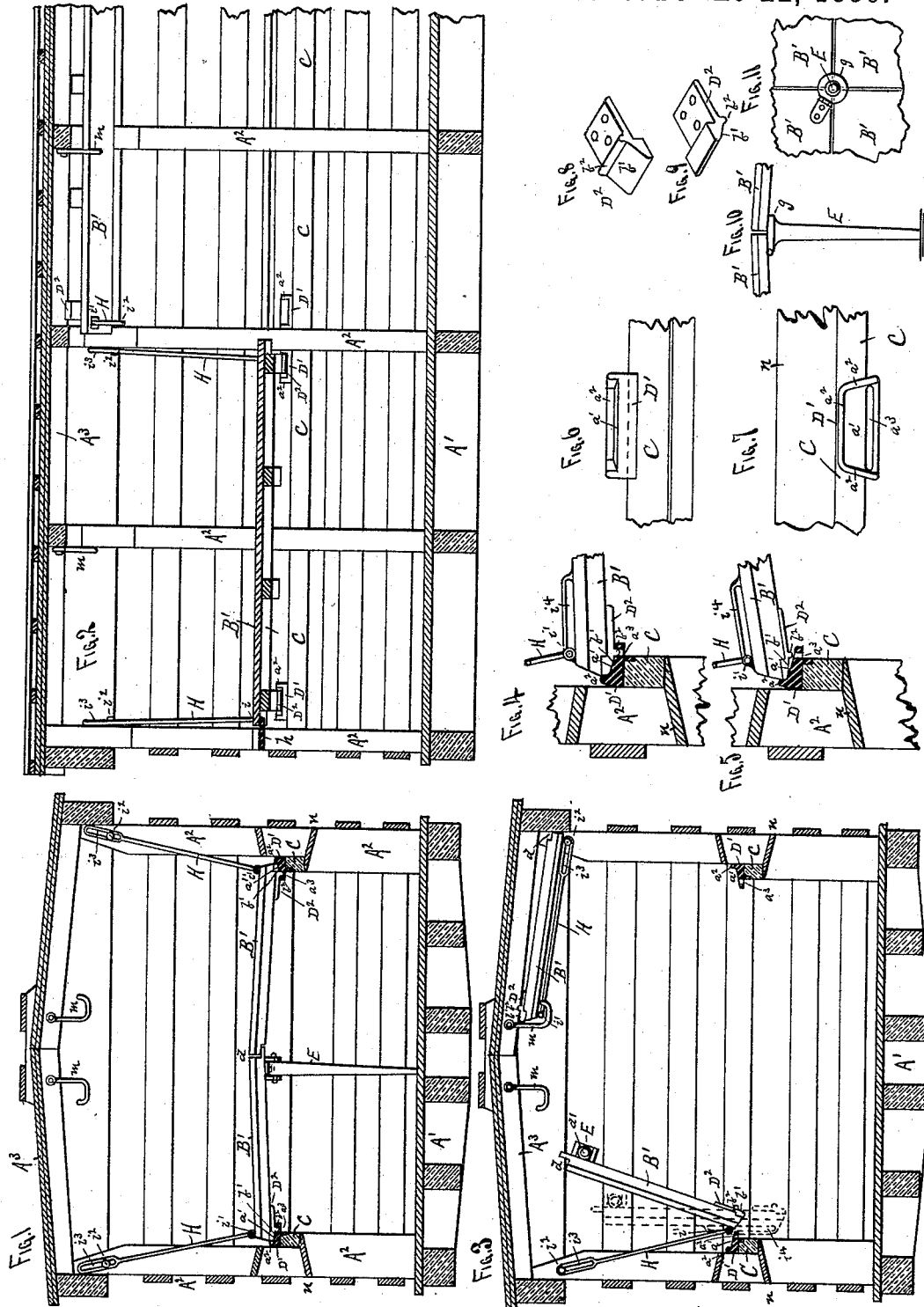


(No Model.)

B. C. HICKS.
STOCK CAR.

No. 344,044.

Patented June 22, 1886.



WITNESSES.

a. S. Mayo.
J. S. White.

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

UNITED STATES PATENT OFFICE.

BOHN C. HICKS, OF MINNEAPOLIS, MINNESOTA.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 344,044, dated June 22, 1886.

