

(No Model.)

H. ROOT.

TRACTION APPARATUS FOR WIRE ROPE RAILWAYS.

No. 246,420.

Patented Aug. 30, 1881.

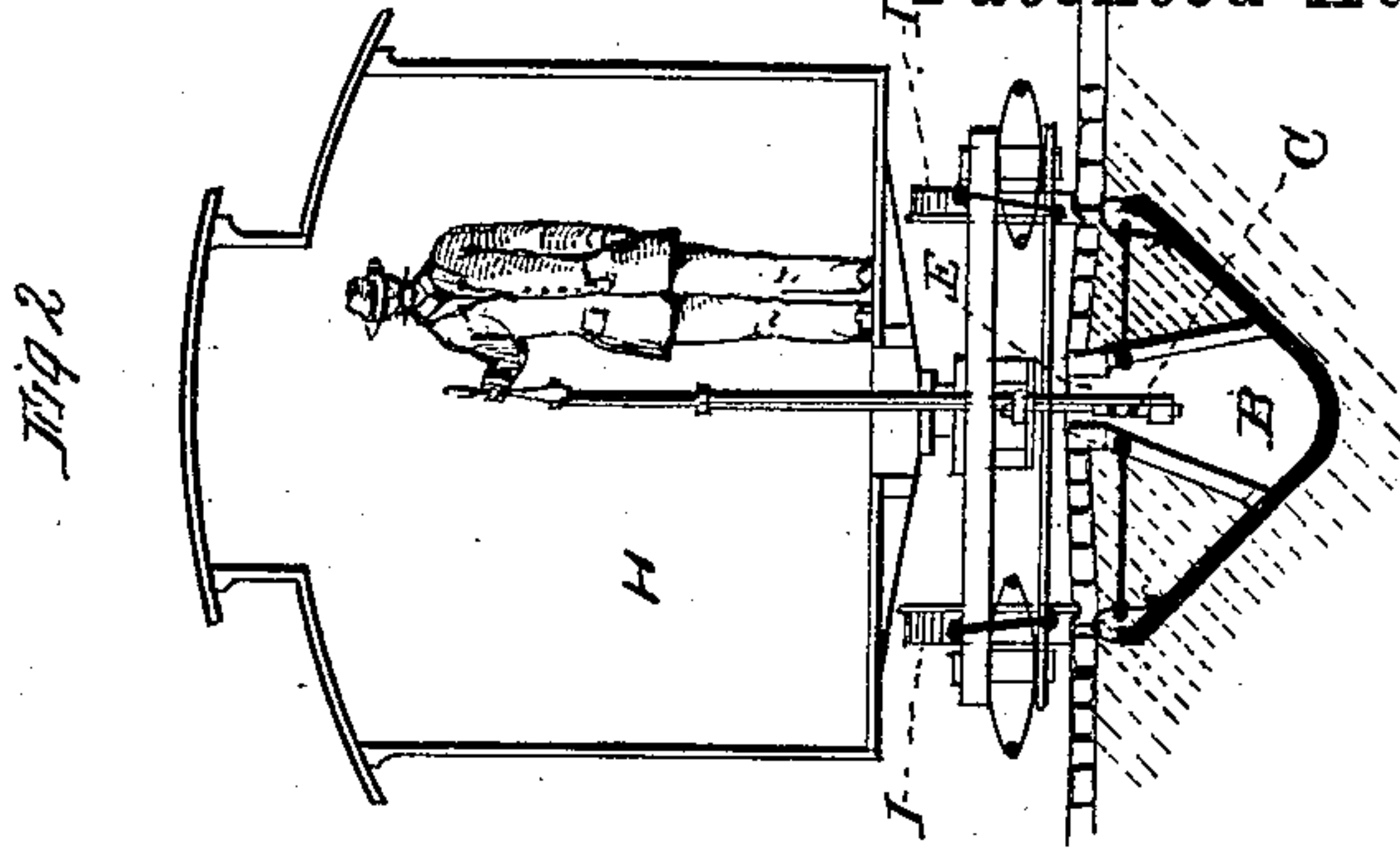
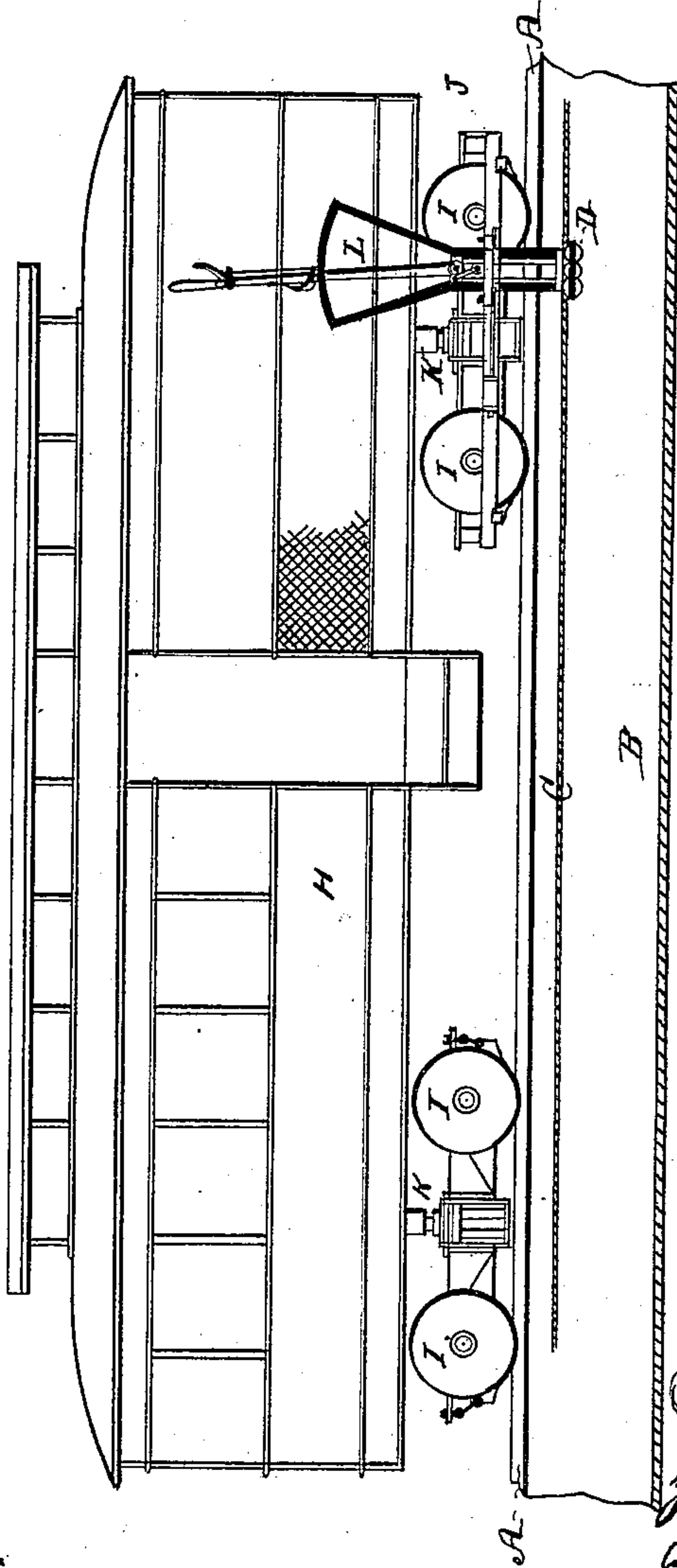


