E. POSSON.

DOUBLE DECK FREIGHT CAR.

APPLICATION FILED DEC. 6, 1915.

1,186,035.

Patented June 6, 1916.

5 SHEETS—SHEET 1.

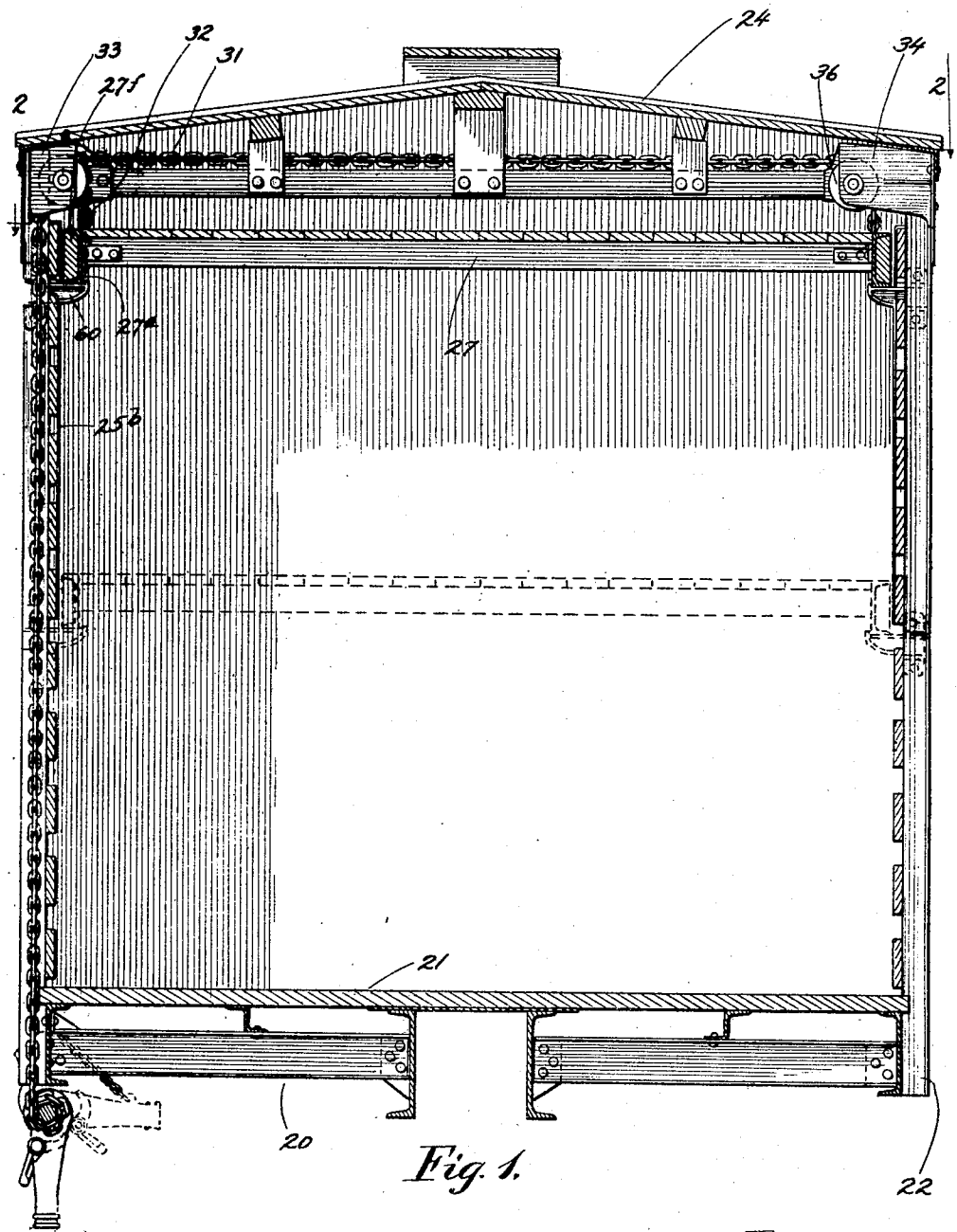


Fig. 1.

