck car arranged complete for shipment of small animals, such as hogs, sheep, &c. Fig. 2 is a detail cross-sectional view showing the manner of constructing the removable floor that divides the car into upper and lower compartments. Fig. 3 is a detail perspective view of one of the detachable cross-beams for supporting said removable floor. Fig. 4 is a detail front elevation of a section of the lower feed-rack.

This application is a division of an application, Serial No. 261,109, filed by me January 18, 1888, describing a stock-car which can be used either as a single or double deck car, and for which Letters Patent No. 396,100 were granted to me January 15, 1889.

A designates a stock-car, which may be made in the usual manner, except in the particulars hereinafter specified. In the upper part of this car are longitudinal beams C, supporting cross-beams C′, above which is a storage-chamber D, that is located immediately beneath the car roof. In the top of the car, extending from end to end, is an opening D′ into the chamber D, said opening being closed by a series of doors D^2, hinged at D^3, and secured by fastenings a' a^2 a^3, as described in my above-mentioned former application. The floor of the storage-chamber D consists of the double inclines *a* and *u*, which are composed of boards that slant in opposite directions from their upper edges *u′* toward the center and sides of the car. These boards or double inclines are supported on the cross-beams C′ and form a floor which does not extend quite to the sides of the car, openings D^4 being left on each side for the passage of hay and fodder from the storage-chamber. The inclines or boards *u u* constitute a **V**-shaped feed-bin V, which extends the entire length of the car. This feed-bin is provided at intervals with small feed-chutes W, located a few feet apart and extending from the center of the trough or bin V down into the lower compartment of the car.

The car-sides comprise opposite longitudinal slats S′, and upon the upper edges of said slats, about midway between the bottom car-floor and car-roof, rest the rabbeted ends of the transverse floor-supporting beams S, which are provided near each end with a mortise or slot *s*, extending transversely therethrough, and each is in communication with the inner end of a bolt-hole *s′*, drilled longitudinally in the beam from the rabbeted end thereof to said mortise or slot, all in such manner that bolts s^2 can be passed through the side slats S′ into the bolt-holes *s′* until the threaded ends of the bolts project into the mortises or slots *s*, and then screw-nuts s^3 are screwed upon the bolts and tightened to firmly secure the cross-beams S in position, while permitting the latter to be conveniently and rapidly detached and removed when occasion demands. This construction and fastening of the floor-beams to provide a double-decked stock-car is simple, durable, and efficient, and enables the attachment and detachment to be quickly accomplished. Other suitable cross-beams and fastenings may be used.

The cross-beams S S support a removable floor S^2, which divides the car into two compartments—a lower compartment S^3 and an upper compartment S^4. This floor S^2, I sometimes make in sections—say four or six, according to the width of the car—which helps materially in the saving of time and labor when setting up or taking down the parts of a double-deck car, as each section consists of a series of boards fastened together and all ready to lay into place.

E E are feed-racks placed on each side of the car in the upper compartment S^4 and ex-

tending from end to end of the car. These racks are made in sections, that they may be folded between the cross-beams C′, and also that they may be conveniently handled. The feed-racks each comprise an upper and a lower longitudinal slat or bar connected by spaced rounds *e*, between which the animals feed, as in an ordinary hay-rack, and the lower longitudinal slat or bar of each rack is hinged in any suitable manner to the car-side, as by eyebolts *c*, Fig. 1. The upper longitudinal slat or bar of each rack is provided with a staple c^2, for engaging a hook *c′* on the inside of the car, so that the racks can be held in a vertical or folded position against the sides of the car when desired. When lowered, they rest on the longitudinal beams C in an inclined position.

T T are feed-racks for the lower compartment S^3. These racks are made in sections to allow them to fold between the cross-beams S, and in construction and operation they are similar to the folding racks E of the upper compartment.

T′ T′ are a series of openings cut along each side of the car through the floor S^2, for the purpose of giving access to the space T^3 behind the racks T, whereby fodder may be placed in the racks.

T^2 T^2 are hinged doors or covers, which form a part of floor S^2, for covering the openings T′ T′.

The storage-chamber D is supplied with feed through the doors D^2, and the feed-racks E, being lowered, will become filled with hay or fodder, which passes through the side openings D^4, the bulk of the hay, however, remaining stored in the chamber D; but as the bottom of this chamber is partly inclined outward, as shown at *a*, the movements of the car during transit will cause the hay or fodder to settle and fall toward and into the openings D^4, and the racks E will thus be kept supplied as long as hay or fodder remains in the chamber D, which will be as much as will be required for a trip of considerable duration.

To fill the spaces T^3 behind the racks T with hay or fodder, I open the doors T^2, fold back the racks E against the sides of the car, and thus obtain a free passage-way to push or crowd hay down from the chamber D into the spaces T^3, after which the doors T^2 can be closed and the racks E unhooked and lowered into position to be refilled.

When the car is loaded with small animals, it is often desirable to feed them with corn, which it has heretofore been very difficult to do during transit. By having corn stored in the bin V the inclined sides *u u* will make it fall toward the center of the bin and the motion of the car will shake it down through the chutes W onto the floor of the lower compartment within reach of the animals. I also make holes *w* through the inclined sides *u* of the bin V at intervals to allow grain to fall down onto the floor of the upper compartment, where it can be taken up by the animals confined there. The other parts of the chamber D being filled with hay or fodder, the grain in the bin or trough V will be confined between the points *u′ u′*. The trough or bin V can also be used for supplying water to the animals.

What I claim as my invention is—

1. A double-decked stock-car having a bottom floor, sides, and a roof, and provided about midway between the bottom floor and roof with removable cross-beams S, detachably secured to the sides of the car, and a removable flooring on the cross-beams, a storage-chamber D, located in the top part of the car, and feed-racks located along the interior and on opposite sides of the car above and below the said removable flooring and cross-beams, substantially as shown and described.

2. A double-decked stock-car having a bottom floor, sides, and a roof, and provided about midway between the bottom floor and roof with removable cross-beams S, detachably secured to the car-sides, a removable flooring on the cross-beams, storage-chamber D in the top part of the car, a grain-trough or bin V, and feed-chutes W, leading from the trough or bin to the center of the lower deck of the car, substantially as shown and described.

3. A double-decked stock-car having a bottom floor, sides, and a roof, and provided about midway between the bottom floor and roof with removable and replaceable cross-beams detachably secured to the car-sides, a removable flooring on the cross-beams, and feed-racks along the interior on opposite sides of the car above and below the said cross-beams and flooring, substantially as shown and described.

4. A double-decked stock-car having a bottom floor, sides, and a roof, and provided about midway between the bottom floor and roof with removable cross-beams S, detachably secured to the car-sides, a removable flooring S^2 on the cross-beams, a storage-chamber D in the top part of the car, a grain trough or bin V, a feed-chute W, leading from the trough or bin to the center of the lower deck, feed-racks E above the removable flooring, and feed-racks T below the latter, substantially as described.

ALONZO C. MATHER.

Witnesses:
HARRY T. JONES,
E. A. WEST.