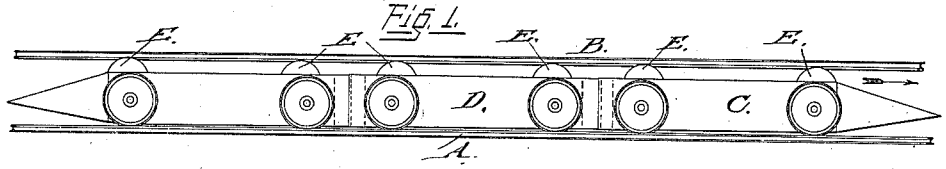
(No Model.) 4 Sheets—Sheet 1.

D. G. WEEMS.

ELECTRIC RAILWAY SYSTEM.

No. 387,382. Patented Aug. 7, 1888.

Fig. 1.



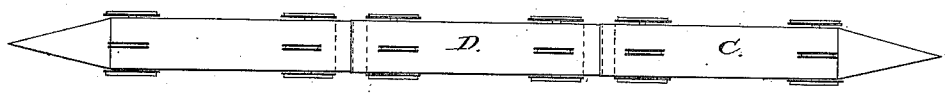


Fig. 2.

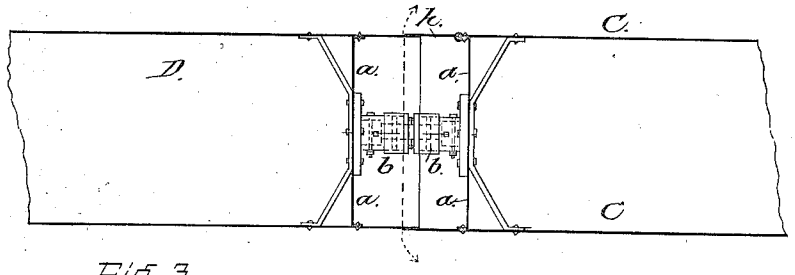


Fig. 3.

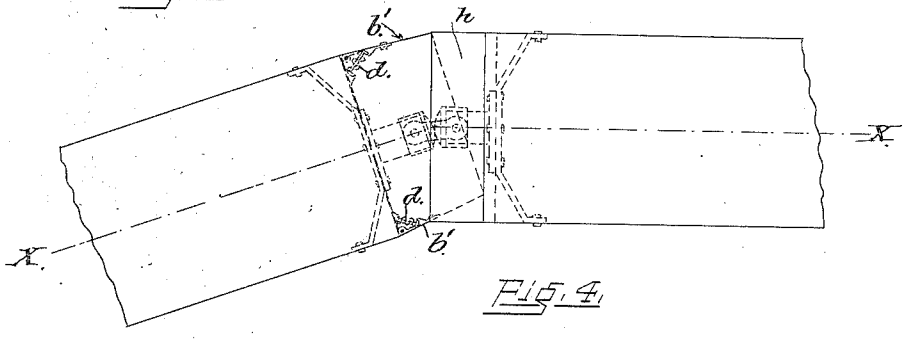


Fig. 4.

WITNESSES:

Wm. W. Pegram.

B. J. Dashiell Jr.

INVENTOR.

David G. Weems.

BY A. H. Evans & Co.,

ATTORNEY.

(No Model.)

4 Sheets—Sheet 2.

D. G. WEEMS.

ELECTRIC RAILWAY SYSTEM.

No. 387,382. Patented Aug. 7, 1888.

