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CAR.

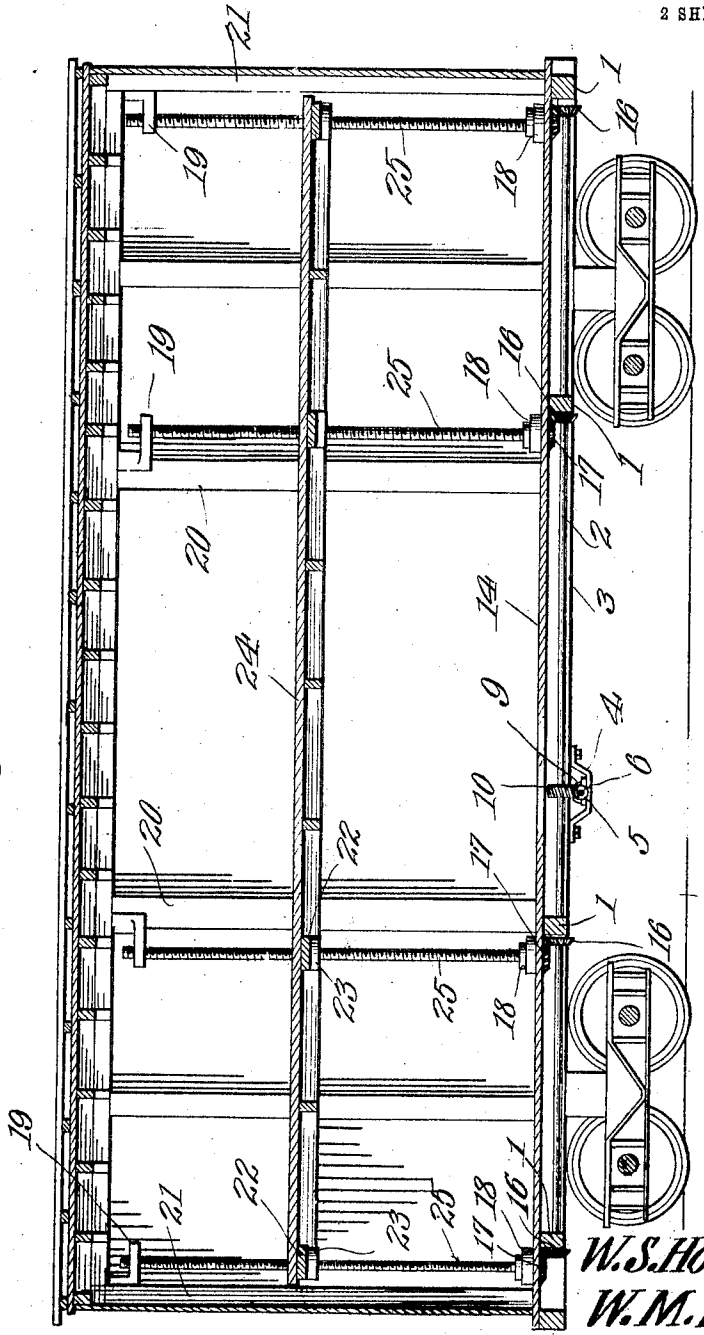
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1,083,831.

Patented Jan. 6, 1914.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 3.

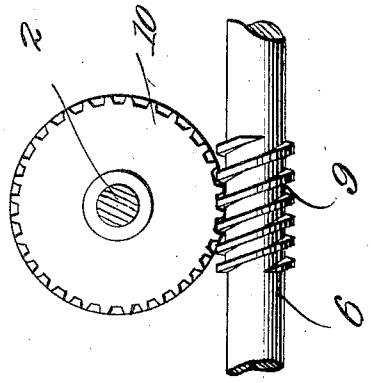
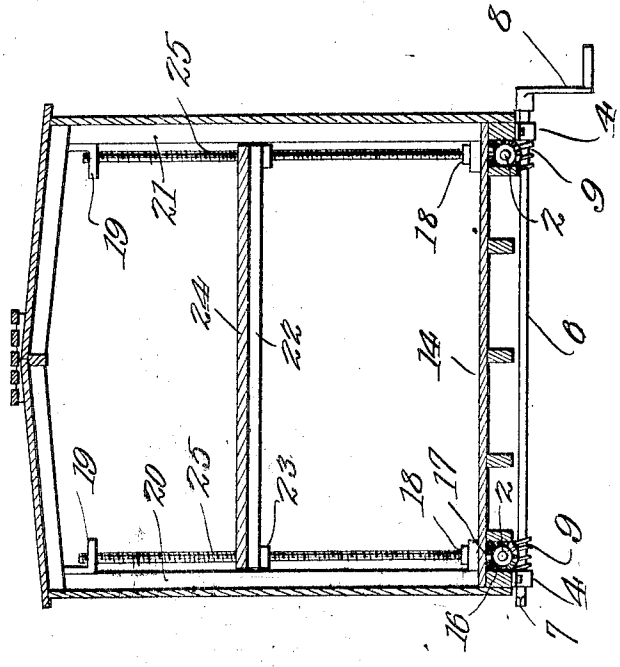


Fig. 2.



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UNITED STATES PATENT OFFICE.

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1,083,831. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed November 12, 1912. Serial No. 730,930.

