

(No Model.)

2 Sheets—Sheet 1.

W. J. MORDEN, Dec'd.

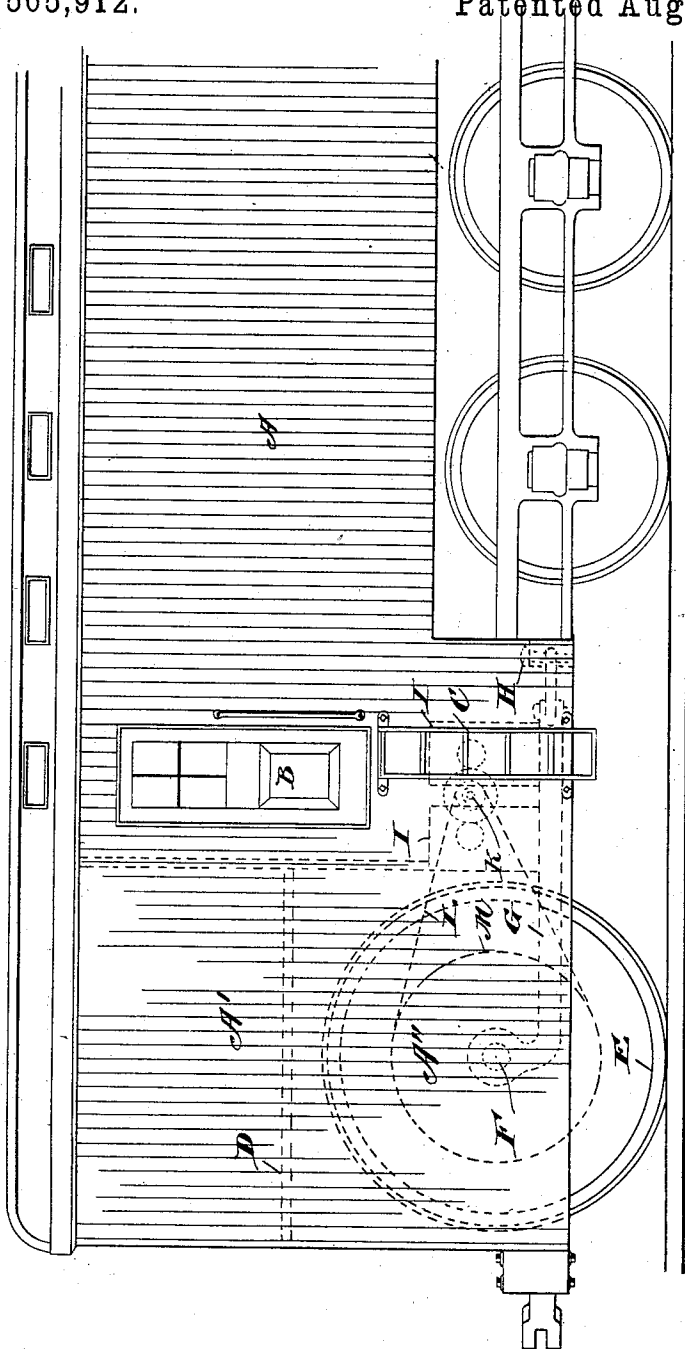
L. H. MORDEN, Executrix.

GENERATING POWER FROM MOVING TRAINS.

No. 565,912.

Patented Aug. 18, 1896.

Fig. 1.



Witnesses,
J. D. Mann
Frederick B. Gordon

Inventor,
William J. Morden
By Offield, Bode & Luthcum
Attys.

(No Model.)

2 Sheets—Sheet 2.

W. J. MORDEN, Dec'd.

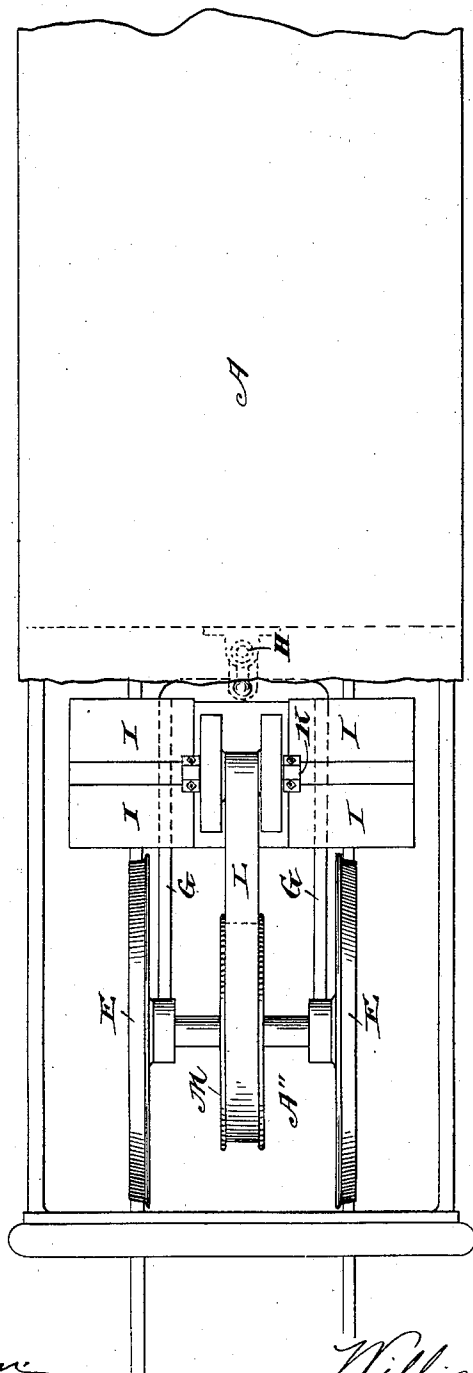
L. H. MORDEN, Executrix.

