(No Model.)

D. HOIT.

COAL CAR.

No. 305,189. Patented Sept. 16, 1884.

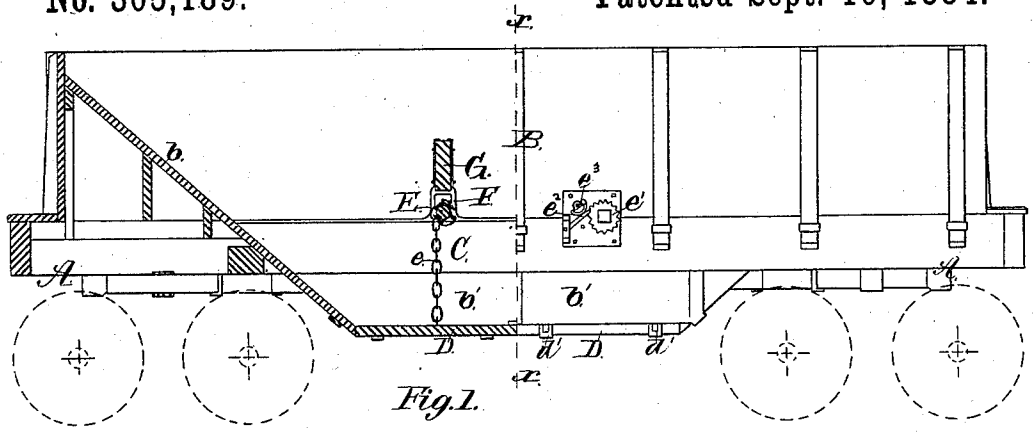


Fig. 1.

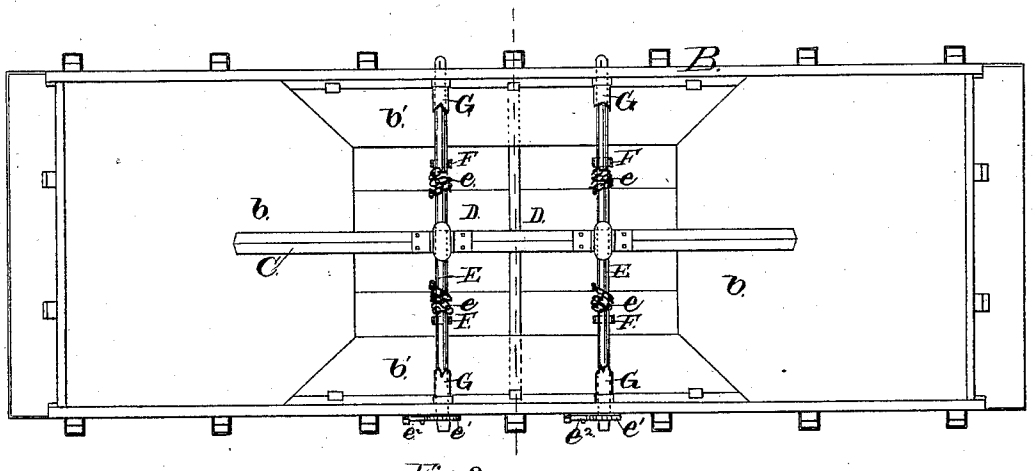


Fig 2.

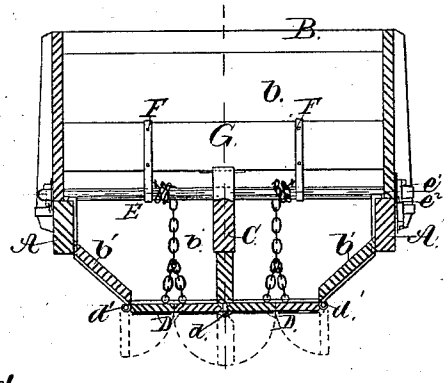


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

DAVID HOIT, OF WEST ALBANY, ASSIGNOR OF ONE-HALF TO CHARLES F. HICKS, OF TROY, NEW YORK.

COAL-CAR.

SPECIFICATION forming part of Letters Patent No. 305,189, dated September 16, 1884.

Application filed December 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID HOIT, of West Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Coal-Cars, of which the following is a specification.

