

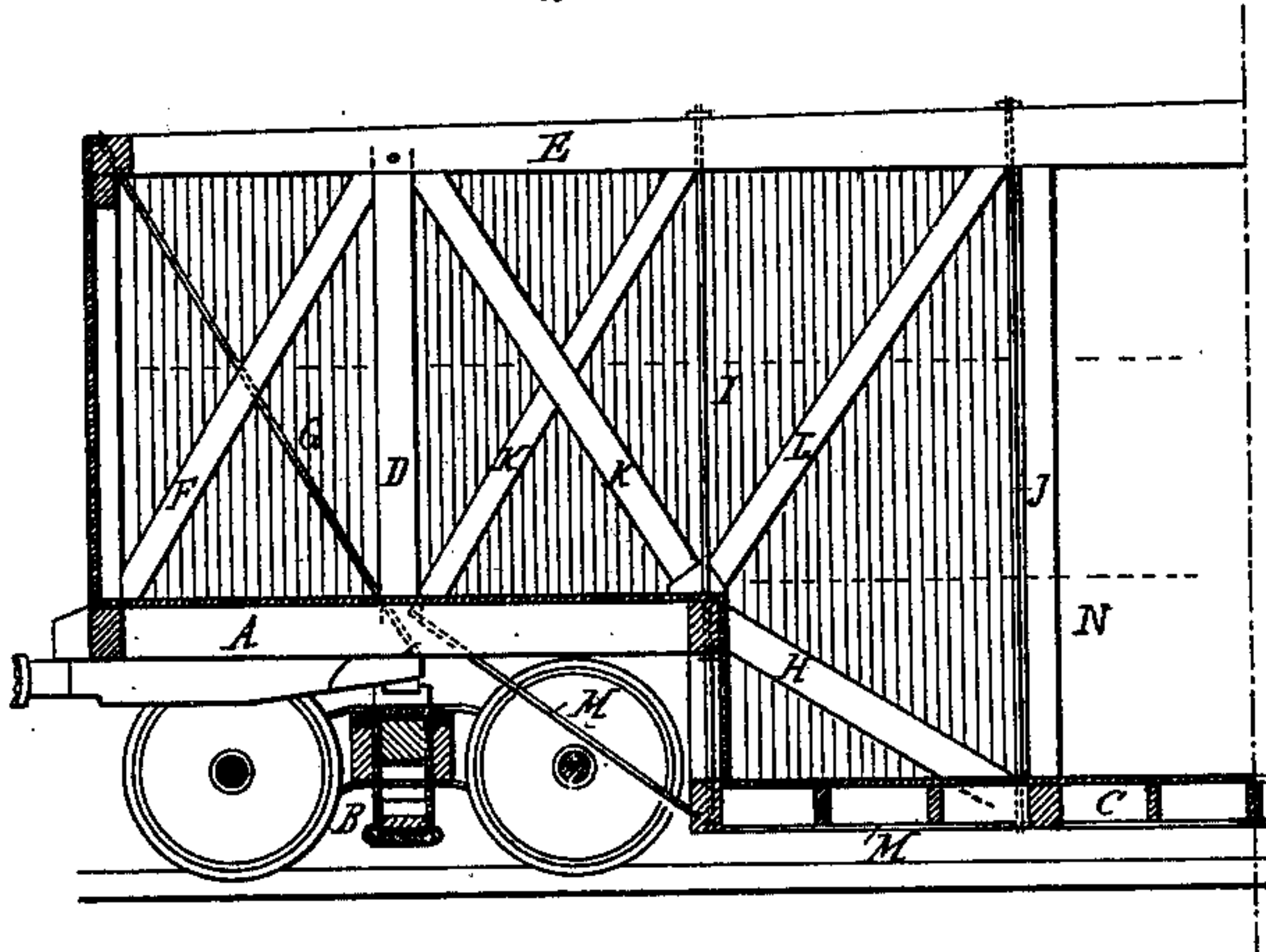
(No Model.)