GENERATING POWER FROM MOVING TRAINS.

No. 565,912.

Patented Aug. 18, 1896.

Fig. 2.



Witnesses,
S. D. Mann
Frederick Goodwin

Inventor,
William J. Morden
By *Offield, Fowler & Hutchinson*
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM J. MORDEN, OF CHICAGO, ILLINOIS; LAURA H. MORDEN EXECUTRIX OF SAID WILLIAM J. MORDEN, DECEASED.

GENERATING POWER FROM MOVING TRAINS.

SPECIFICATION forming part of Letters Patent No. 565,912, dated August 18, 1896.

Application filed May 9, 1895. Serial No. 548,683. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. MORDEN, of Chicago, Illinois, have invented certain new and useful Improvements in Traction-Motors, of which the following is a specification.

The object of this invention is to provide a traction-motor for generating power by the movement of railway-trains, which power may be employed for a variety of purposes; and the invention consists in the construction and arrangement of the motor and also in the construction and arrangement of the car to which said motor is attached.

In the accompanying drawings, Figure 1 is a side elevation showing one end of a car to which my traction-motor is attached, and Fig. 2 is a plan view of the same with the roof of the car broken away.

In order to carry out my invention so as to secure the best results therefrom, I prefer to specially construct a car as shown in the drawings, in which A represents the car-body and A' a rearward extension thereof, forming a cab, access to which is had through the door B by way of the flight of steps C, and providing a storage-receptacle or tool-house D in the upper portion of said rearward extension A'. The lower portion of this extension is not floored over, and therefore provides a wheel-house. (Indicated at A'') In this space I arrange my traction-motor, consisting of two large traction-wheels E, which are journaled upon an axle F, connected by a yoke G and a vertical pivot H to the car-body A. The yoke affords a suitable supporting-frame, on which may be mounted a machine; for example, one or more dynamos or ventilator-fans, as indicated at I. The counter-shaft K for driving said machine may be driven directly by a belt L from a driving-pulley M on the traction-wheel axle. The traction-wheels are preferably flanged the same as the driving-wheels of a locomotive and the truck-wheels of a car. The yoke-frame is shown as pivotally connected to a cross-sill of the car-frame and adapted to swing around a vertical pivot; but it may be connected in any manner desired, so long as the connection is free.

The advantage of this construction is that

the power is generated simply by the traction of the large wheels. The rotary motion of the axle of these power-wheels can be made to transmit motion by suitable gearing to any machine mounted upon the yoke-frame. By this arrangement the traction-wheels, their frame, and any machine mounted upon such frame all move as one in passing around curves and over irregularities in the track-rails. The vibrations of the car-body are not detrimental to the operation of the traction-wheels and the machine driven therefrom. For example, if a fan be employed the air-current generated by the fan may be taken off through a flexible pipe and employed in the ventilation of the cars. If a dynamo be mounted on the frame of the traction-wheels, the current generated thereby may be carried by suitable conductors to storage batteries mounted in the car-body or in the compartment above the power-wheels or elsewhere along the train.

I am aware, of course, that it has been proposed to apply gearing of various forms to car-axes in various ways. The difficulty has been that such gearing acts as a brake upon the car-wheels and more power is lost than is gained. By employing these large traction-wheels a very slight expenditure of power is required to cause them to roll along the track, while a considerable power may be developed by gearing applied to the axle of such wheels without seriously loading the locomotive.

While I prefer to use the special arrangement of car shown, still the traction-motor may be connected to a car in some other manner. The machinery carried by the frame of the traction-motor should at all times be protected from the elements, and this is accomplished by my peculiar construction of car.

It will be observed that the side sills of the car extend beyond the power-wheels and are there connected with the usual end sills and provided with a draw-bar, so that a car having my traction-motor applied thereto may be coupled up in any part of a train.

While I have referred to the coupling of my traction-motor to a "car," I mean to be understood by the use of this term "car" to

include any vehicle adapted to run upon fixed tracks, and to include not only all kinds of cars, but also the locomotive, tender, or a specially-constructed vehicle to which my
5 motor may be attached.

I claim—

The combination with a railway-vehicle having an open interior inclosed by the side and endsills, of a trailing traction-motor com-
10 prising a pair of traction-wheels arranged

within said open interior and projecting above the plane of the sill, a frame in which said traction-wheels are journaled, said frame being adapted to support a machine to be driven from the power-wheels and freely connected 15 to the car, substantially as described.

WILLIAM J. MORDEN.

Witnesses:

C. C. LINTHICUM,
N. M. BOND.