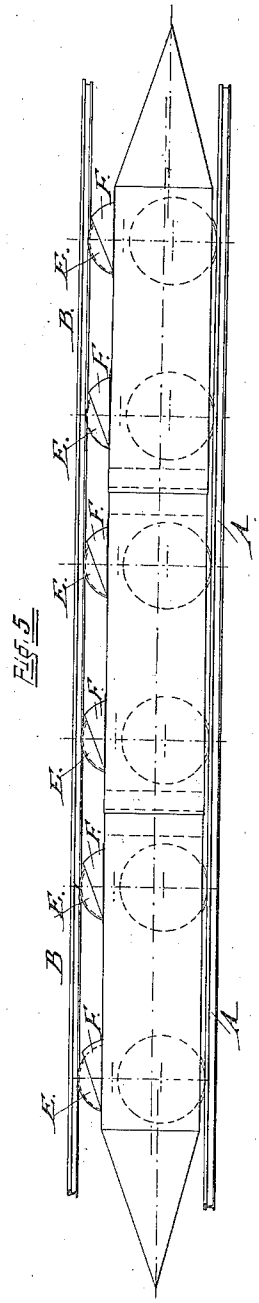


Fig. 5

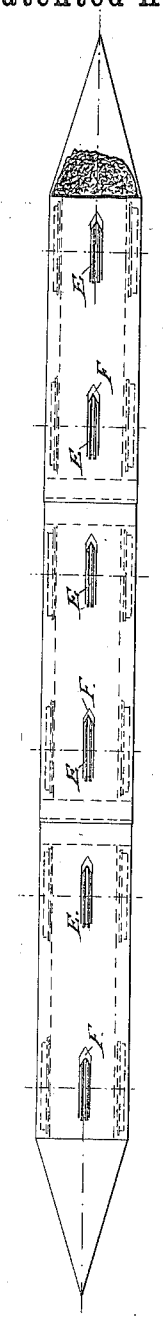


Fig. 6

WITNESSES:

Wm. W. Pegram.

Benj. J. Dashiell Jr.

INVENTOR,

Dwight G. Weems.

BY

A. H. Evans & Co.

ATTORNEY.

(No Model.)

4 Sheets—Sheet 3.

D. G. WEEMS.

ELECTRIC RAILWAY SYSTEM.

No. 387,382. Patented Aug. 7, 1888.

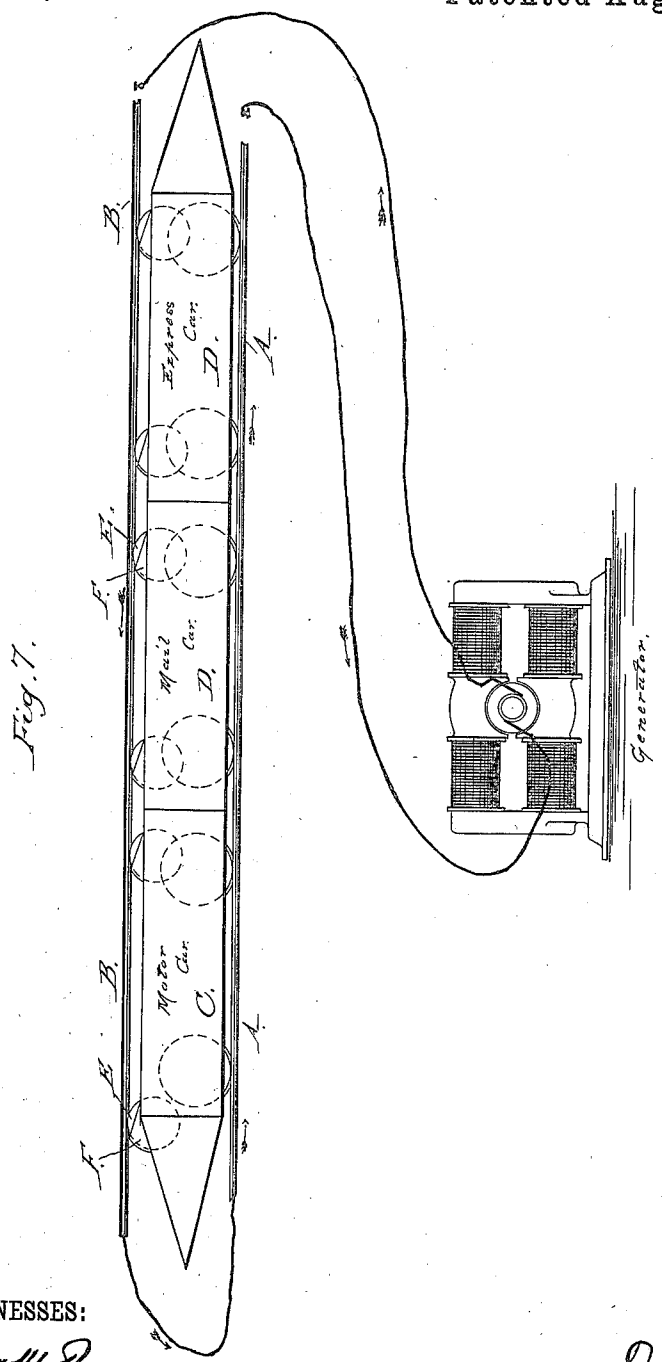


Fig. 1.

WITNESSES:

Wm. W. Pegram.

Benj. J. Dashiell Jr.