E. B. WARD.  
Railway Freight Car.

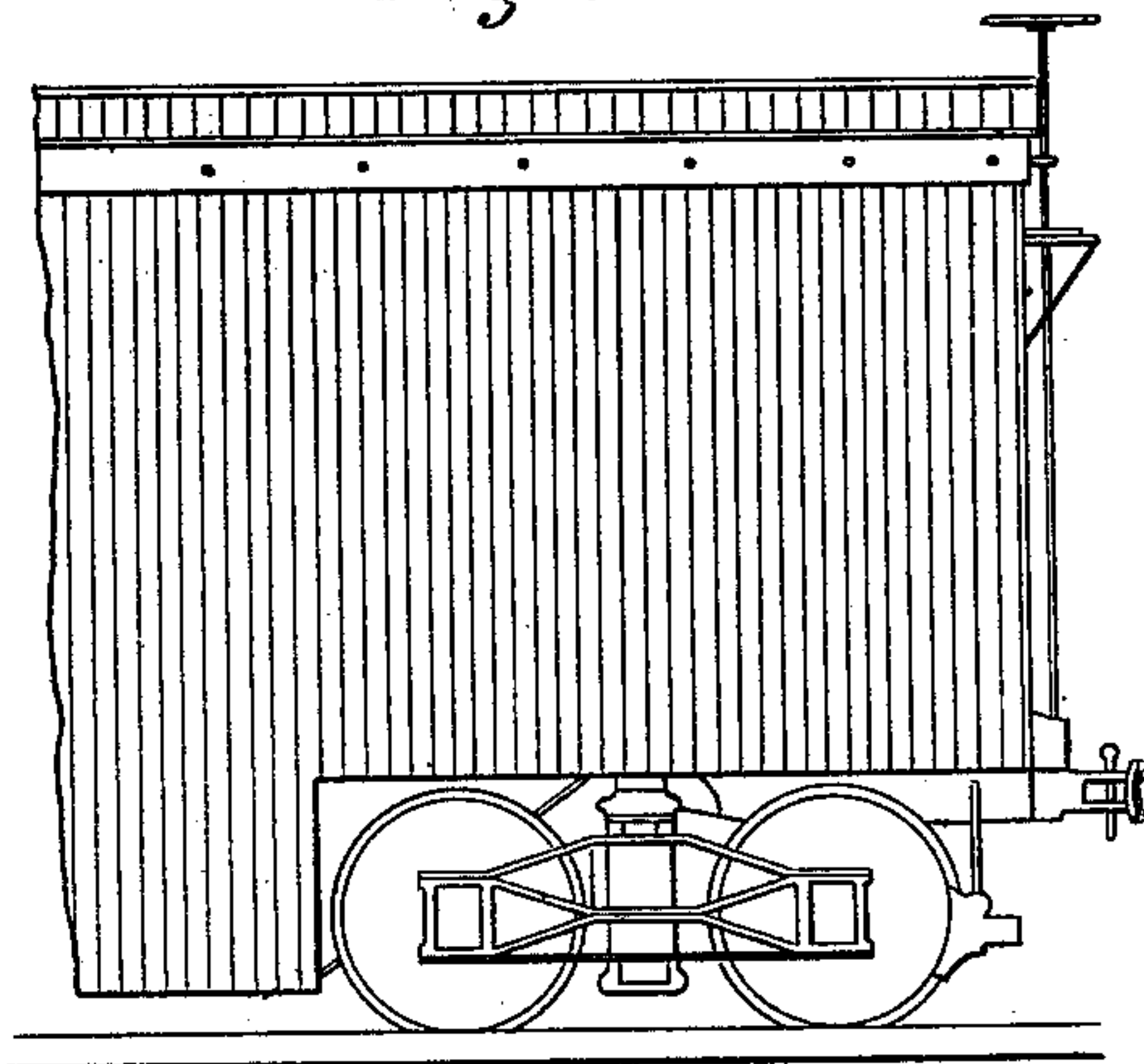
No. 229,778.

Patented July 6, 1880.

