

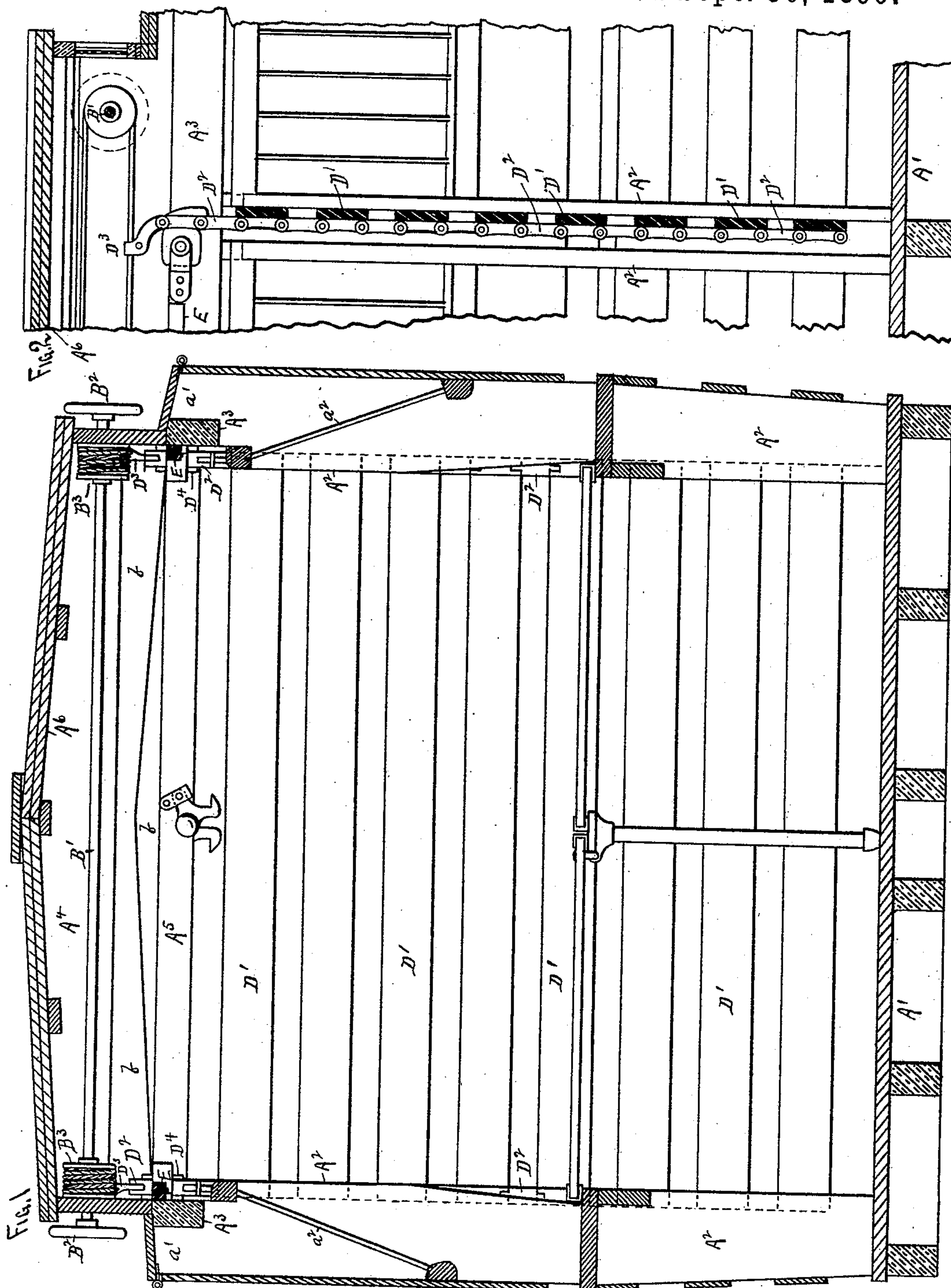
(No Model.)

B. C. HICKS  
STOCK CAR.

2 Sheets—Sheet 1.

No. 437,596.

Patented Sept. 30, 1890.



WITNESSES.  
A. H. Webster

Wm H Horton

John Chapin Hicks  
INVENTOR, BY  
Charles N. Woodward  
Atty.