Witness.

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5 SHEETS—SHEET 2

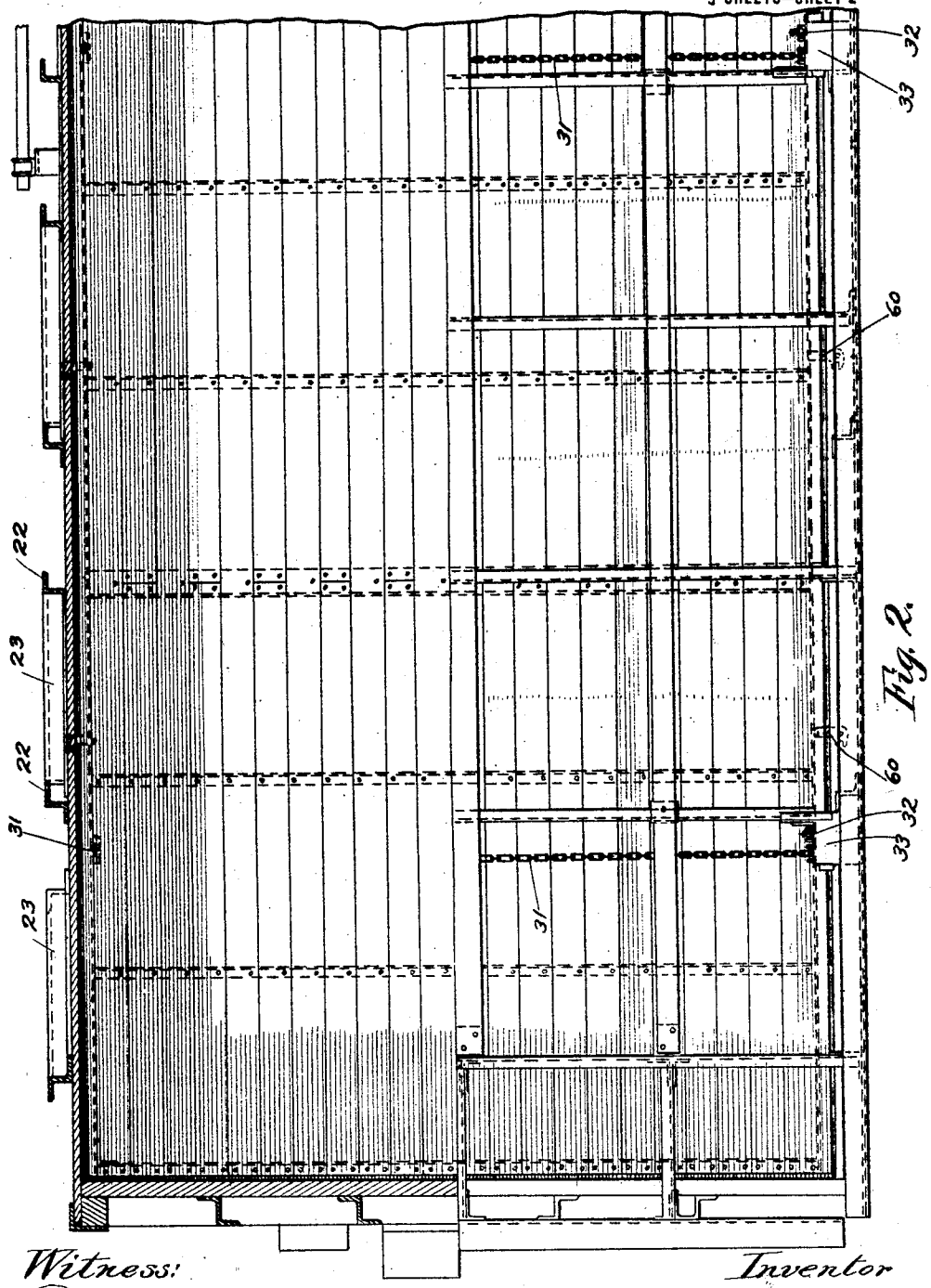


Fig. 2.

