(No Model.)

H. C. FAY.

RAILWAY CAR.

No. 363,378. Patented May 24, 1887.

FIG. 1.

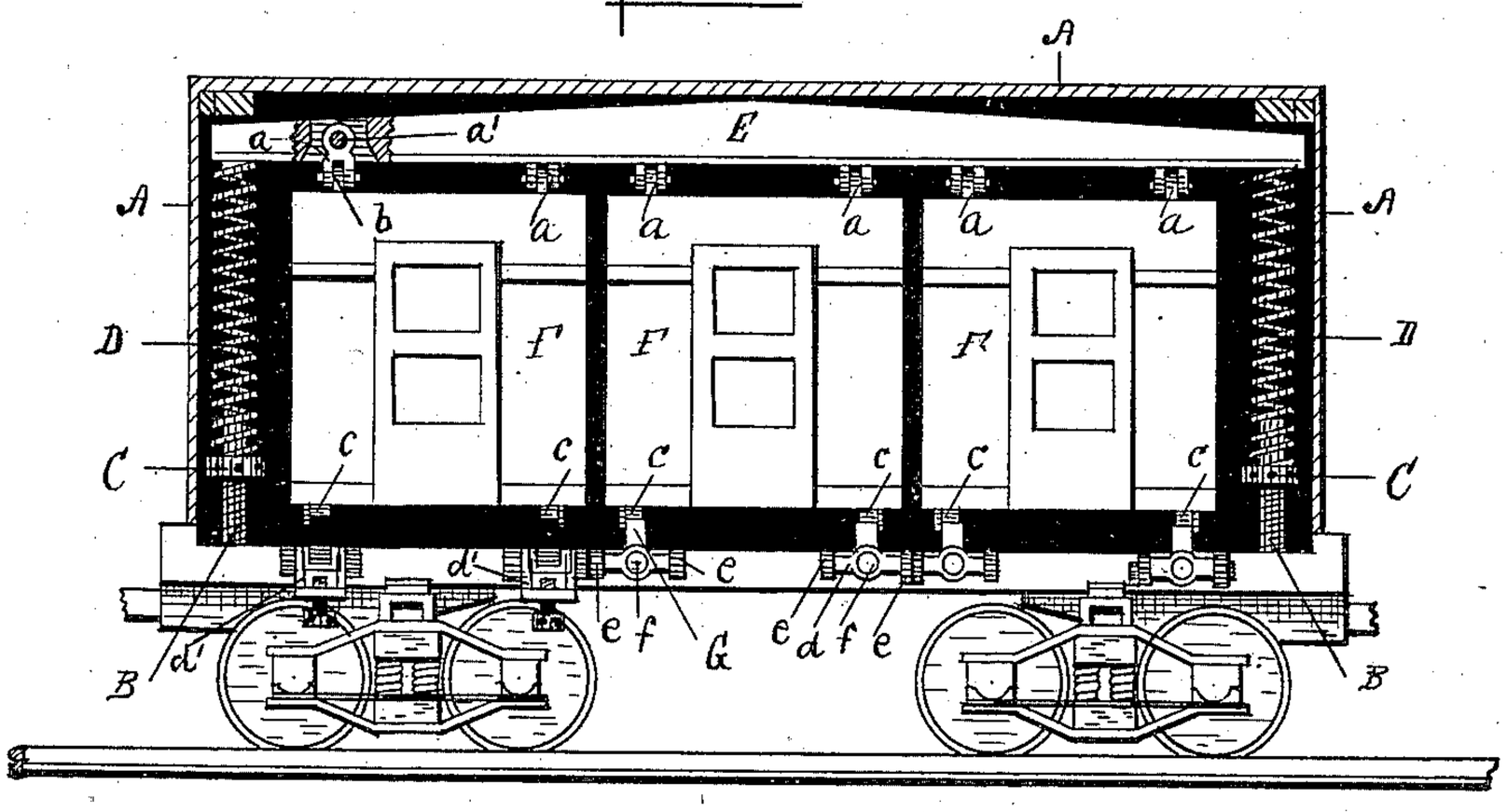


FIG. 2.