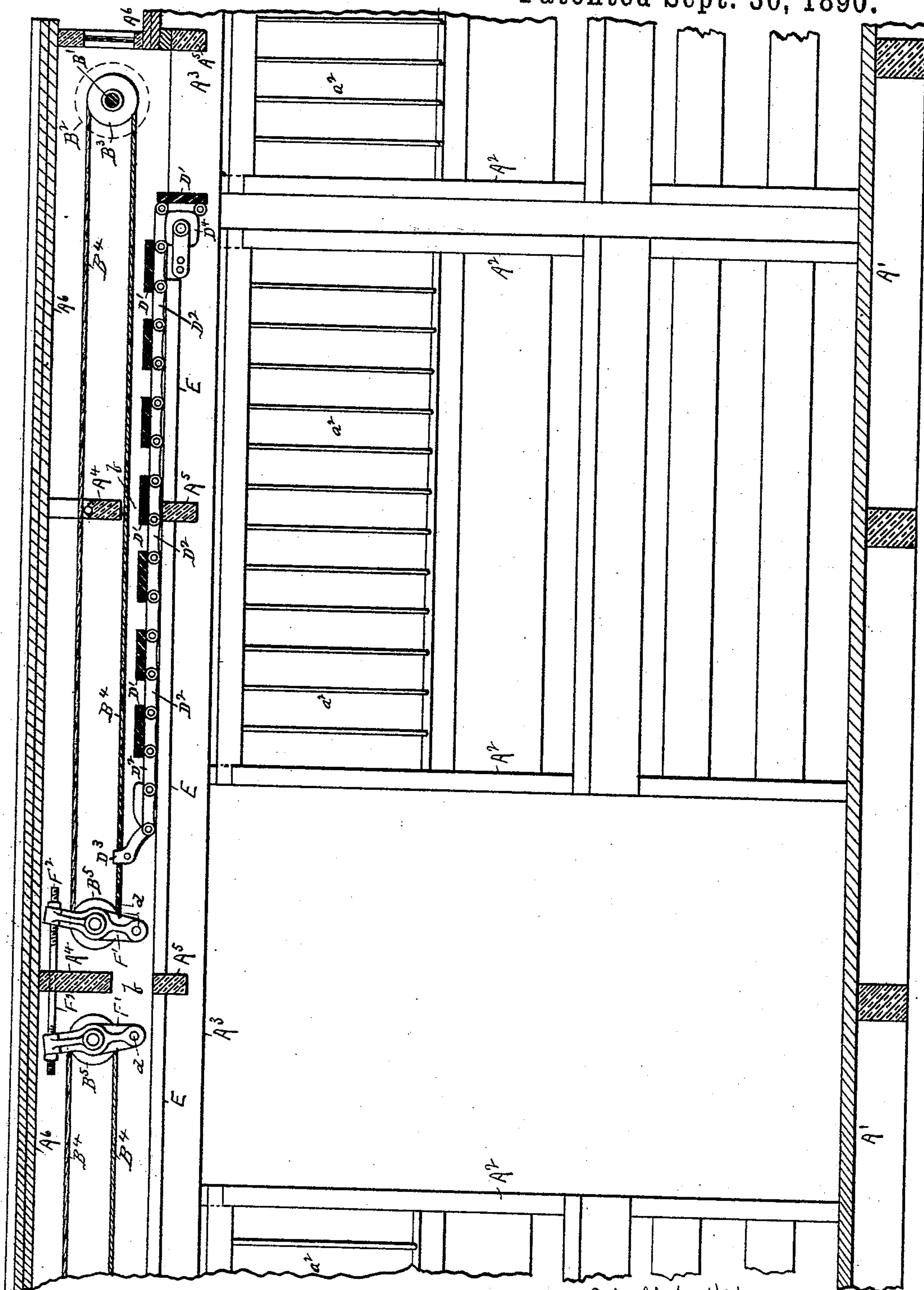
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B. C. HICKS.  
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WITNESSES.  
H. H. Hinton

FIG. 3

B. C. Hicks  
INVENTOR, BY  
Charles H. Woodward, atty.



# UNITED STATES PATENT OFFICE.

BOHN CHAPIN HICKS, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE HICKS STOCK CAR COMPANY, OF CHICAGO, ILLINOIS.

## STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 437,596, dated September 30, 1890.

Application filed January 18, 1889. Serial No. 296,756. (No model.)

*To all whom it may concern:*

Be it known that I, BOHN CHAPIN HICKS, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Movable Partitions for Stock-Cars, of which the following is a specification.

This invention relates to that class of stock-cars provided with movable flexible stall divisions or partitions for dividing the interior of the car into compartments; and the invention consists in the construction of the framework of the car, whereby the movable divisions may be more economically disposed as to space and with less obstruction to the interior of the car, and in the mechanism for raising and lowering the partitions.

