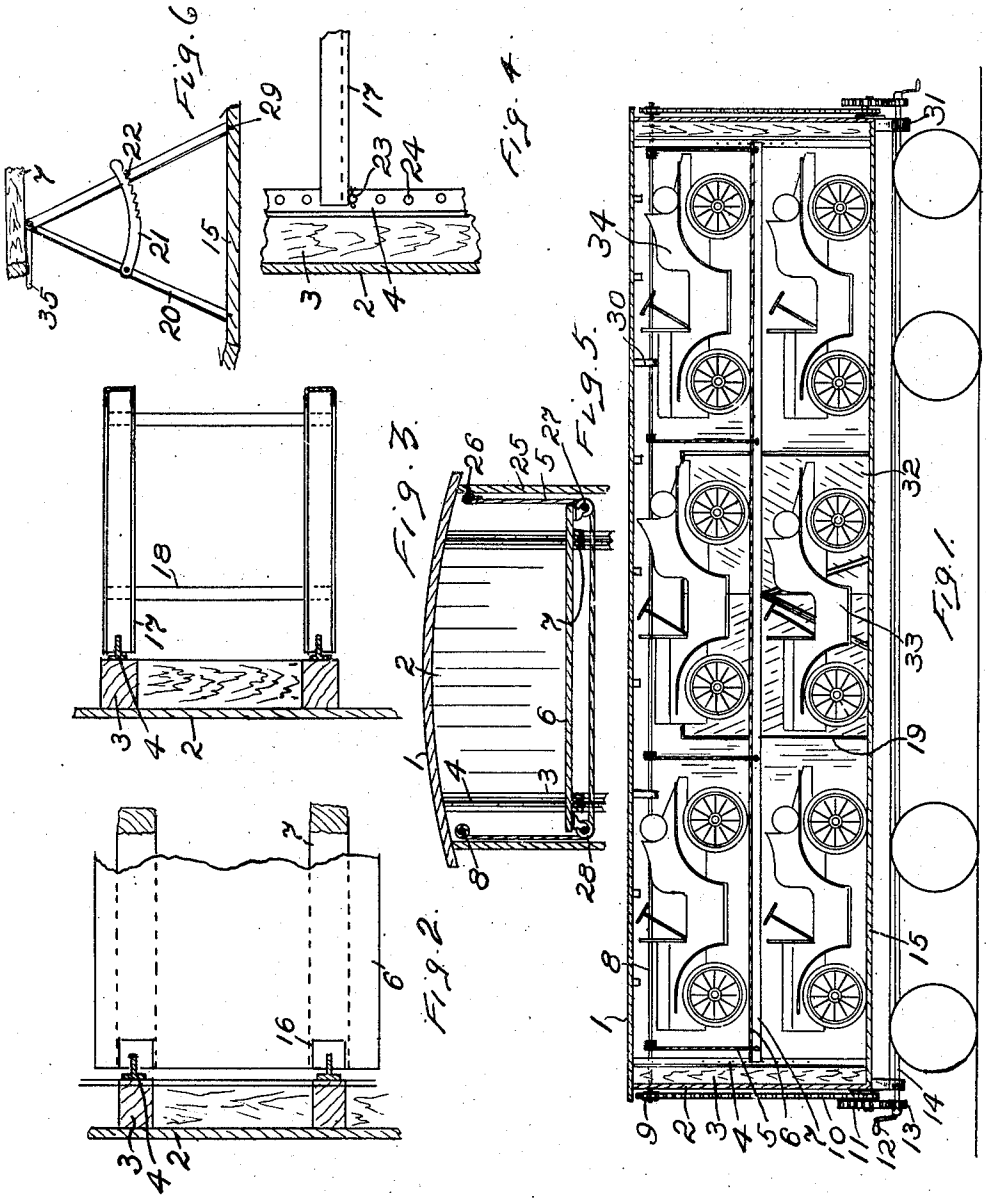
L. E. EVENS.

RAILWAY FREIGHT CAR.

APPLICATION FILED OCT. 13, 1910.

1,016,220. Patented Jan. 30, 1912.



WITNESSES:
H. B. Burr
Frank T. Campbell

INVENTOR
L. E. Evens,
by G. C. Kennedy
ATTORNEY.

UNITED STATES PATENT OFFICE.

LEO E. EVENS, OF WATERLOO, IOWA.

RAILWAY FREIGHT-CAR.

1,016,220. Specification of Letters Patent. Patented Jan. 30, 1912.

Application filed October 13, 1910. Serial No. 586,905.

To all whom it may concern:

Be it known that I, LEO E. EVENS, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Railway Freight-Cars, of which the following is a specification.

My invention relates to improvements in railway freight cars, and the object of my improvement is to supply such cars with convenient and easily operated auxiliary supporting means for the transportation of heavy and bulky merchandise or freight such as automobiles, such means being adapted to permit of the stowage of the maximum number of such objects, with resulting economy in haulage expense to the common carrier. This object I have accomplished by the means which are hereinafter fully described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of a railway freight car, with one side removed in order to better disclose the inner arrangement of my improvements therein. Fig. 2 is an enlarged detail broken view of a part of said car and my improvements, taken in plan. Fig. 3 is a similar view, but showing a modification of my improved movable supporting means. Fig. 4 is a broken detail in elevation, showing the slideway for the movable table. Fig. 5 is a cross-section of the upper part of a freight car, showing the suspended table therein. Fig. 6 is a side elevation of one of the A-shaped trestles used as an auxiliary support to said table.

Similar characters of reference designate corresponding parts throughout the several views.