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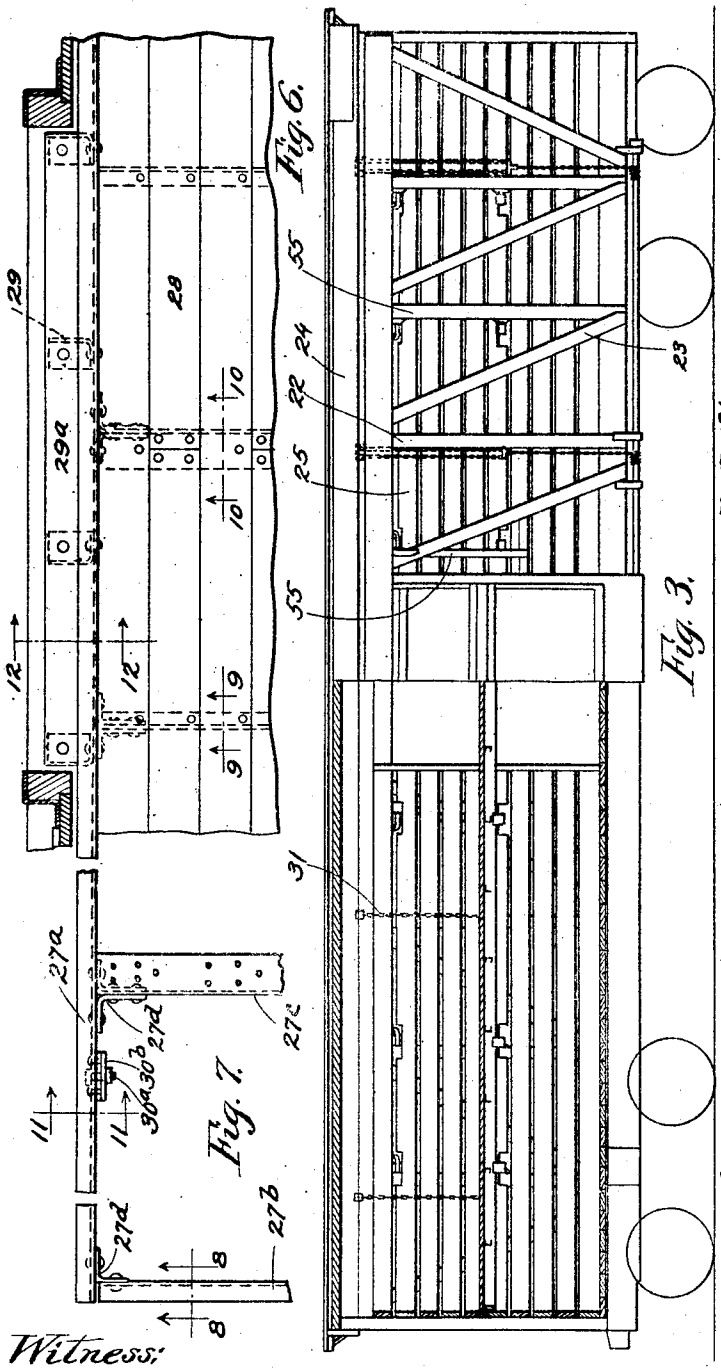
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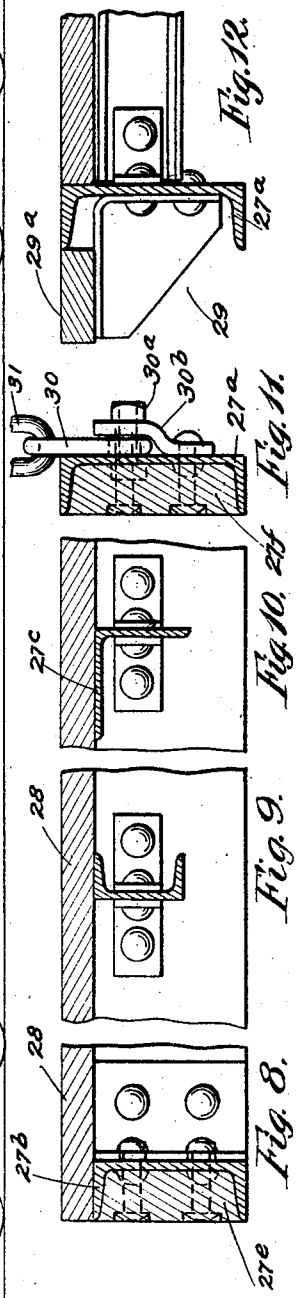
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5 SHEETS—SHEET 3.