Application filed February 26, 1886. Serial No. 193,375. (No model.)

To all whom it may concern:

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

This invention relates to that class of stock-cars formed with an auxiliary deck or floor, whereby sheep, hogs, and other small animals may be transported upon each floor or deck; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described.

In the drawings, Figure 1 is a cross-sectional elevation of a stock-car, showing my improved double deck arranged therein. Fig. 2 is a sectional side elevation with one of the deck-sections folded up and with one turned down. Fig. 3 is a cross-sectional elevation showing one of the deck-sections folded up and one partially folded up. Figs. 4 and 5 are enlarged sectional details of the means for supporting the outer edges of the deck-sections. Figs. 6 and 7 are enlarged details of the deck-section supporting-plate which is attached to the car. Figs. 8 and 9 are enlarged perspective views of one of the supporting-plates which is attached to the deck-sections, Figs. 4, 5, 6, 7, 8, and 9 being on the same scale. Fig. 10 is a detached side view of portions of the adjacent ends of a pair of the deck-sections and one of the supporting-legs, illustrating a modification in the manner of constructing the leg. Fig. 11 is a bottom plan view of portions of four of the adjacent deck-sections, illustrating the manner in which one leg may be made to support four sections.

A' represents the floor; A², the side frames or stanchions, and A³ the roof, all constructed in the ordinary manner. The auxiliary or double deck is formed in sections B', as shown. Generally five pairs of these sections B' will be arranged in each car, four pairs between each end and the doorway-openings; but a greater or lesser number may be used, as required.

The sections B' will be formed of wooden frames, covered with planking, of any suitable

construction, to secure the requisite strength and lightness.

Along the sides of the car, at the requisite height at which the sections B' are to be set, the stanchions A² will be connected by horizontal string-pieces C; or these pieces C may be formed in one piece secured across the stanchions. Upon these string-pieces C, opposite each end of each section B', metal plates D' will be secured. These plates are formed, as more clearly shown in Figs. 6 and 7, with an inclined upper surface, a', surrounded by a rib, a², on three sides, and with a cavity or slot, a³, in the lower edge of the inclined upper surface, a', as shown, the surface a' of each plate D' inclining inward and downward, as shown. Secured upon the lower sides of the sections B', opposite these plates D', are other plates, D², each with an inclined lower surface, b', corresponding to the surface a' of the plate D', and each provided with a rib, b². By this arrangement, when the sections B are set in place in the car, the surface b' and rib b² of each plate D² will rest upon the surface a' and into the slot or cavity a³ of its respective plate D', and the outer edges of the sections will be thus supported, as hereinafter more fully explained.

The inner edges of each section B' are shown in Figs. 1 and 3 rabbeted in opposite relations at d, so that the inner edge of one section is supported by the "rabbet" of the other section, thus requiring central supporting-legs, E, only beneath one section of each pair of sections B.

In Figs. 10 and 11 I have shown another method of supporting the inner edges of the sections B', consisting in hinging the legs E to one section, B', and forming each leg with its upper end, g, extended so as to project beneath the adjacent section and support it, so that one leg, E, does duty for two sections, B'. If preferred, the projecting ends g of the leg E may be hinged to one of the sections near one corner, so that its extended end g will project beneath the corners of the four sections where the ends of two pairs of sections come together, as in Fig. 11. Thus one leg, E, can be made to support four sections. The

ends of the sections next the ends of the car will be supported by fixed stops *h* on the frame of the car; hence the legs *E* will be required only beneath the inner ends of the sections, and if ten sections are used in each car, (which will be the usual number,) and if the extended ends *g* are arranged as in Fig. 11, then only four legs, *E*, will be required in each car. The legs *E* will be arranged to be folded up against the lower sides of the sections *B'* when not in use, as at *d'* in Fig. 3.

H are iron rods, one pivoted by one end to each end of each section *B'* at each outer corner at *i'* and each rod pivoted by its other end at *i''* to the upper part of the nearest adjacent stanchion, *A''*, or to some other suitable point near the roof *A''*. The upper end of the rods *H* are slotted at *i''*, so that they are free to play up or down.