In ordinary box-cars it is possible to transport but such a number of automobiles as may be stowed therein upon their floors, one deep. It is my intent to provide movable means for supporting a second tier of the automobiles or other objects to be transported above the lower tier. This I am able to accomplish in the following way:

The numeral 6 designates an auxiliary floor, hereinafter called the table, which lies above the floor 15 of the car 1, and is parallel therewith, and secured on longitudinal beams 7. The ends of this table 6 have recesses 16 to permit the entrance of the guide-rails 4, which latter are fixed vertically to beams 3 at the ends of the car. When desired, a variation may be adopted for the table shown, as will appear in Fig. 3, where the supporting-means consists of longitudinal channel-bars, their concavities upwardly, connected by cross-bars 18, the ends of such channel-bars being grooved to admit the guide-rails 4. The channel-bars 17 are more particularly intended to support automobiles, the bars being spaced apart the right distance to receive the wheel-tires, and having their concavities of sufficient width to receive tires of different diameters.

The numerals 8 and 14 designate rotary shafts, the same lying longitudinally along said car, the shaft 8 being located within the car and in its upper angle of junction of the roof with the side along the left-hand side, while the shaft 14 is located immediately below the bottom of the car, near its left-hand side. The shaft 14 is supported by hangers 31, while the upper shaft 8 is supported by the hangers 30 as well as the ends of the car. The ends of the shaft 8 which project outwardly from the ends 2 of the car, have sprocket-wheels 9 mounted thereon, which carry the sprocket-chain 10, the lower end of the latter being carried by a sprocket-wheel (not shown) on a projecting stud-shaft, the latter also carrying a gear-wheel 11. The adjacent end of the shaft 14 carries a pinion 13 which intermeshes with the adjacent gear-wheel 10. While it is not necessary that gearing should be used at both ends of said shafts, yet the use of the means shown permits of greater stiffness and less strain in lifting the load. Each of the pinions 13 is provided with a removable crank-handle 12, which, when not in use may be detached and stowed inside the car. In the upper corner or angle of the inside of the car on right-hand side is located a longitudinal fixed shaft 26. At different places cables 5 are arranged in said car with one end of each secured to said fixed shaft 26. These cables are then carried downward and under the movable table 6, or under the movable channel-bars 17 as the case may be, then upwardly and secured to the rotary shaft 8 so as to be wound thereupon. I find it advisable in practice, to mount small grooved pulleys 27 and 28 at the angles of the table 6 to carry the cables

5 with a minimum of friction, and also preventing uneven strains on the table.

The guide-rails 4 are provided with a plurality of pin-holes 24, therealong, adapted to receive pins 23.

The numeral 20 designates a trestle, whose members are pivoted at their converging upper ends on a transverse rod and are adapted to be adjustably spaced apart and connected by means of a movable arm or lever 21 provided with a number of ratchet-teeth which engage a stop-pin 22 removably.

The car is provided with doors 32, preferably having beveled edges to fit beveled casings in order to always insure a close fit, while the width of the door-opening is sufficient to permit of the introduction of an automobile of any length therethrough lengthwise.

The method of loading my improved car is the following: The table 6, or the channeled bars 17 as the case may be, having been lowered upon the floor 15 of the car, the automobiles 34 are placed in the car resting upon said table, or in case the channel bars 17 are used, with their wheel tires resting in the concavities of the bars. By means of the mechanism previously described, the table is then elevated in the car with its load, sufficiently to permit of working space thereunder, and the pins 23 are used to support the ends of the table, while the trestle 20 may be placed under the table to support the middle part thereof. The automobiles 33 are then placed directly upon the floor 15 of the car. Then the table is lowered a proper distance, the pins 23 inserted in the holes 24 of the guide-rails 4, and the trestle 20 placed under the middle of the table with its transverse rod 35 extending under the table from side to side. The trestle thus supports the middle of the table, removes strain from the ends of the car, the weight of the load on said table thus being transferred directly to the floor of the car. The table, or bars 17 when secured as indicated also braces the ends of the car, helping to stiffen its structure. The use of this invention permits of fully loading the car to its capacity, with resulting economy in transportation.

The devices shown being illustrative in their character, it is to be understood that variations other than those shown are included in the scope and within the principles of my invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is:

1. In combination, a freight-car, a movable table therein having longitudinal channels on its upper surface, and means for raising and lowering said table away from or to the floor of the car.

2. In combination, a freight-car, a movable support therein provided with rigid longitudinal channeled bars, and means for adjusting the position of said movable support.

3. In combination, a freight-car, a movable table therein, vertical guideways for said table, cables secured to the upper part of the car and passed under said table, and a rotary shaft, said cables being wound about said shaft to raise said table along said guideways.

4. In combination, a freight-car, a vertically-movable supporting-frame therein, vertical guideways for the ends of said supporting-means, cables fixed at one end and carried under said supporting-means, anti-friction means between said table and said cables, and means for winding up said cables to elevate said supporting-frame along said guideways.

5. In combination, a freight-car, a movable table therein having longitudinal channels in its upper surface, removable adjustable supports for the table adapted to be located thereinunder, and means for raising and lowering said table away from or to the floor of the car.

6. In combination, a freight-car, a movable table therein, vertical guideways for said table, cables secured to the upper part of the car and passed under said table, a rotatable shaft, said cables being wound about said shaft to raise said table along said guideways, and removable adjustable supports for the table adapted to be located thereinunder.

Signed at Waterloo, Iowa, this 8th day of Oct. 1910.

LEO E. EVENS.

Witnesses:
GEO. C. KENNEDY,
O. D. YOUNG.