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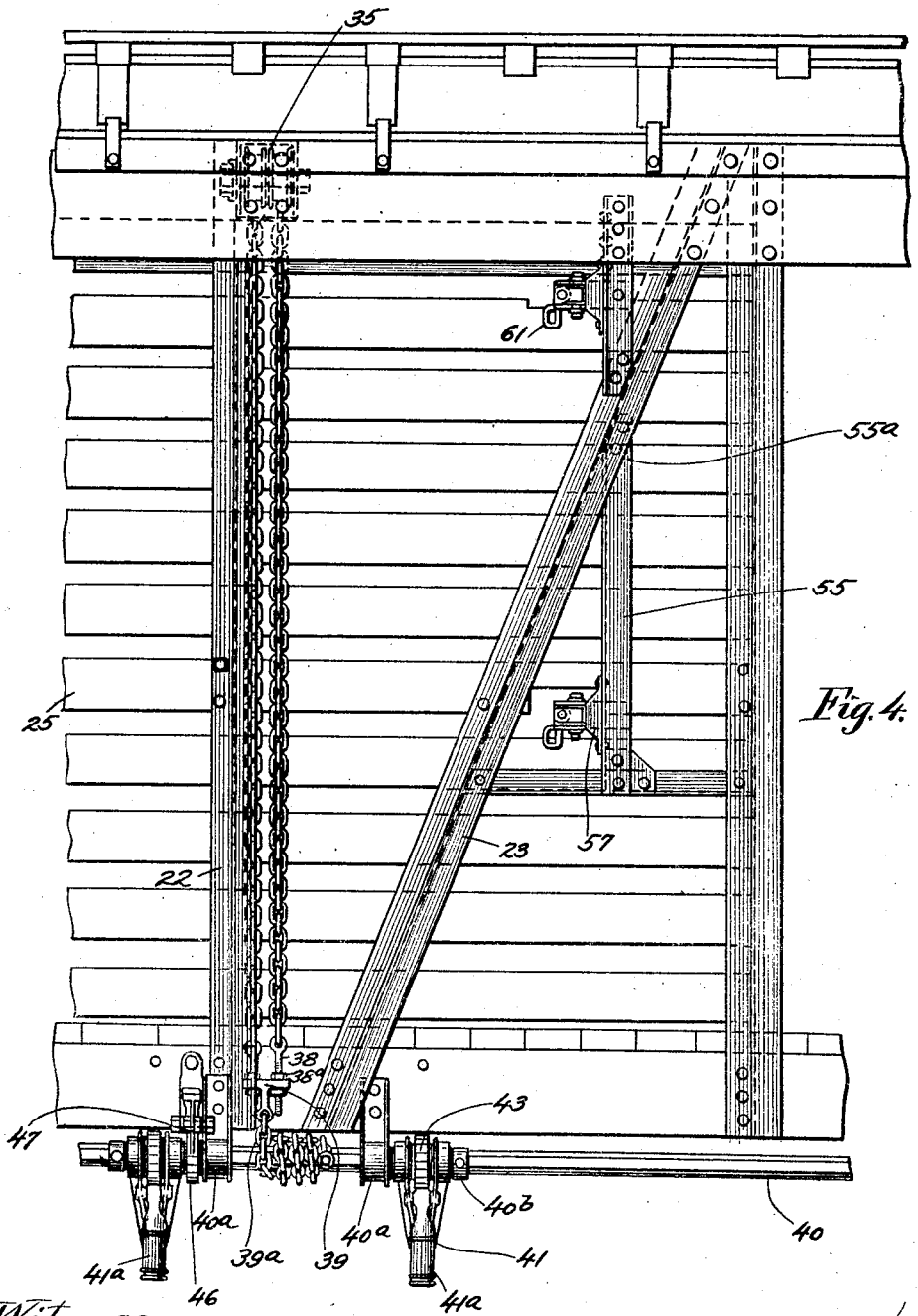


