G. A. REMBER.

ADJUSTABLE DECK FOR STOCK CARS.

APPLICATION FILED JULY 17, 1915.

1,246,467.

Patented Nov. 13, 1917.

2 SHEETS—SHEET 1

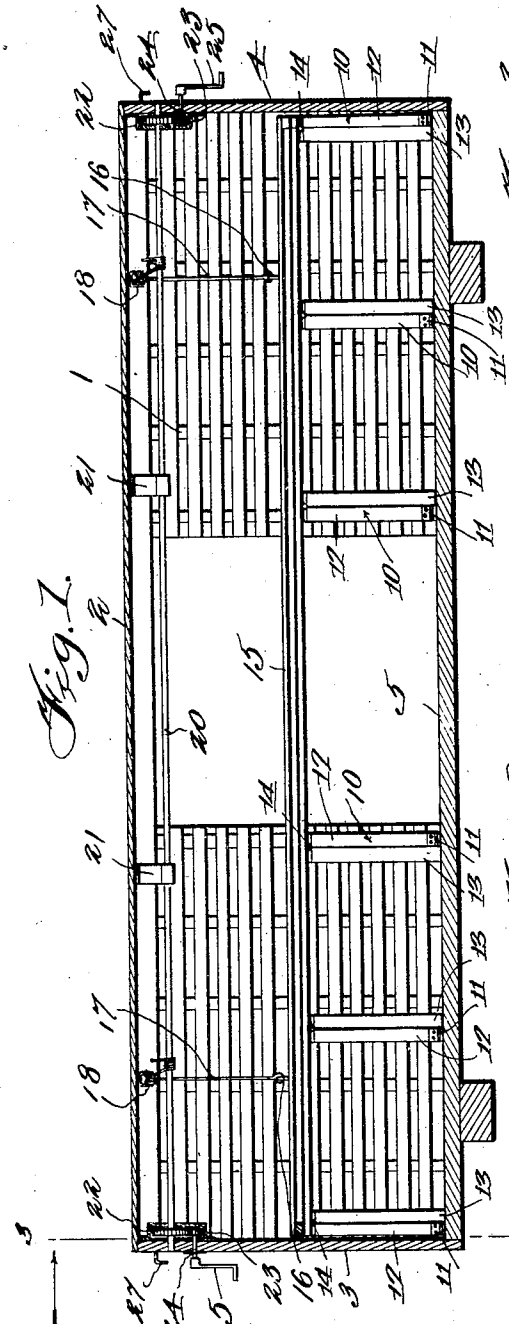


Fig. 1.

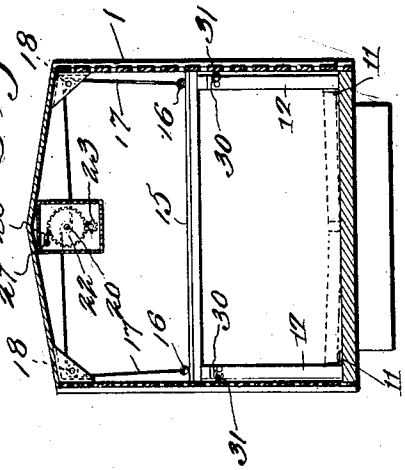


Fig. 3.

