

(No Model.)

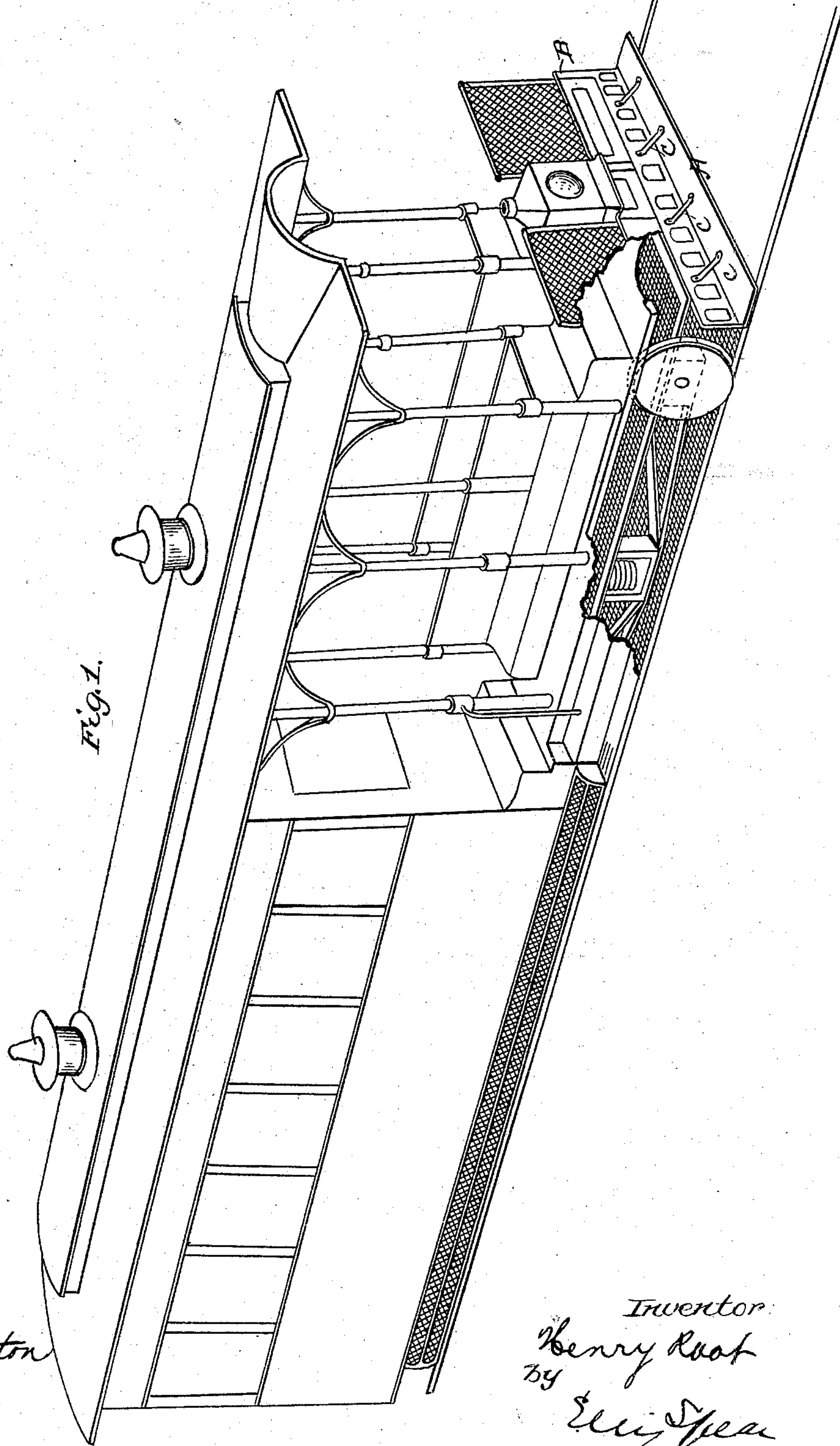
3 Sheets—Sheet 1.

H. ROOT.

CAR FOR CABLE RAILROADS.

No. 263,227.

Patented Aug. 22, 1882.



Attest:  
F. L. Middleton  
D. H. Mead

Inventor  
Henry Root  
by  
E. J. Spear  
Atty

(No Model.)