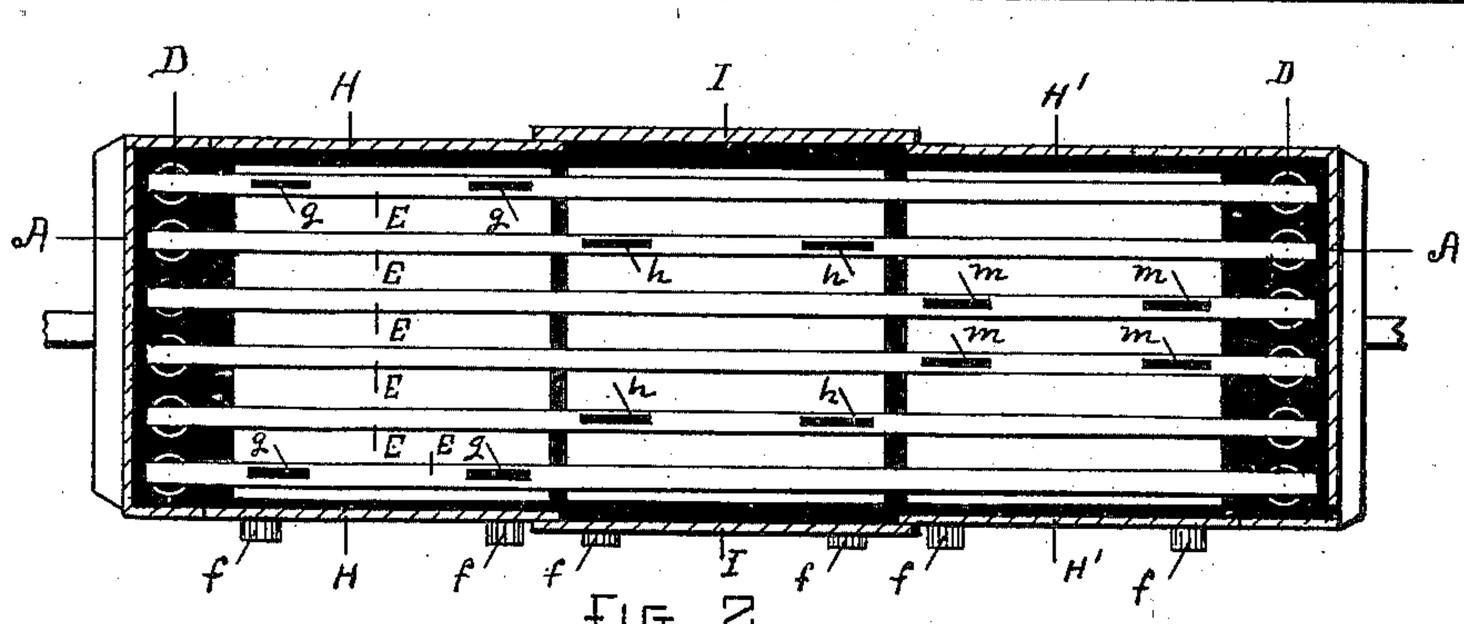


FIG. 3.