To all whom it may concern:

Be it known that we, WILLIAM S. HOLDAWAY and WILLIAM M. RYAN, citizens of the United States, residing at Provo, in the county of Utah, State of Utah, have invented a new and useful Car, of which the following is a specification.

The device forming the subject-matter of this application is a railway car which is provided with an intermediate deck, means being provided for raising and lowering the deck, so that stock or other merchandise may be placed upon the deck, when the deck is in a lowered position, the deck subsequently being raised, to permit a loading of the floor-proper of the car.

The present invention aims to provide novel means for actuating the deck, to provide novel means for uniting the actuating mechanism with the body portion of the car, and to provide novel means for connecting the deck with the actuating mechanism.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 shows in vertical longitudinal section, a car equipped with the mechanism constituting the subject-matter of the present invention; Fig. 2 is a transverse section of the structure shown in Fig. 1; and Fig. 3 is a detailed elevation showing the mechanism whereby rotation is imparted to the main shafts from the actuating shaft.

In the drawings, there is shown a car, the transverse floor beams of which are denoted by the numeral 1. Journaled for rotation in the transverse floor beam 1 and extended longitudinally of the car, adjacent the sides of the car, are main shafts 2. The longitudinal floor beams 3 which are located adjacent the sides of the car, support arched hangers 4, the hangers 4 carrying bearings 5 in which is journaled for rotation an actuating shaft 6 which extends transversely of the car, the ends of the actuating shaft 6 being squared as indicated at 7, to receive cranks 8. Secured to the actuating shaft 6 adjacent its ends are worms 9, meshing into worm wheels 10 supported by the shafts 2. At this point it may be stated that when the crank 8 is rotated, rotatory movement will be imparted to the actuating shaft 6, the worms meshing into the worm wheels 10, and the worm wheels 10 rotating the shafts 2.

From the foregoing it will be observed that the actuating shaft 6 may be rotated from either or both sides of the car, whereupon, rotatory movement will be imparted simultaneously to the main shafts 2. Each of the main shafts 2 is operatively connected with suitable mechanism for raising and lowering the deck of the car. Since these raising and lowering mechanisms are duplicated, but one of them will be described.

Each of the main shafts 2 carries a plurality of beveled pinions 16, meshing into horizontally disposed beveled pinions 17 which are secured to the lower end of screws 25, the beveled pinions 17 preferably being located below the floor 14 of the car. The screws 25 are journaled for rotation in bearings 18 which are secured to the floor 14 of the car, and in angle brackets 19 which may be secured to the door jambs 20, to certain of the uprights 21 of the car, or to any other suitable and accessible portions of the car. Mounted to move vertically within the car is a deck 24, certain of the cross beams of which are denoted by the numeral 22, the cross beams 22 carrying nuts 23 into which the screws 25 are threaded

In practical operation, presupposing that the deck 24 is located adjacent the floor proper 14 of the car, it will be understood that stock or other commodities may be placed upon the deck, until the deck is loaded, whereupon, the cranks 8 may be operated, in the manner hereinbefore set forth, to impart rotatory movement to the main shafts 2. When the main shafts 2 are rotated, the pinions 16 thereof, meshing into the pinions 17 of the screws 25, will cause a rotation of the screws, the screws rotating without longitudinal advancement in the bearings 18 and in the bearing brackets 19. The screws 25, when rotated, will cause an elevation of the deck 24, it being recalled that the screws 25 are threaded into the nuts 23 which are carried by certain of the transverse beams 22 of the deck 24. Thus, after the deck has been loaded, the same may be elevated into or above the position shown

in Fig. 1 of the drawings, whereupon the floor proper 14 of the car may receive its load.

It is possible to raise the deck 24 until it is close to the roof of the car. Thus the full load may be placed on the floor 14, the deck 24 being relieved of the weight. When a cargo of dripping merchandise is to be carried, the deck 24 may be permitted to rest on the floor 14, to the end that a perfect drainage may be obtained.

The device herein disclosed is of simple construction, and embraces no parts likely to get out of order.

A stock car constructed in accordance with the present invention, may be loaded readily, it being unnecessary to drive the stock up a sharply inclined chute, in order that the stock may pass upon an elevated deck.

The car is adapted to be employed for the transportation of merchandise other than stock, and the deck 24 may be positioned at an adjusted height between the top and the bottom of the car, thereby permitting merchandise of different characters, and of different heights, to be shipped expeditiously and economically in the same car.

Having thus described the invention, what is claimed is:—

In a device of the class described, a car including a floor structure; a deck vertically movable within the car; end screws supported for rotation by the floor structure and threaded into the extremities of the deck; intermediate screws supported for rotation by the floor structure and threaded into the central portion of the deck; beveled pinions carried by the lower ends of the screws; longitudinal shafts journaled on the floor structure; beveled pinions carried by the shafts and meshing into the beveled pinions of the screws; and means for connecting the shafts for simultaneous rotation; the intermediate screws constituting means for preventing a bending of the deck and a binding of the deck on the end screws during a lifting of the deck; said means being located between the intermediate screws to apply the rotatory movement of the shafts initially to the intermediate screws, thereby to lessen the tendency of the shafts to yield under torsion.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

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Witnesses:
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