Fig. 4.

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5 SHEETS—SHEET 5.

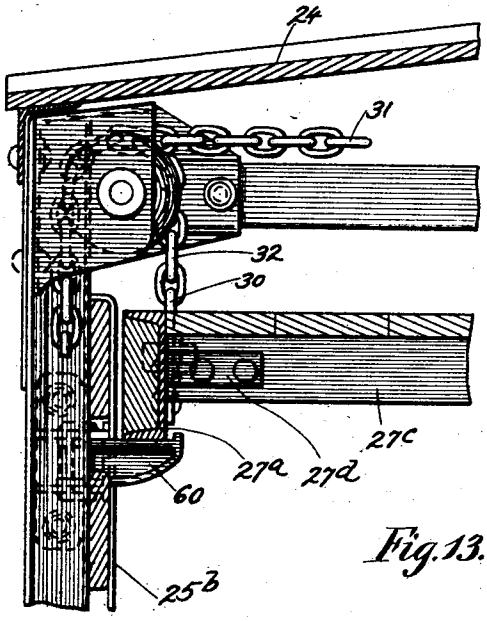
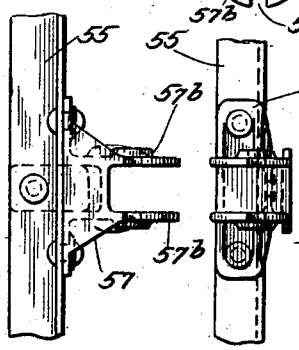


Fig. 13.



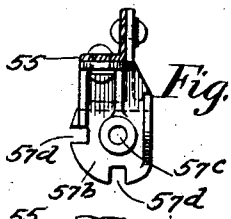


Fig. 15.

Fig. 14.

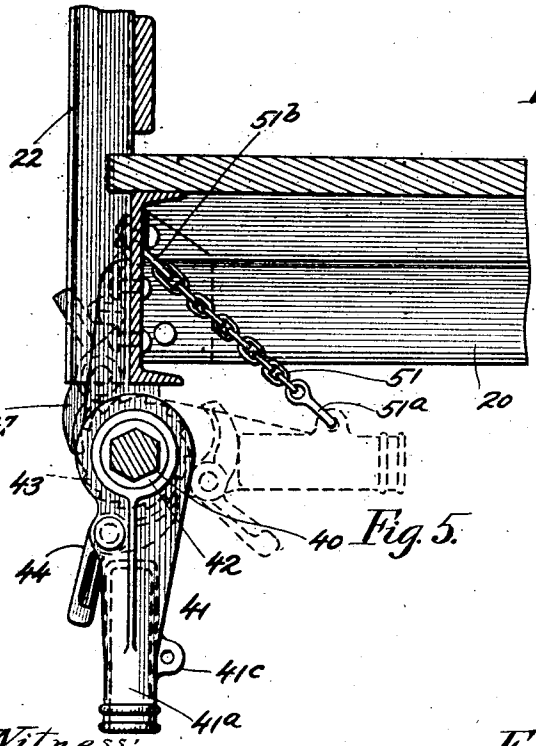


Fig. 5.



Fig. 16.

Fig. 17.

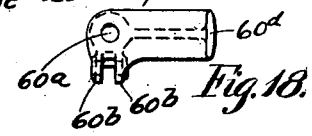


Fig. 18.



Fig. 19.

Fig. 20.

Inventor.