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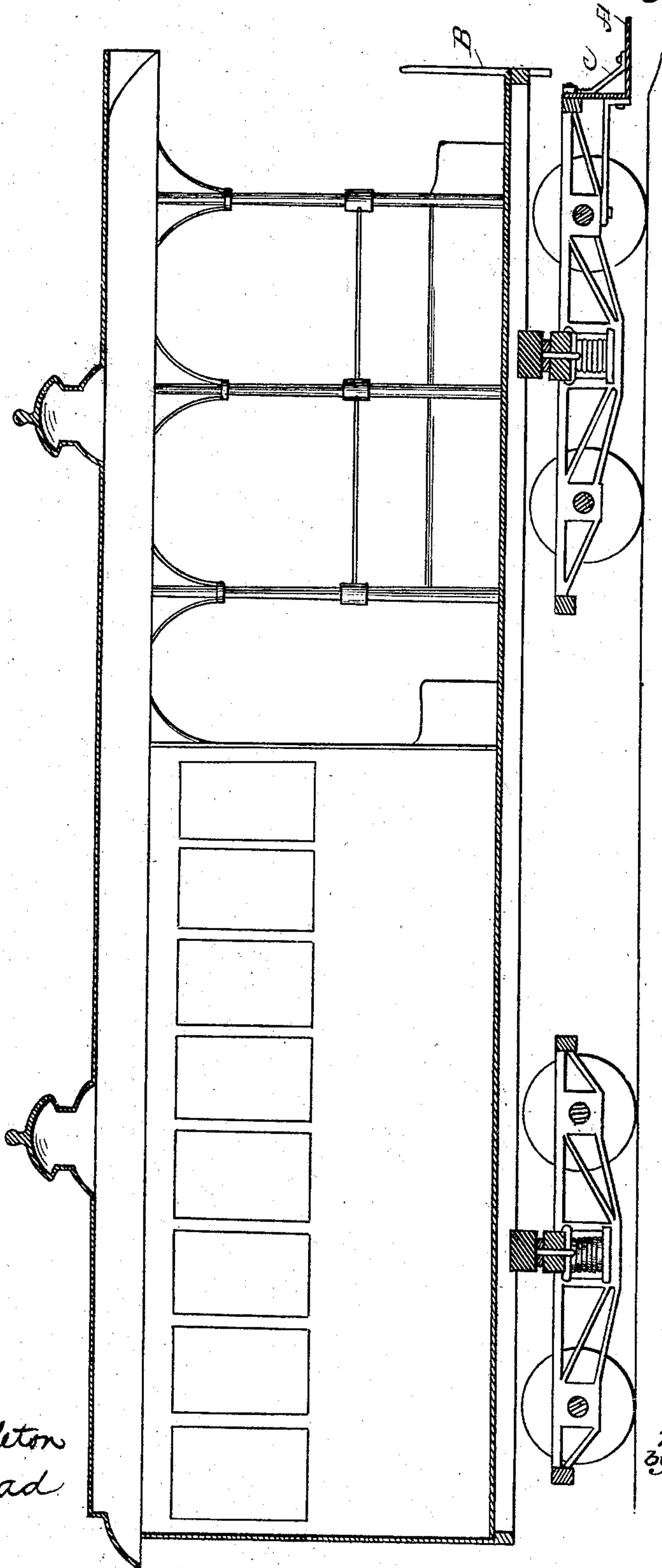
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Fig. 2.



Attest:  
J. L. Middleton  
D. H. Mead

Inventor  
Henry Root  
by  
E. H. Spear  
Atty.

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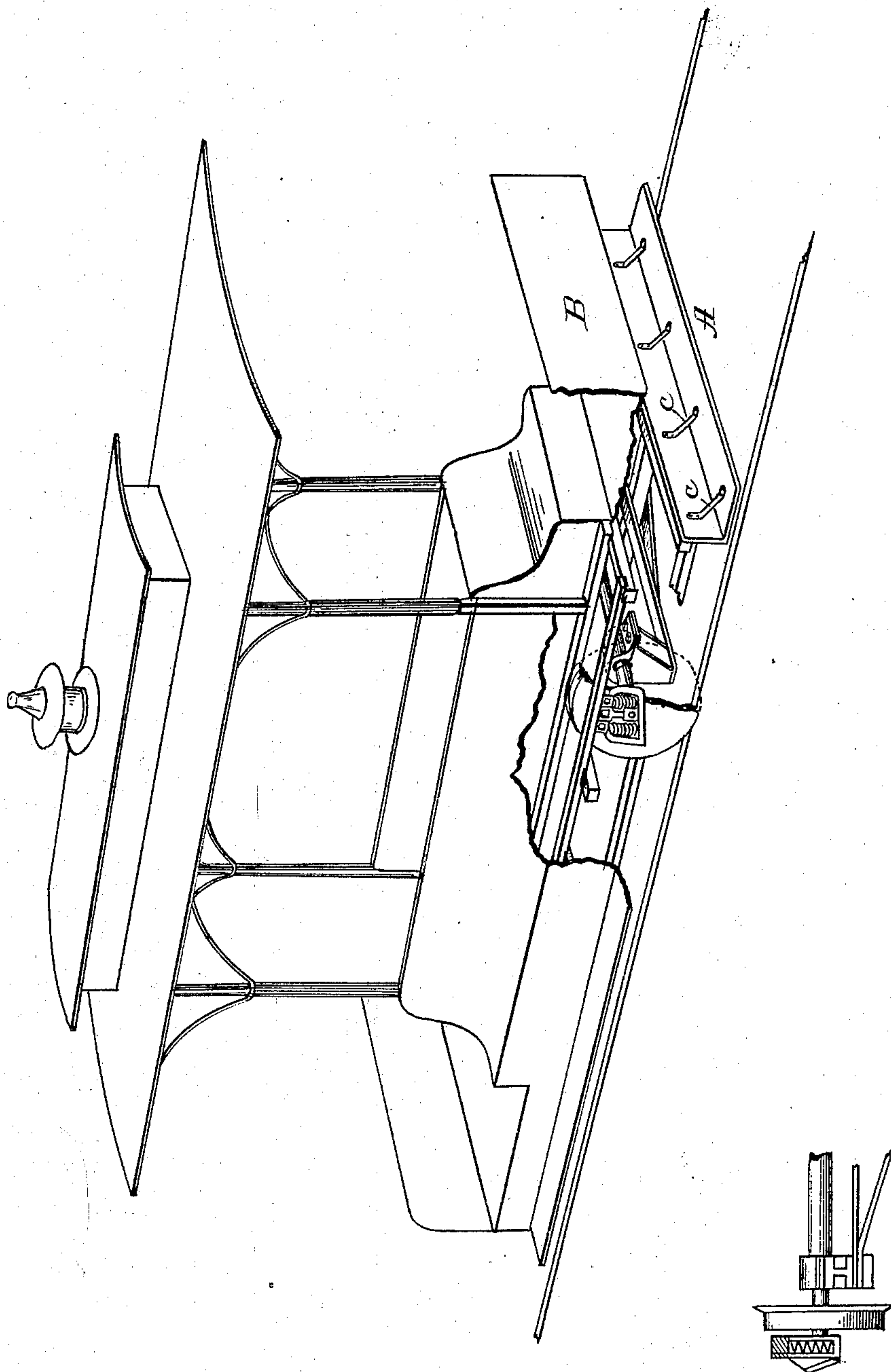
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Fig. 3.