The improvements are illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical cross-section of a stock-car with the improvements embodied therein. Fig. 2 is a vertical longitudinal section of a portion of the same, showing one of the flexible partitions lowered down; and Fig. 3 is a vertical longitudinal section of the central portion of the car with one of the flexible partitions elevated.

A<sup>1</sup> is the floor; A<sup>2</sup>, the vertical side stanchions or side posts; A<sup>3</sup>, the longitudinal plates or stringers; A<sup>4</sup> A<sup>5</sup>, the carlings or roof-timbers, and A<sup>6</sup>, the roof of a stock-car. The floor and stanchions or side posts are of substantially the ordinary construction, except that the latter are somewhat wider and are arranged in pairs at the points where the flexible partitions occur to form guides for the ends of the partitions. The adjacent side posts of each pair are located parallel with each other, so that they constitute a guideway for one vertical edge of the flexible partition. The stringers A<sup>3</sup> are set inward, as shown, leaving spaces *a'* for the insertion of the feed into the feed-racks *a*<sup>2</sup> from above, as shown. The carlings or roof-timbers A<sup>4</sup> A<sup>5</sup> are formed double or in pairs, one above the other, leaving spaces *b* between them, through which the flexible partitions are adapted to pass when elevated, as shown in Fig. 3. The roof A<sup>6</sup> rests upon the upper series of car-

lings A<sup>4</sup>, the whole forming thereby an elevated roof over a portion of the car or its entire length, as desired. The car is by reason of this elevated roof made higher than an ordinary box freight-car. The lower carlings A<sup>5</sup> occupy substantially the same position as the usual roof-carlings in an ordinary car, so that the interior space below them has the same carrying capacity as an ordinary car. The elevated roof thus serves to provide space for the paraphernalia of the stock-car without obstructing the clear inner space in the car, so that the car may be utilized for ordinary freight purposes when not in use for transporting stock.

When the flexible partitions are employed at short intervals, so as to provide a separate stall for each animal, the elevated roof will extend the entire length of the car; but where only two are employed (as will generally be the case when used in a double-deck car, as in the drawings) then the elevated roof will extend only far enough to provide a receptacle for the flexible partitions.

The sections S S, which constitute the double deck, are indicated in the drawings. As is well known, in double-deck stock-cars the double-deck sections are movable and are adapted to be raised and lowered, so that the car may be used with or without the double deck. The manner in which such double-deck sections may be raised to the upper part of the car is set forth in Letters Patent of the United States granted to me June 22, 1886, No. 344,044.

The present improvements are particularly adapted to be used in stock-cars wherein movable double-deck sections are employed.

Across the car, at or near the ends of the elevated roof portion, shafts B<sup>1</sup> are journaled, having hand-wheels B<sup>2</sup> or other means of revolving them, and with cable-winding drums B<sup>3</sup> near their ends inside the car. These winding-drums are each adapted to receive the two ends of a cable or chain B<sup>4</sup>, one end of each of the cables being attached at one end to each of the drums on opposite sides and at opposite ends and with one end of each of the cables wound about its drums several times and then the bight passed over carrier-sheaves



B<sup>5</sup>, journaled in hangers F' on the sides of the car at some distance away from the drums and shafts, as shown. By this means, if the shafts B' be revolved in one direction the cables will be wound upon the drums from one side and unwound from the other, and vice versa, so that the lengths of the cable between the drums B<sup>3</sup> and the carrier-sheaves B<sup>5</sup> will be caused to travel back and forth with a positive movement, for there can be no possible slipping of the cables, since they are fastened securely to the drums. The carrier-sheaves are located in the same horizontal plane as the winding-drums, and the strands of the cables between the sheaves and drums extend in substantially a horizontal plane.

The flexible partitions are formed of slats D', connected by chains D<sup>2</sup> at their ends, the uppermost link of each chain being coupled at D<sup>3</sup> to the lower section or strand of the cables B<sup>4</sup>, and the partitions being otherwise unconnected to the cables, so that when the shaft B' is revolved in one direction the flexible partition will be drawn upward over guide-sheaves D<sup>4</sup> and passed along between the two sets of carlings A<sup>4</sup> A<sup>5</sup>, as shown in Fig. 3, leaving the interior of the car below the carlings entirely unobstructed. Then when the shafts B' are revolved in the opposite direction the partition will be run down again across the interior of the car, as in Figs. 1 and 2.