Witness:

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Edward Posson

By Sheridan, Wilkinson and Scott, Attys

UNITED STATES PATENT OFFICE.

EDWARD POSSON, OF CHICAGO, ILLINOIS.

DOUBLE-DECK FREIGHT-CAR.

1,186,035. Specification of Letters Patent. Patented June 6, 1916.

Application filed December 6, 1915. Serial No. 65,283.

To all whom it may concern:

Be it known that I, EDWARD POSSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Double-Deck Freight-Cars, of which the following is a specification.

This invention relates to applications for double deck freight cars, and has for its object to provide in combination with such a car a deck which may be raised from the floor to operative or utilizable position to provide a double-decked car for transportation of animals, perishable food stuffs, or the like, or which may be raised out of the way to position just beneath the roof of the car and maintained in such position, or which may be allowed to rest on the floor of the car.

Still another object of the invention resides in the construction of my improved double deck car with the specific means and structure utilized to carry out the object mentioned above.

These and other objects will be set forth in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a transverse vertical section through my improved car. Fig. 2 is an irregular horizontal section along the line 2—2 of Fig. 1. Fig. 3 is a side elevation, partly in section, of my improved car. Fig. 4 is a side elevation of a portion of my car drawn to an enlarged scale. Fig. 5 is a transverse vertical section of the same. Fig. 6 is a plan view of a portion of the deck. Fig. 7 is a detail plan view of a portion of the deck skeleton. Fig. 8 is a detailed section, taken along the line 8—8 of Fig. 7. Fig. 9 is a detailed section, taken along the line 9—9 of Fig. 6. Fig. 10 is a similar view, taken along the line 10—10 of Fig. 6. Fig. 11 is a detailed section, taken along the line 11—11 of Fig. 7. Fig. 12 is a detailed section, taken along the line 12—12 of Fig. 6. Fig. 13 is a detail side elevation of the deck support-carrying means. Fig. 14 is a similar view, taken at right angles. Fig. 15 is a plan view of the same. Fig. 16 is a side elevation of one of the deck supports in one position. Fig. 17 is a similar view, showing the same in another position. Fig. 18 is a plan view of the same. Fig. 19 is a side elevation of one of the deck support lugs; and Fig. 20 is a similar view, at right angles thereto.

Like numerals refer to like elements throughout the drawings, in which—

20 indicates generally the floor-supporting structure and car frame upon which is carried a floor 21. Uprights 22 extend upwardly from and are attached to the car frame, as shown in Figs. 1 and 4, for example. Located between the vertical uprights 22 are the diagonal or inclined uprights 23, secured to the car frame at their lower ends. The uprights 22 and 23 support and carry the roof 24, and also serve as a reinforcing and carrying means for the longitudinal strips or slats 25, comprising the side walls of the car. In the type of car shown in the drawings these wall boards 25 are spaced apart to provide ventilation and aeration of the interior of the car, this construction being advisable when used for transportation of cattle, other animals, or, in some instances, perishable stuffs, as is well known in this art.

Generally indicated by the numeral 27 is the deck, comprising longitudinal frame members 27^a secured together and braced by cross frame members 27^b—27^c, for example—see Fig. 7. These cross frame members are attached to longitudinal frame members by suitable angles 27^d. The members 27^b are of channeled section, and in the channels are mounted suitable filler strips 27^e. The longitudinal frame members 27^a are similarly constructed of channel cross section, and their channels are also filled by filler strips 27^f,—see Fig. 1. The deck framework is covered by suitable boarding 28, as shown in Figs. 6, 8, 9, &c. To provide against injury to live freight at the door apertures, angle braces 29 are attached to a web of the longitudinal deck frame members 27^a, as shown in Fig. 12, and a cover board 29^a is supported upon these angle braces, this cover board projecting partially into the doorway, thereby eliminating the space which would be present in the absence of such member, and which would permit animals to become trapped between the deck and the door, resulting in broken legs or other injury. Secured to the inner face of the webs of deck frame members are the eye members 30, pivotally attached thereto by bolts 30^a extending through offset brackets 30^b,—see Fig. 11. Chains 31, 32 are at-