Attest:  
J. L. Middleton  
D. H. Mead.

Inventor  
Henry Root  
by Eli Spear  
Atty.



# UNITED STATES PATENT OFFICE.

HENRY ROOT, OF SAN FRANCISCO, CALIFORNIA.

## CAR FOR CABLE RAILROADS.

SPECIFICATION forming part of Letters Patent No. 263,227, dated August 22, 1882.

Application filed March 28, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY ROOT, of the city and county of San Francisco, State of California, have invented an Improved Car for Cable Railroads; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in the cars which are employed upon cable railroads; and it consists in combining with a grip-car for cable railroads, mounted on supporting-springs, the rigid frame supported directly from the axles and having a fender fixed to its front end, all as fully hereinafter described.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a view of my invention attached to a dummy and car combined. Fig. 2 is a longitudinal section. Fig. 3 shows its attachment to a dummy. Fig. 4 is a detail.

In this class of roads the dummy or grip-car travels in front of the attached cars, so as to give the operator an unobstructed view of the track. This grip-car is usually made up of two frames, one of which is mounted upon springs and carries the seats for passengers, forming an open car. The other frame may be attached to boxes directly upon the axle; or it may be attached to the bottom of the boxes which carry the springs, and it thus carries the gripping apparatus at a nearly fixed height above the surface of the track. The frame which is supported upon the springs has a considerable range of movement, and as it extends some distance beyond the wheels the forward end has a wide range of movement from variable loads and from the plunging motion caused by the inequalities in the track. It does not therefore furnish that rigid support which is required for carrying the fender at a fixed distance above the surface of the street, and at the same time so close to it at all times as to make it impossible for it to pass over any persons who may fall in front of the cars.

My invention contemplates the employment of a guard or fender, which is secured to the front end of the rigid frame, and is so shaped as to pick up and hold any body which may be in the way.

In all cases where the entire route is operated by cable I consider that my car patented August 30, 1881, No. 246,420, is preferable. In other cases the device may be connected with the ordinary dummy.

To the forward end of the rigid truck-frame, and in front of the wheels, I secure a plank or frame, which extends about six inches beyond the front of the car. This frame extends across the whole width of the car, and is not over two or three inches above the surface of the street. Knees or braces secure it firmly to the truck-frame, and may assist a person in danger by furnishing points to be seized and held.

The front edge of the fender should preferably be rounded, and covered with rubber, leather, or any suitable soft material to prevent injury.

If preferred, the fender may be made in two parts inclined toward each other and meeting at an angle in the center; but I have found that if placed straight across the front it will be all that is required, as it strikes the body below the center and will thus pick it up and deposit it upon the fender instead of rolling it under, and this is the safest way of disposing of a person struck by the car.

This fender may be so attached to the frame as to be adjustable to any desired height above the surface of the road.

The sides of the car may have slats or wire-netting fixed to it and extending down to a point near the surface of the road, so as to prevent any person accidentally falling between the wheels from the sides.

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

In a dummy or grip-car for cable railways, the combination, with the supporting-wheels and axles and the frame mounted upon springs, of a supplemental frame supported directly by the axle and having the fender fixed to the front end, substantially as described.

In witness whereof I hereto set my hand.

HENRY ROOT.

Witnesses:

S. H. NOURSE,  
G. W. EMERSON.