The guide-sheaves D<sup>4</sup> are an important feature, since they afford (with a minimum friction) guides in the upper part of the car over which the flexible partition is drawn by the cables, and by means of which the partition, as it is elevated, is drawn into a horizontal position. These guides are located beneath the cables near the upper edge of the partition when lowered and substantially tangential to the side of the partition when the latter is in its lowermost position.

Attached to the stringers A<sup>3</sup> on a line even with the upper surfaces of the lower carlings A<sup>5</sup> are horizontal carrier-strips E to support the edges of the flexible partitions when the latter are elevated, so as to prevent the possible sagging of the partitions.

The carrier-sheaves B<sup>5</sup> are journaled in hangers F', the latter pivoted at d to the car-frame, and the upper ends of each adjacent pair of hangers connected by an adjusting-rod F<sup>2</sup> to form a tension device for the cables, since the setting up of the nuts on the rod F<sup>2</sup>, as will be readily understood, will draw the two sheaves toward each other and thus strain the cables and keep them taut. By this form of construction the roof-frame is formed with the double carlings or timbers A<sup>4</sup> A<sup>5</sup>, leaving a space between them for the storage of the flexible partitions when not in use, so that the interior of the car is thereby left entirely unobstructed when the partitions are elevated and the car left free for freight when not in use as a stock-car.

If it were not for the extra height of the

car, due to the elevated roof and the double carlings, and for the space between the double carlings for the passage and storage of the flexible partitions, it would be necessary to have the partitions when elevated partly obstruct the space in the interior of the car, which would otherwise be available for the storage of freight when the car is not in use as a stock-car. At the same time the lower carlings over which the flexible partition passes afford a protection to the partition and prevent its being injured by the loading and unloading of ordinary freight; also, as the stock-cars to which these improvements particularly relate are constructed with movable deck-sections, which when not in use are raised to the top of the car, said double-deck section can, when elevated, lie flat against the under faces of the lower carlings without interfering with the flexible partitions and without being interfered with by them.

The flexible partitions operate more freely from below the cables than from above them and permit the shafts B' to be placed at any desired point in the car with reference to the sheaves B<sup>5</sup>, which is a great advantage under some circumstances.

I claim as my invention—

1. In a stock-car, a cross-shaft journaled near the roof thereof, winding-drums fast to said shaft near its ends, carrier-sheaves near the roof of the car and in substantially the same horizontal plane as said drums, and cables which pass around said drums and around said carrier-sheaves, the strands of said cables between said drums and sheaves extending in a substantially horizontal plane and along the upper part of the car only, in combination with a flexible partition connected at its upper edge to said cables and otherwise unconnected therewith, and guides near the roof of the car beneath said cables and near the upper edge of said partition when in its lowermost position, whereby said partition passes over said guides and is raised and lowered across the car by the rotation of said winding-shaft, substantially as set forth.

2. In a stock-car, a cross-shaft, winding-drums fast thereon, and carrier-sheaves, all mounted in the top of the car, cables which pass around said drums and said carrier-sheaves, the strands of said cables between said drums and sheaves extending in substantially a horizontal plane and along the upper part of the car only, and a flexible partition connected at its upper edge to said cables and otherwise unattached thereto, whereby said partition is raised and lowered by the rotation of said shaft and the movement of said cables, in combination with horizontal carrier-strips along the upper part of the sides of the car for supporting the ends of said partition when the same is elevated, substantially as set forth.

3. A stock-car frame consisting of the floor A', side stanchions or side posts A<sup>2</sup>, double-roof carlings A<sup>4</sup> A<sup>5</sup>, and horizontal support-



ing-strips E, in combination with cross-shafts B', having winding-drums B<sup>3</sup>, cables B<sup>4</sup>, carrier-sheaves B<sup>5</sup>, and flexible partitions connected to said cables, whereby said partitions  
5 are capable when raised of being supported between said carlings and upon said strips, substantially as and for the purpose set forth.

4. In a stock-car, double-roof carlings having spaces between them and longitudinal  
10 supporting-strips along the sides of the car, in combination with a flexible partition adapted to be raised and lowered across said car and supported when elevated within the space between said carlings and upon said support-  
15 ing-strips, substantially as and for the purpose set forth.

5. A stock-car frame consisting of the floor,

paired side posts or stanchions, and the roof-frame formed with double carlings and with longitudinal supporting-strips along the sides 20 of the car, in combination with a flexible partition adapted to be raised and lowered across said car with its ends supported by said paired side posts when down and supported within the space between said carlings and upon 25 said supporting-strips when elevated, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BOHN CHAPIN HICKS.

Witnesses:

C. N. WOODWARD,  
H. S. WEBSTER.