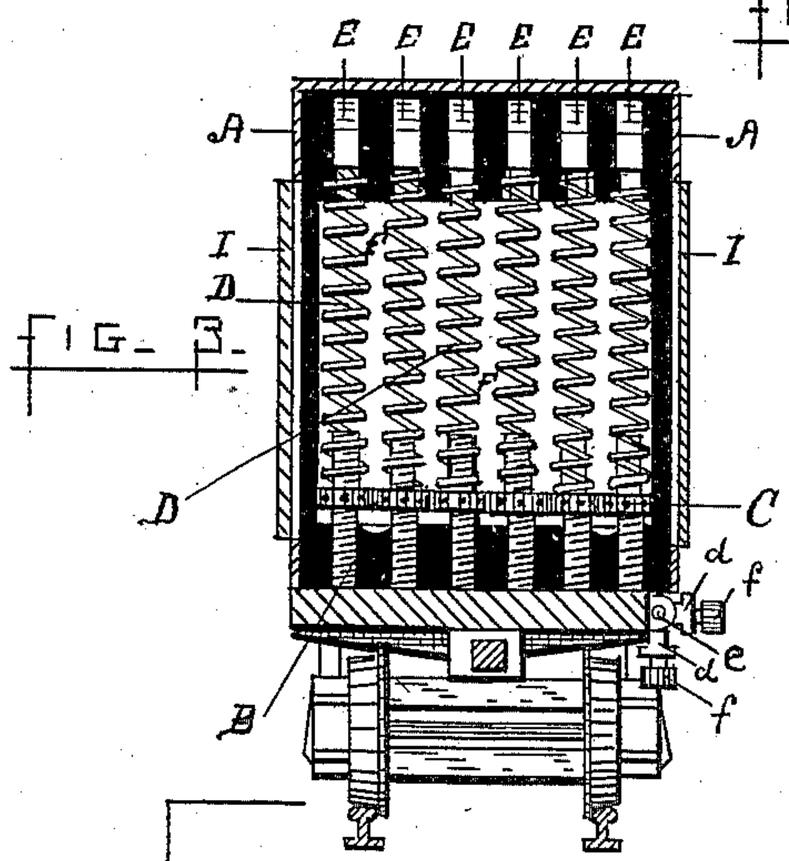


FIG. 4.

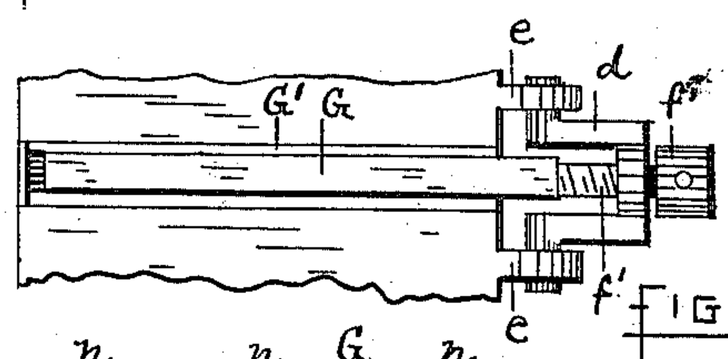
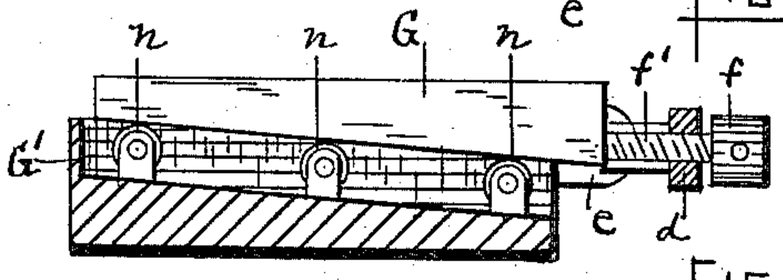


FIG. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY C. FAY, OF WORCESTER, MASSACHUSETTS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 363,378, dated May 24, 1887.

Application filed September 27, 1886. Serial No. 214,589. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. FAY, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Railway-Cars, of which the following is a specification, accompanied by drawings illustrating a car embodying my invention, and in which—

Figure 1 is a longitudinal vertical sectional view. Fig. 2 is a horizontal sectional view. Fig. 3 is a transverse vertical sectional view; and Figs. 4 and 5 show, respectively, top and side views of one of the rails upon which the interior boxes are supported.

Similar letters refer to similar parts in the several views.

My invention relates to that class of railway-cars employed in the transportation of fragile freight; and it consists in providing means for resisting the concussion and jar incident to railway transportation by means of an interior receptacle for the freight, suspended within the freight-car upon elastic supports, substantially in the manner as hereinafter described, and set forth in the claims.

A A denote the body of an ordinary freight-car.

B represents a series of screw-threaded vertical posts fixed in the frame-work of the car and projecting upward from the floor of the car.

C C are nuts having a series of holes to receive a lever.

D D are spiral springs with their lower ends inclosing the ends of the screw-threaded posts A and resting on the nuts B.