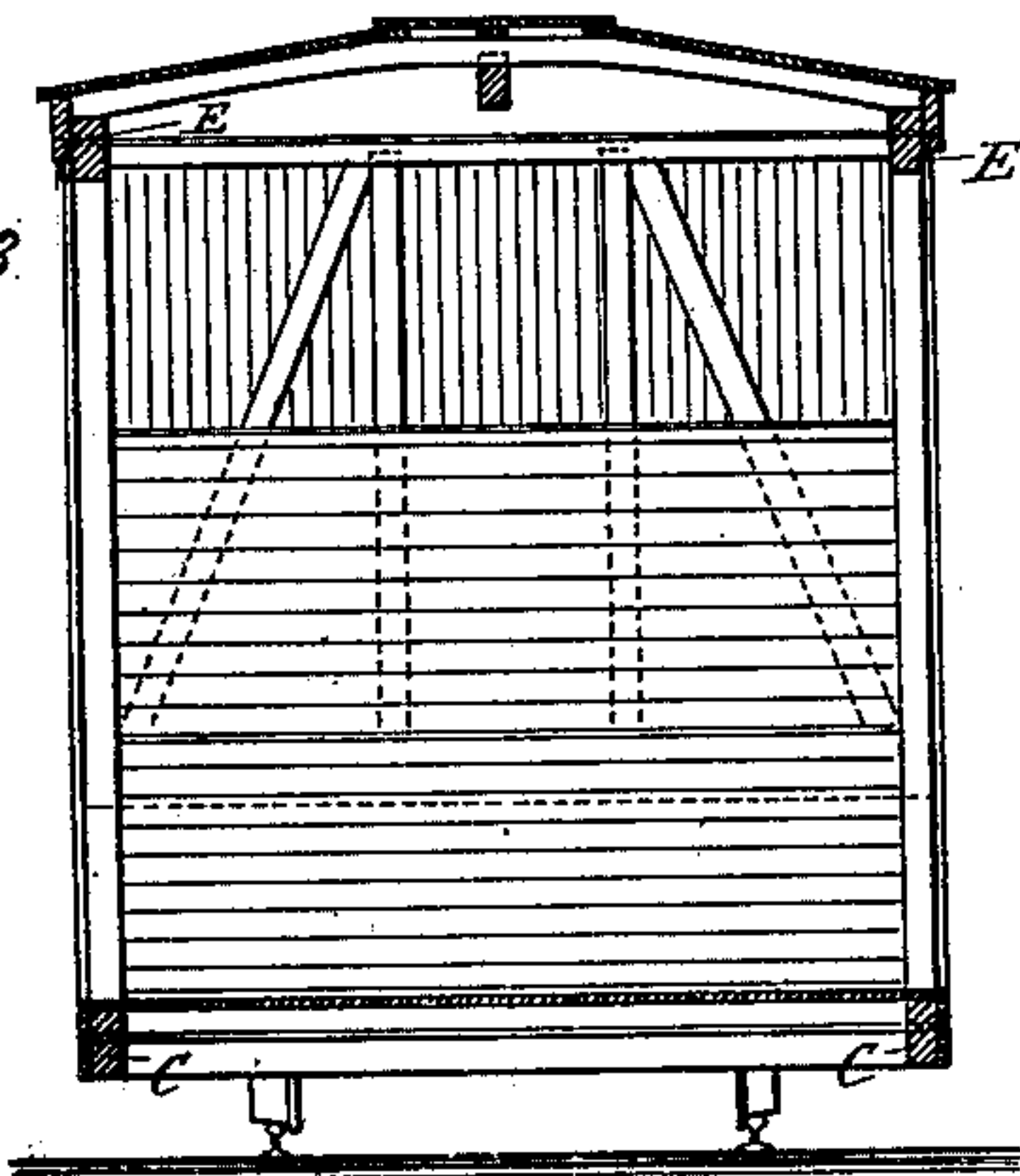
*Fig. 1*



*Fig. 2*



*Fig. 3*



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# UNITED STATES PATENT OFFICE.

ELECTUS B. WARD, OF DETROIT, MICHIGAN.

## RAILWAY FREIGHT-CAR.

SPECIFICATION forming part of Letters Patent No. 229,778, dated July 6, 1880.

Application filed May 7, 1880. (No model.)

*To all whom it may concern :*

Be it known that I, ELECTUS B. WARD, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Railway Freight-Cars, of which the following is a specification.

The nature of my invention relates to certain new and useful improvements in the construction of railway freight-cars more especially adapted for transporting small live stock, like sheep and hogs.

Figure 1 is a side elevation of a section of one-half of a freight-car constructed upon my improved plan, with the sheathing removed. Fig. 2 is a like view, showing the car inclosed. Fig. 3 is a central cross-section.

In the accompanying drawings, which form a part of this specification, A represents the bottom chord of that portion of the floor which is immediately above the truck B. C represents the bottom chord between the trucks. D is a vertical support extending from the top chord, E, which is slightly cambered, and this support is immediately over the central portion of the truck. F is a brace extending from the top of the support D to the front lower corner of the car. G is a tie-rod extending from the front upper corner of the car to the foot of said support. H is a diagonal bottom chord connecting the two, A and C, together. I is a supporting-rod supporting the front lower corner of the extreme bottom from the top chord, and J is a similar rod supporting from the top chord that section of the extreme bottom where the extreme bottom chord C and the diagonal bottom chord H meet. K are braces extending diagonally from the top chord to the bottom chord A, between the support D and the supporting-rod I, and L is a strut extending from the top chord, at its point of intersection with the supporting-rod J to the point of intersection between the bottom chords, A and H. M is a truss-rod, such as is usually

employed beneath freight-cars, extending underneath the bottom chord C. N represents a doorway between the supporting-rods J, the other half-section of the car being constructed as shown.

The dotted lines show the position of the intermediate floors between the extreme bottom floor and the deck, as the car is to be arranged for transporting the small live stock. These intermediate floors may be removable, so that bulky freight may be carried.

By this construction it will be perceived that the objections hereinbefore named in the use of the ordinary freight-cars are avoided, while much more room is attained, and, as the extreme bottom of the car is brought so near the ground, it will be found very convenient in loading and unloading from the ground, and that the additional room is obtained without increasing the height or width of the car.

I am aware that a car has heretofore been constructed in which that part of its body between its trucks projects downward below its wheel-axes, and I therefore lay no claim to such construction, broadly.

What I claim as my invention is—

1. The combination, with a freight-car in which part of its body between its trucks projects downward below its wheel-axes, of the bottom floor-chord C, suspended from the top chord, E, by the rods I J, and provided with the supporting truss-rods M, secured to the chords A, substantially as described, and for the purpose set forth.

2. A freight-car wherein the bottom chords, A C H, top chord, E, supports D, braces F K, tie-rods G, and struts L are combined with the supporting-rods I J and truss-rods M, substantially as and for the purposes set forth.

ELECTUS B. WARD.

Witnesses:

H. S. SPRAGUE,  
ALBERT WAHL.