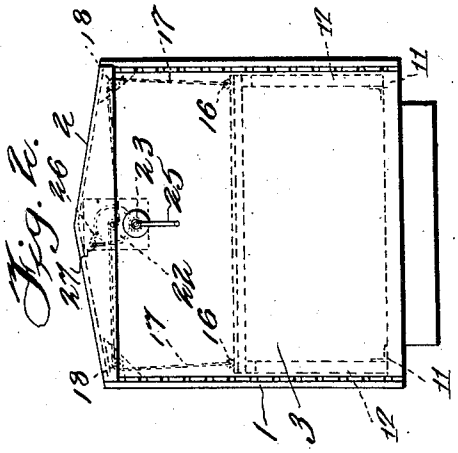


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 6

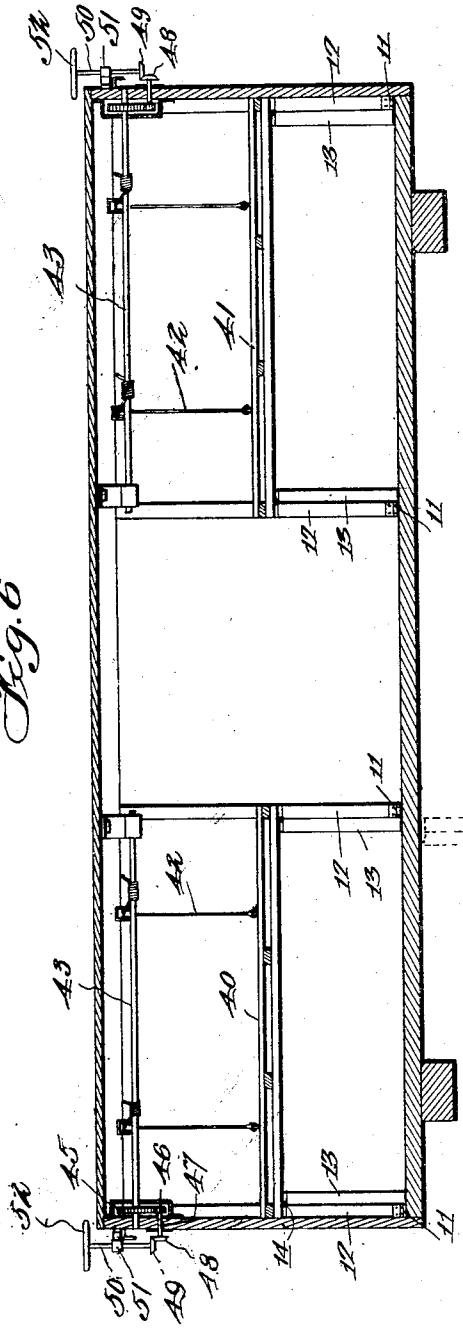


Fig. 8.

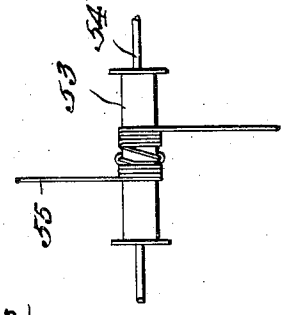


Fig. 7.

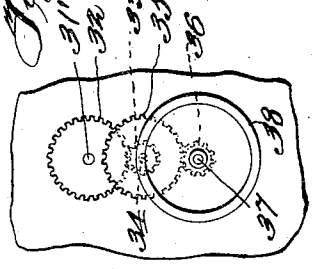


Fig. 5.

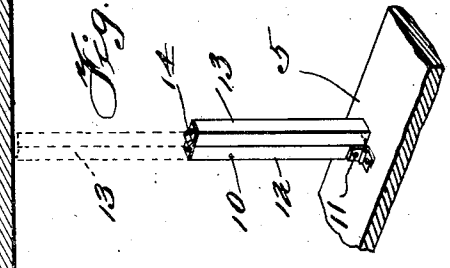
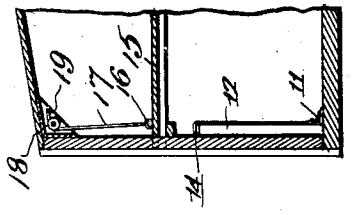


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE DECK FOR STOCK-CARS.

1,246,467. Specification of Letters Patent. Patented Nov. 13, 1917.

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To all whom it may concern:

Be it known that I, GEORGE A. REMBER, a citizen of the United States, residing at Hailey, in the county of Blaine and State of Idaho, have invented certain new and useful Improvements in Adjustable Decks for Stock-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates generically to deck construction for use in stock cars, which are employed for the transportation of various types of stock, and the primary object of the invention is to provide a deck for stock cars which may be moved upwardly to a position a short distance below the roof of the car when it is desired to ship such stock as cattle, horses or the like, and which may be lowered to substantially the center between the floor and roof of the car forming a double deck stock car when it is desired to ship stock, such as hogs or the like.

Another object of this invention is to provide a stock car as specified, which is comparatively simple in construction, and which includes a plurality of posts composed of hingedly connected sections for supporting the movable deck at different elevations, and also to provide cables which are attached to the deck and wound about a shaft, for winding upon the shaft for raising the deck or unwinding from the shaft for lowering the deck, and further to provide means for facilitating rotation of the shaft.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings, wherein like characters designate like and corresponding parts throughout the several views, and in which:—

Figure 1 is a longitudinal section through a stock car constructed in accordance with this invention,

Fig. 2 is an end view of the car,

Fig. 3 is an end view on the line 3—3 of Fig. 1,

Fig. 4 is a fargmentary cross section through the car,

Fig. 5 is a perspective view of one of the posts,

Fig. 6 is a longitudinal section through a modified form of the stock car,

Fig. 7 is a view of a modified form of the means for rotating the shaft, and

Fig. 8 is a detail perspective view of a modified form of the shaft and manner of supporting the cable.

Referring more particularly to the drawings, 1 designates a stock car of ordinary construction, as an entirety, which car has a roof 2, and the usual type of ends 3 and 4, and floor 5.

The stock car 1 has a plurality of posts 10 hingedly connected to the floor 5 of the car, as is shown at 11. Each of the posts 10 are composed of sections 12 and 13. The sections 12, which are hingedly connected to the floor 5, are of a height substantially equal to one half of the height of the interior of the car, and when the two sections are in a folded position, as shown in solid lines in Fig. 5 of the drawings, they form a support upon which the deck 15 rests, when in a lowered position. When the sections 13 of the posts 10 are moved upwardly, as is indicated in dotted lines in Fig. 5 of the drawings, the upper ends of the sections 13 form supports for the deck 15 when the latter is in a raised position. The sections 12 and 13 are hingedly connected, as is shown at 14 in Fig. 5 of the drawings.