Fig. 1.



Witnesses

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TRACTION APPARATUS FOR WIRE-ROPE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 246,420, dated August 30, 1881.

Application filed April 4, 1881. (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 Traction Apparatus for Wire-Rope Railways; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to certain improvements in that class of railways in which the cars are propelled along the track by means of an endless rope which travels in an underground tube or tunnel, and in which a gripping device is used to connect the cars and rope through a slot in the tube.

Hitherto it has been customary to employ an independent car, which is called a "dummy," to support and carry the gripe and its operating-lever, this dummy being coupled to the car in which the passengers are conveyed by a link or other form of coupling. Each car has two pairs of driving-wheels to support it, and the cars are separated and their positions reversed for the return-trip each way.

My invention consists in making a single car of sufficient length to provide space for the passengers and for the management of the gripe. The ends of this car are supported, like an ordinary passenger-coach, upon swiveled or pivoted wheel-frames, being mounted upon springs, and the gripe is supported upon the rigid frame-work of the forward set of wheels independent of the body of the car or any motion which it may have, so that the whole car will ride easily upon springs, and the gripe will at the same time be held by the rigid wheel-frame at a constant distance from the track and the rope or cable tunnel.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a side elevation of my apparatus. Fig. 2 is a transverse section.

A is the line of rails, B the cable tube or tunnel, and C the endless traveling cable which moves within the tunnel, being driven and supported in the usual manner. D is the gripping device, which may be of any known construction; and E is the slot in the upper part of the tunnel, through which the operating slide or device extends from the gripe to the car above, where it is controlled by levers or other suitable mechanism.

Instead of connecting this apparatus directly with a supplemental car or dummy, in the usual manner, I build a car, H, of a length about

equal to two ordinary cars. The rear portion is finished off like an ordinary car-body, and the front may be similarly finished, or it may be left open at the sides, with a netting or other form of inclosure extending half-way up. The entrance to this car is made at the sides, midway between the ends.

The car-body has each end supported upon four or more wheels, I, united by a frame, J, and having a central pivot or swivel joint at K, so that the wheel-frames may turn and accommodate themselves to the curvatures of the road, as in the ordinary passenger-coaches.

The car-body is supported upon springs, by which an easy elastic motion is given to it.

It is necessary that the gripping device should be so connected with the car that it should have little or no movement communicated to it by the movements of the car. I therefore support the whole gripe mechanism L upon the forward wheel-frame, and an opening is made through the floor of the car just above it, so that the operating mechanism may extend up to a point within easy reach of the driver.

By this construction the gripe is supported upon the solid wheel-frame, and, as the distance between the wheels is small, the movements of the wheel-frame in accommodating itself to the curvatures of the track are small and unimportant, and will not affect the gripe, while the longer car-body can make the longer and more sweeping curves necessitated by its length independent of the gripe.

A car is thus made having much greater accommodation and with much less proportional expense. It easily follows the curves of the road, and may be mounted upon very elastic springs.

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

The car-body H, supported upon the independent swinging wheel-frames J at each end, in combination with a cable-gripping device, L, supported from one of the wheel-frames and independent of the car-body, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

HENRY ROOT.

Witnesses:

S. H. NOURSE,
FRANK A. BROOKS.