E E are girders with their ends resting upon the spiral springs D.

F F F are interior boxes for receiving the freight to be transported. To the girders E are pivoted at a' the links a, which are hinged to lugs b, attached to the tops of the boxes F. Each of the boxes F are also provided with flanged truck-wheels c. Ways G′ are formed in the body of the car, provided with the rolls n for the wedge-shaped rails G, extending transversely across the car and forming tracks, over which the interior boxes, F, are moved in and out of the car upon their truck-wheels c. Bails d are hung in lugs e on the outside of the car, carrying a screw, f', whose head f is provided with a series of holes to receive a pin or lever. Each of the bails d is hung in proper position to bring the screw f' against the end of the wedge-shaped rail, enabling the rail to be moved up the inclined way on the rolls n by advancing the screw f', thereby raising the box F, supported by the rails G.

In loading the car for transportation the interior boxes, F, are either placed in the position shown in Fig. 1, suspended by the links a from the girders E, or they may be removed upon their truck-wheels c to any convenient place of loading, and afterward rolled into the car A upon their corresponding rails, G, and attached by the links a to the girders E. The screws f' are then withdrawn from contact with the rails G and the bails d dropped to a vertical position, as shown by the two bails at the left-hand side of Fig. 1. The rails G are then removed, allowing the interior boxes, F, with their loads, to be suspended from the girders E and sustained by the spiral springs D.

In order to accommodate the tension of the spiral springs to varying loads, the nuts C are raised or lowered on the posts B.

Instead of the three interior boxes, as shown in the drawings, any number may be used which in practice is found most convenient, and but a single pair of girder-beams may also be used with two or more interior boxes; but I prefer to employ a pair of girder-beams for each of the interior boxes, as shown. The load is then divided between the several sets of springs, and lighter and more elastic springs may be used.

In Fig. 2 the interior box at the left of the car is suspended from the outer pair of girders, that in the center from the two next, and that at the right-hand side from the inside pair of girders, the points of suspension being indicated for each by the letters g, h, and m.

If it is required to remove the interior boxes before they are unloaded, I enter the wedge-shaped rails in the ways G′, and, bringing the bails into a horizontal position, I insert the screw f' and advance the rails over the rolls n, thereby raising the boxes to allow them to be detached from the girders by removing the pins which unite the links a and lugs b.

It will be observed that the springs are placed at the ends of the car, enabling me to

use a long and elastic spring without greatly increasing the height of the car and also without adding materially to its strength, as the entire weight of the load is sustained by the bed of the car.

I am aware that springs have been used in a railway-car for the purpose which forms the object of my present invention, and I do not claim such use, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. The combination, with a freight-car, of a box or freight-receptacle suspended within the freight-car and sustained by an elastic support, as and for the purpose set forth.

2. The combination, with a freight-car, of a box or freight-receptacle with means for suspension within said car, substantially as described, and a transverse track across said car, consisting of removable rails, and truck-wheels on the box or freight-receptacle, as and for the purpose set forth.

3. The combination, with a freight-car, of a box or freight-receptacle having truck-wheels attached, and having means of suspension in the freight-car, substantially as described, of removable rails, said rails being wedge-shaped and resting on friction-rolls, forming an inclined track across the car, and friction-rolls supporting said rails, and means, substantially as described, for moving said rails up said inclined track, and thereby raising said box or freight-receptacle.

4. The combination, with a freight-car, of a box or freight-receptacle having truck-wheels attached, a removable track formed of wedge-shaped rails resting on an inclined way, a bail hinged on said car, and an actuating-screw by which the rails are moved up said inclined way, as and for the purpose set forth.

5. The combination, with a freight-car, of a box or freight-receptacle suspended from girders at the top of the car, and springs supporting the ends of said girders, as and for the purpose set forth.

6. The combination, with a freight-car having girders extending across said car, spiral springs supporting said girders, screw-threaded posts attached to said car, and adjusting-nuts on the screw-threaded posts, said nuts supporting said spiral springs, as and for the purpose set forth.

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Witnesses:
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