The deck 15 has eye-bolts 16 connected thereto, at spaced intervals along its edges. Cables 17 are connected to each pair of eye-bolts 16, and extend upwardly along the sides of the car, as is clearly shown in Figs. 2 and 3, and over pulleys 18, which are rotatably supported by brackets 19 mounted in the corners of the roof. The cables 17

extend from the pulleys 18, and are wound about the shaft 20. The shaft 20 is rotatably supported a short distance below the roof of the car by suitable bearings or hangers 21. The cables 17 are wound about the shaft 20, so that when the shaft is rotated for winding the cable thereupon, each end of the cable will be wound about the shaft for pulling evenly upon both sides or each of the side edges of the deck 15.

The ends of the shaft 20 are journaled in the ends 3 and 4 of the car 1, and they have gears 22 mounted thereon. The gears 22 mesh with pinions 23. The pinions 23 are mounted upon shafts 24, which extend through the ends 3 and 4 of the car 1, and have crank handles 25 mounted upon their outer ends, for facilitating the rotation of the shaft 20, for raising or lowering the deck 15 of the car.

Pawls 26 are pivotally carried by the ends of the car and engage the teeth of the gears 22, for preventing the weight of the deck 15 from unwinding the cables and permitting the deck to lower, when it is not desired. If it is so desired, the pins 27, upon which the pawls are mounted, may extend through the end of the car and have cranks formed thereon for facilitating the movement of the pawls out of engagement with the teeth of the gears 22, so as to permit of the unwinding rotation of the shaft for lowering the deck 15.

The posts 10 have hooks 30 pivotally connected thereto, which are provided for coaction with staples 31 carried by the sides of the car 1, for holding the posts and the sections of the posts in various positions.

In Fig. 7 of the drawings, a modified form of the mechanism for rotating the shaft 20 is provided, in which the shaft 31′, which replaces the cable shaft 20, has a gear 32 mounted thereupon. The gear 32 meshes with a pinion 33, which pinion is mounted on a stub shaft 34. A gear 35 is also mounted upon the stub shaft 34 and meshes with a pinion 36 mounted upon a stub shaft 37. A wheel, similar to the brake operating wheels used on stock cars, 38, is also mounted upon the shaft 37 to provide for the manual rotation of the same.

In Fig. 6 of the drawings, a modified form of the invention is shown, wherein the deck is composed of sections 40 and 41. The sections of the deck are positioned in the sections of the car upon each side of the doors of the car, and they are raised and lowered by cables 42, which are wound about shaft 43. The shafts 43 may be rotated by either of the shaft rotating structure heretofore described, or by a construction illustrated at the left end of the figure. In the construction illustrated at the left end of Fig. 6, the gear 45, which is mounted upon the shaft 43, meshes with a pinion 46, mounted upon a stub shaft 47. The stub shaft 47 extends out of the end of the car and has a beveled gear 48 mounted thereon. The beveled gear 48 meshes with a beveled gear 49 which is mounted upon the lower end of a vertically extending shaft 50. The shaft 50 is rotatably supported by suitable bearings 51, and has a wheel 52 mounted upon its upper end, which protrudes above the roof of the car.

In Fig. 8 of the drawings, a modified form of the manner of supporting the cables is shown. In this figure, a drum 53, is shown, which drum is keyed or mounted upon the shaft 54, which corresponds to the shaft 20 or 43. The drum 53 has the cable 55 wound thereupon from opposite directions, so that each end of the cable will be wound upon or unwound from the drum, during the rotation of the same, for raising or lowering the deck.

From the foregoing description taken in connection with the accompanying drawings, the advantages of construction and of the method of operation of the improved adjustable deck for stock cars will be readily apparent to those skilled in the art to which this invention appertains and, while in the foregoing description, the principle of the operation of this invention has been described together with various features of construction, it is to be understood that certain minor features of construction, combination and arrangement of parts may be altered to suit practical conditions provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:—

1. In combination, a freight car, a vertically movable supporting deck arranged within the car, a shaft journaled to the end walls of the car adjacent the upper end thereof, sheaves journaled to the top wall of the car, cables secured to the shaft and trained over the sheaves and having their free ends connected to the deck, means connected to one end of the shaft for rotating the shaft for raising and lowering the deck, a plurality of supports, said supports comprising hinged sections having the lower end of the lower section hingedly secured to the floor of the car, and adapted to receive the deck on their upper ends for supporting the deck midway the height of the car, and said sections adapted to be extended and support the deck adjacent the top wall of the car.

2. In combination, a freight car, a vertically movable deck slidably arranged within the car, a shaft journaled by its ends to the opposite end of the car, sheaves secured to the top wall of the car and depending into the interior thereof, cables having one end

connected to the shaft and the opposite ends trained over the sheaves and connected to the deck, sectional supports comprising upper and lower sections hingedly connected together, said lower section having its lower end secured to the bottom wall of the car, and adapted to receive on its upper end, the deck and assist in supporting the same midway of the car, said upper section adapted to be arranged and receive the deck on its upper end for assisting the cables in supporting the deck in a raised position.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. REMBER.

Witnesses:
H. A. BAKER,
FRED W. FATOR.

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