INVENTOR:

David G. Weems.

BY

A. H. Evans & Co.

ATTORNEYS.

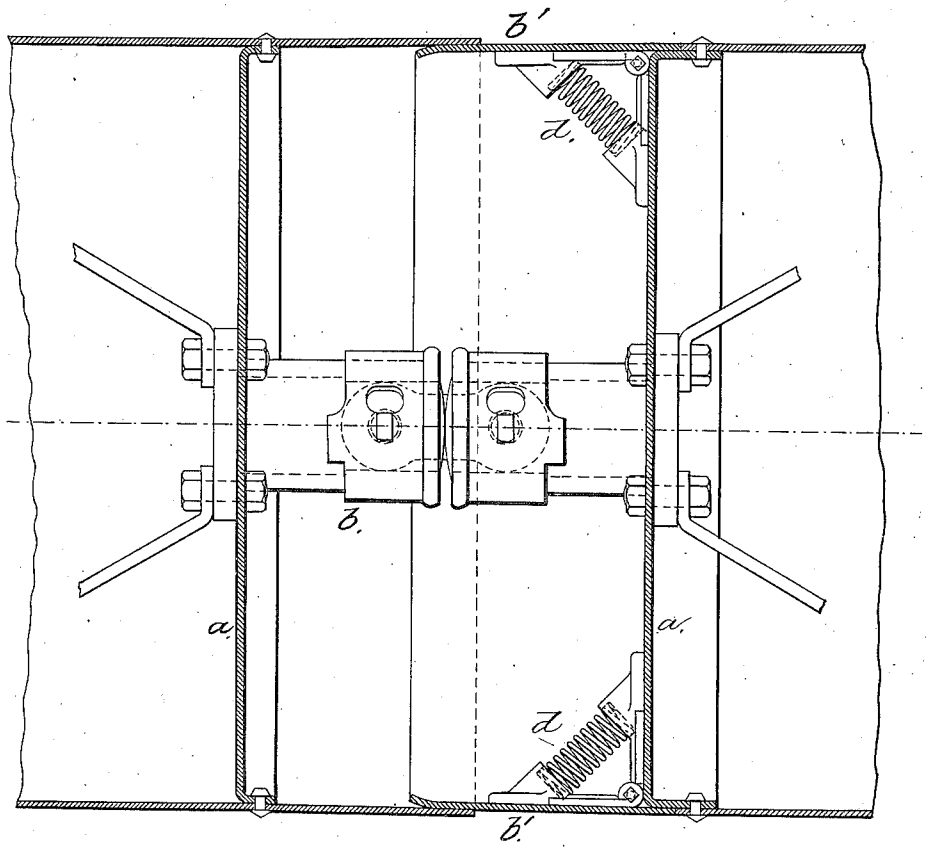
(No Model.) 4 Sheets—Sheet 4.

D. G. WEEMS.

ELECTRIC RAILWAY SYSTEM.

No. 387,382. Patented Aug. 7, 1888.

Fig. 8.



WITNESSES:

Wm. W. Pegram.

Benj. J. Dashiell Jr.

INVENTOR:

David G. Weems.

BY

A. H. Evans & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

DAVID G. WEEMS, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE ELECTRO-AUTOMATIC TRANSIT COMPANY OF BALTIMORE CITY, OF SAME PLACE.

ELECTRIC-RAILWAY SYSTEM.

SPECIFICATION forming part of Letters Patent No. 387,382, dated August 7, 1888.

Application filed March 20, 1888. Serial No. 267,802. (No model.)

To all whom it may concern:

Be it known that I, DAVID G. WEEMS, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Electric-Railway Systems, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of a train of cars having my improvements attached. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged sectional view on the line X X of Fig. 4, showing the telescopic ends of two adjacent cars. Fig. 4 is a top plan view of Fig. 3. Fig. 5 is a side elevation, and Fig. 6 is a plan view, of cars of slightly-modified form. Fig. 7 illustrates an electric generator, the train of cars, the upper and lower rails, and the wires connecting said rails with the generator. Fig. 8 is a sectional view showing the pivoted wings *b'*, the cushions *d*, and the coupling devices on a more enlarged scale.

My invention relates to certain improvements in electric-railway systems for transporting mail, express-packages, &c., at a high rate of speed over a line of elevated, surface, or underground tracks or rails, using as a motive power electricity, having the motor located in a traveling car or locomotive having attached thereto a series or train of cars, the said train being supplied with means for automatically controlling, starting, and stopping itself.