tached to these eye members, as shown in Fig. 1, for example. Pulley housings 33 are located at the juncture of the roof 24 and one side wall, and somewhat similar pulley housings 34 are located at the juncture of the other side wall and the roof, as shown in Fig. 1. Double chain pulleys 35 are rotatably mounted in housings 33, and over these double pulleys 35 the chains 31 and 32 pass, the former being continued across beneath the roof 24 to, and over, a second pulley 36 rotatably mounted in the housing 34, and from thence the chains 31 are passed to the deck and attached to the eye, as described above. The chains 32 are attached to the opposite side of the deck, as shown in Fig. 5, for example. The chains 31 and 32 pass down the outside of the car wall, as shown in Fig. 4, and are attached at their ends to turn-buckles 38, which in turn, are threaded through an equalizer yoke 39, in turn attached to the chain 39[a]. It will be obvious that by varying the position of the turn-buckles 38 relative to the yoke 39, the difference in length, due, for example, to unequal stretching of one chain, will be compensated for. Lock nuts 38[a] provide means to maintain the turn buckles 38 in their proper position relative to the yokes 39.

Located beneath the car frame 20, at one side thereof, is an operating shaft 40, preferably of non-circular cross section, as shown in Fig. 5, for example. This shaft is rotatably mounted in bearing brackets 40[a] attached to the car frame and depending therefrom, see Fig. 4, for example. Rotatably mounted on the shafts 40 are the operating levers 41 comprising socketed portions 41[a], in which may be inserted an operating handle. These operating levers are rotatably mounted on bushings or collars 42 carried by the shafts 40 between the brackets 40[a] and stop collars 40[b], as shown in Fig. 4. The lever 41 is bifurcated, as shown in Fig. 4, and between the arms thereof is the ratchet wheel 43, non-rotatably secured to the shaft 40. A pawl 44 is pivotally mounted between the arms formed by the bifurcated portion of the lever 41, the same being provided with a portion arranged to engage the teeth of the ratchet wheel 43, see Fig. 5, for example. An additional ratchet wheel 46 is non-rotatably mounted on the shaft 40, as shown in Fig. 4, and with this coacts a pivoted detent or pawl 47,—see Fig. 5—and, as will be obvious, may be utilized to maintain the shaft against unwinding when there is a load upon the same. The chain 39[a] is attached at one end to the shaft 40, as shown in Fig. 4, and it will be obvious that winding of the shaft by means of the lever 41 and associated mechanism will result in winding of the chain 39[a] about the shaft, as shown in Fig. 4, and in consequent raising of the deck 27. When raised to the desired position, the detent or pawl 47 may be utilized to hold the shaft in such position to prevent accidental unwinding of the same. When there is no intention or desire for the use of the lever 41, as when the car is being used as an ordinary freight car, such lever may be swung in the position indicated in dotted lines in Fig. 5, and retained in such position by means of the chain 51 carrying the hook 51[a], which is engageable with the apertured lug 41[c] of the lever 41. This chain is attached to a bracket 51[b] carried by the car frame, as shown in Fig. 5.

I attach vertical braces 55 to the side walls, as shown, for example, in Fig. 3, these braces extending from the top of the car to a point below the position in which the deck is mounted for use. In these locations the uprights 55 intersect the diagonal braces 23, and it is necessary to articulate the same, as indicated by numeral 55[a], see Fig. 4. Upon these braces 55, and upon the uprights 22 are rigidly secured the brackets 57,—see Figs. 13–15—these brackets having base flanges 57[a] riveted, or otherwise secured, to braces 55. The brackets 57 are further provided with the spaced apart flanges 57[b], apertured at 57[c]. The flanges 57[b] are further provided with the notches or slots 57[d] located 90° apart, as shown in Fig. 15, for a purpose to be hereinafter described. Pivotally mounted between the flanges 57[b] are the deck-supporting members 60, as shown in Figs. 16–18, for example. These deck supports 60 are centrally apertured at 60[a] to permit the insertion of bearing pins to aline with the apertures 57[c] of the brackets 57. Angularly disposed with respect to the main body of the supporting member 60 are spaced apart flanges 60[b], apertured as indicated by numeral 60[c]. Between these flanges are pivotally mounted the locking members 61 in the arm portions 61[a], apertured at 61[b] to permit their pivotal attachment to the flanges 60[b] of supports 60. The locking members 61 are further apertured at 61[c] for engagement by a hook or the finger of the operator. Each of the braces 55 is provided with two of the brackets 57 and supporting members 60, as shown in Fig. 4, and the adjacent wall boards or strips 25 are notched or cut-away to provide for the pivotal movement of the supporting member.