This invention relates to improvements on the coal-car for which Letters Patent of the United States No. 272,550 were granted to me on the 20th day of February, 1883; and the objects of my present improvements are to simplify the construction of said car, to increase the capacity thereof, to lower the center of gravity of its superimposed load, and to bring the discharge-openings more closely to the level of the tracks of the railroad. These objects I attain by means of the construction illustrated in the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a combined side elevation and longitudinal section of an eight-wheel car containing my improvements; Fig. 2, a plan view of the same, and Fig. 3 a transverse section at the line X X of Fig. 1.

As represented in the drawings, A is the frame-work of the car, on which the box B, for containing the coal, is erected. Said box is preferably made in a rectangular form, with vertical sides, and having at each end inclined planes *b*, which reach nearly to the top of said box, and, sloping downward, terminate at opposite ends of the discharge-opening. At each side of said box inclined planes *b'* are formed, as shown in Fig. 3. The object of the inclined planes *b* and *b'* is to direct the discharge of the coal toward and through the discharge-openings, all of which are formed longitudinally in the bottom of the car.

C is a longitudinal partition formed in the lower part of coal-receptacle, on the center line thereof.

D represents trap-doors for closing the discharge-openings in the bottom of the car. Said doors are arranged in a series of four pairs of leaves, that are parted longitudinally, two pairs being arranged in front of the transverse center line of the car, and the other two pairs being placed at the rear of said line. The inner leaves of the doors D are hinged, as at *d*, to the bottom edge of the partition C, and the outer leaves are hinged, as at *d'*, to the lower edges of the pieces that form the inclined planes *b'*. By making the doors D to separate longitudinally I am enabled to have their leaves so narrow that the coal-box can be carried down nearly to the plane of the axles of the truck-wheels, much closer to the level of the tracks than has ever heretofore been accomplished, and, as a consequence, the center of gravity of the load is correspondingly lowered.

E represents transverse shafts arranged across the box B in such manner that one of said shafts will lie directly over two pairs of the doors D. Chains *e*, each having one of its ends made fast to and adapted to wind around its appropriate shaft, have bifurcated ends, which are attached to the doors D, and are so arranged that when the shafts E are rotated in one direction the chains will be wound around them, and thereby the doors D will be swung upward into the horizontal positions shown in Fig. 3, to close the discharge-openings to which they are respectively applied. When the doors D are closed, the shafts E are prevented from rotating, to permit the unwinding of the chains, by means of the ratchet-wheels *e'*, (secured to said shafts,) pawls e^2, and keepers e^3, as fully described and set forth in my Letters Patent No. 272,550, above referred to.

To dump the load contained in the box B, the ratchet-wheels *e'* are released from the control of the pawls e^2, and then the weight of the load resting upon the doors D will force the latter to swing downward into the positions indicated by the dotted lines in Fig. 3, so as to permit the load in the box B to fall through the discharge-openings in the bottom of the car. The shafts E have their bearings in the hangers F, which are secured to the transverse beams G. Said beams are arranged in line with and directly over the shafts E, thereby affording the required support therefor, and also forming guards for said shafts, to protect them and their chains *e* from being injured by the falling coal while the car is being loaded.

I claim as my invention—

1. In a coal-car, the combination, with a box,

B, provided with longitudinal discharge-openings, and with end inclines, *b*, and side inclines, *b'*, all of said inclines being carried down to the lowest plane of said discharge-openings, as herein shown and described, the said box being also provided with a longitudinal partition, C, for dividing the said discharge-openings into two separate series, of the trap-doors D, hinged to the side inclines, *b'*, and central partition, C, and arranged to swing longitudinally in respect to the box B from a plane that lies nearly at a level with the plane of the axes of the truck-wheels, as and for the purpose herein specified.

2. In a coal-car, the combination, with a box, B, provided with the inclines *b* and *b'*, and trap-doors D, arranged on a plane that lies entirely below the under side of the frame-work A of the car, as herein set forth, of the shafts E and chains *e*, adapted to operate the doors D, as herein described, and the transverse beams G, fixed above the shafts E, as and for the purposes herein specified.

DAVID HOIT.

Witnesses:
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