Where the height of the car is sufficient to enable the sections to be folded up between the stringers *C* and the roof *A''*, the slots *i''* in the rod *H* will not be required to be as long as shown; but when, as is generally the case, the distance between the plates *D'* and the roof *A''* is not sufficient to permit the sections to be thus folded up the slots *i''* will be long enough to enable the outer edges of the sections *B'* to drop down off from the plate *D'* when elevated, as shown at the left of Fig. 3, and thus leave room for the sections to be folded up beneath the roof *A''*, as shown at the right of Figs. 2 and 3, and held thus suspended by the hooks *m*.

By forming the surface of the plate *D'* inclining inward and downward the elevation of the inner edges of the sections *B'* will cause the plates *D''* to slip off from them, and the sections drop down as far as the slots *i''* will permit, thus avoiding the necessity for the operator to lift the sections bodily at any time. At no time is it necessary to lift more than one-half the weight of one of the sections. By this simple arrangement the sections *B'* may all be folded up beneath the roof of the car when not in use, as shown at the right of Figs. 2 and 3, or folded down and supported by the plates *D'* *D''* and legs *E* to form an auxiliary deck, as shown in Fig. 1 and on the left of Fig. 2, so that the car can be used for cattle, horses, and other large animals, as an ordinary stock-car, or for freight or goods of any kind as an ordinary freight-car, the sections *B'* when folded up leaving the interior of the car entirely unobstructed and free to be used in the ordinary manner.

Another important advantage gained by folding the sections up next to the roof *A''* is that the sides of the car are left entirely free and unobstructed, so that when used for cattle, horses, &c., the ventilation is not interfered with. If, however, it is found desirable, the sections can be folded up against the sides of the car and held in place by hooks, instead

of being folded up next to the roof, as in Figs. 2 and 3.

The ribs *b''* on the plate *D''* perform an important function, as they serve to hold the sections *B'* outward and prevent them from moving inward, while at the same time they are very easily released when the inner edges of the sections are elevated, as shown in Fig. 5, which represents an enlarged detail with the section *B'* elevated to release the rib *b''* from the cavity *a''*.

The forming of the slots *i''* in the rods *H* have another important function—viz., the preventing of the weight of the sections coming upon the rods when the sections are in place horizontally, the extreme length of the rods including the slots being greater than the distance between the pivots *i'* *i''* when the sections are folded down horizontally, as in Fig. 1. Thus the weight of the sections and the animals upon them will be borne entirely by the plates *D'* *D''* and legs *E*.

In cases where the cars are less in height and greater in width than ordinary, requiring wider sections *B'*, and consequently greater space to turn them in folding them up, I shall arrange the pivots *i'*, by which the lower ends of the rods *H* are secured to the sections *B'*, to fit into slotted plates *i''* on the sections *B'*, as shown in Figs. 3, 4, and 5, so as to allow the sections to drop to a still lower point, as indicated by dotted lines in Fig. 3. By this arrangement I can turn the sections *B'* over and fold them up next to the roof, regardless of the height of the car or the position of the sections.

The sections *B'* are shown in Fig. 3, inclining slightly from the center downward and outward, so as to cause liquid excrement to flow off through the sides of the car. Inclined boards *n* will be arranged to carry off any matter flowing off from the sections.

Having thus described my invention, what I claim as new is—

1. In a double-deck stock-car, a series of sections, *B'*, suspended in said car by rods *H*, and adapted to be folded up beneath the roof of said car when not in use, substantially as set forth.

2. In a double-deck stock-car, a series of sections, *B'*, suspended in said car by rods *H*, and supported by plates *D'* *D''* and legs *E*, so that no strains occur upon said rods when said sections are in place horizontally, substantially as set forth.

3. In a double-deck stock-car, a series of floor-sections, *B'*, having folding legs *E* and plates *D''*, with ribs *b''*, a series of corresponding plates, *D'*, with cavities *a''*, and attached to the sides of said car, and rods *H*, pivoted at *i'* to said sections, and at *i''*, by slots *i''*, to said car, whereby said floor-sections may be set horizontally and supported by said plates and legs when required for use, or folded up be-

neath the roof of the car when not in use, substantially as set forth.

4. In a double-deck stock-car, a series of floor-sections, B', adapted to be supported
5 horizontally between the floor and roof of said car, and provided with slotted plates *i*⁴, rods H, each pivoted by one end in said slotted plates and by the other end to the frame of said car near the roof, substantially as set
10 forth.

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

BOHN C. HICKS.

Witnesses:

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