In the operation of the deck and deck-raising means,—assuming that the deck has been raised to the position shown in Figs. 1 and 5—the locking members 61 are moved out of engagement with one of the slots 57[d] and the supports 60 are then moved to the position indicated in Figs. 1 and 5 for example, whereupon the deck may be allowed to drop down and rest on the same, as shown in the drawings. When in this position the locking members 61 will drop down into the

adjacent slots 57^d and prevent accidental movement or displacement of the supports 60. To further provide against relative slipping of the deck or supports, I provide the latter with raised ribs or lugs 60^d on their upper surface, as shown in Fig. 17.

In the position shown in Fig. 5 the deck is adjacent the roof and out of operative position. In the event that it is desired to use the car as a double deck car, the deck is raised sufficiently to permit movement of the upper row of supporting members 60 out of supporting position, and the deck may be lowered to rest upon the lower row of supports in which position it is available for use. To protect the walls of the car from chafing and being damaged by movement of the deck, I provide chafing strips 25^b of metal, as shown, for example, in Figs. 1 and 5.

It will be apparent that the deck may be carried upon the floor of the car when not in use or beneath the roof thereof, as desired. It is believed that the operation and construction of my invention will be sufficiently clear from the above to eliminate the necessity of further description herein.

It will be obvious that my invention is susceptible of many modifications and improvements; and I do not wish to be restricted to the form shown and described beyond the scope of the appended claims.

I claim:—

1. In combination, a car body comprising side walls, a deck, means to raise or lower said deck relative to said walls, braces carried by said car walls, supporting members carried by said braces and pivotally mounted with respect thereto to swing into or out of supporting position with respect to said deck, and locking members constructed and arranged to lock said supporting members in operative or inoperative position, said locking members being pivotally attached to said supporting members.

2. In combination with a car, braces, bracket members carried thereby, supporting members pivotally carried by said bracket members, said bracket members being provided with slots therein, and locking members carried by said supporting members and arranged to engage said slots to lock said supporting members in supporting or non-supporting position.

3. In combination with a car body comprising side walls, a deck, means to raise or lower said deck, means to support said deck intermediate the top and bottom of said walls or adjacent the top thereof, as desired, and chafing strips attached to said side walls and extending between said positions of support of said deck.

4. In combination with a car, a deck movable therein, means to raise or lower said deck, said means comprising pulley members located in said car adjacent the top thereof, chains, or the like, extending over said pulley and attached to said deck, and a winding shaft, said chains extending adjacent the outside of one wall of said car to said winding shaft.

5. In combination with a car, a deck movable therein, means to raise or lower said deck, said means comprising pulley members located in said car adjacent the top thereof, chains, or the like, extending over said pulley and attached to said deck, and a winding shaft located beneath the floor of said car and at one side thereof, said chains extending adjacent the outside of one wall of said car to said winding shaft.

6. In combination with a car, a deck movable therein, means to raise or lower said deck, said means comprising pulley members located in said car adjacent the top thereof, chains, or the like, extending over said pulley and attached to said deck, a winding shaft, said chains extending adjacent the outside of one wall of said car to said winding shaft, means to rotate said shaft, said means comprising a lever member, and means to support said lever member beneath said car out of operative position.

In testimony whereof, I have subscribed my name.

EDWARD POSSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."