My present invention is an improvement on a former patent, No. 376,567, granted to me January 17, 1888, for similar improvements; and my invention consists in the improved constructions and combinations of devices, which I shall hereinafter fully describe and claim.

To enable others skilled in the art to make and use my invention, I will now describe the same and indicate the manner in which I carry it out.

Referring to Figs. 1 to 5, A represents the lower bearing-rails, and B the upper guide-rail, which is electrically connected with a dynamo permanently located at one or both terminals of the road, as described in my said former patent. The cars in the said former patent were pointed at both ends, but in the present case I prefer to make them of such a nature that when coupled together the whole train practically presents an unbroken surface on all sides. The purpose of this arrangement will be readily understood when it is stated that the friction of the air against the ends of pointed cars traveling at the rate my train is adapted to travel is so great that in a long run the ends of the cars which receive the impact of the air become so hot as to endanger the cars and damage their contents. To obviate this difficulty, I prefer to make the cars so that the front end of each car will telescope within the meeting rear end of the car in front of it, the rear end of said car telescoping with the meeting end of the car behind it. To make this feature more manifest, I will call attention to Figs. 1, 2, 5, and 6, where the train, composed of several cars, is shown. In these figures, C represents the locomotive, which may be supplied with any approved form of electric motor, as stated in my said former patent, said locomotive having its front end tapered to effect the necessary displacement of the air when the train is in motion, the resistance of the air upon the upper inclined surface tending to hold the locomotive snugly to the tracks. The rear end of the locomotive, however, is not tapered, as in my former patent, but is of a diameter approximating the diameter of the body of the locomotive. The rear end of the car is open, a partition, *a*, set back a suitable distance from the open end, closing the communication with the interior of the locomotive and serving as a means for the proper securing of a coupling, *b*, the said partition being suitably braced to resist whatever strain might be brought to bear upon it in coupling the cars or when the train is in motion.

The cars D, which contain the mail, packages, &c., are preferably of a uniform diameter throughout, having neither front nor rear end pointed, except the rear car of the train, which may have a pointed end if desired. These cars therefore have both ends open, and are provided with partitions and coupling devices similar to those shown on the locomotive, and in addition to these features one or both ends of the cars may be provided

with hinged or pivoted wings *b'*, adapted to have a slight inward movement to cause said end or ends to be compressed sufficiently to enter or telescope with the meeting end of the contiguous car or locomotive, and also to yield when the train is passing around a curve, as shown in Fig. 4, the inward movement of said wings being resisted by cushions or springs *d*, whereby said wings are caused to snugly bear against the inner walls of the open end of the contiguous front car or locomotive.

By reason of the construction just noted the whole train, with the exception of the pointed front end of the locomotive and the pointed rear end of the rear car, presents an unbroken surface to the action of the air. This being so, the retardation of the train, caused by the resistance of the air, is reduced to a minimum, and the friction on the ends of the cars containing the mail-matter and parcels is entirely obviated.

As there will be great friction on the pointed end of the locomotive, I prefer to make said end hollow and to fill it with a packing of mineral wool, asbestus, or like non-conducting material, as shown in Fig. 6, which effectually prevents the injurious effects of the heat upon said end.

The locomotive and cars in the present case, like those described in my said former patent, are provided with upper guide-wheels, E, engaging the upper rail, and to remove the friction from these wheels I prefer to partially inclose them in a housing, F, which prevents the air from striking against the front faces of the guide-wheels; and, further, if desired, the main wheels of the locomotive and succeeding cars may be located within the sides of the same, so as to be hid from view, and also be in a position where they too will offer as little resistance to the air as possible.

In addition to the wings before mentioned, one end of the locomotive and succeeding cars may be provided with hinged or pivoted doors or wings *h*, by which access may be had to the coupling devices when it is desired to couple or uncouple the cars.

By reason of the foregoing construction I am enabled to run my train with the least possible friction and in a manner producing the most beneficial results.

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

1. In an electric-railway system for mail or parcels, a series of cars having ends adapted to telescope with each other, whereby the train presents a practically unbroken surface.

2. In an electric-railway system for transporting mail and packages, an electric motor and a series of cars connected therewith, said cars having open ends adapted to enter or telescope with the adjacent ends of contiguous front cars.

3. In an electric-railway system, a motor and a series of succeeding cars adapted for mail and small packages, said cars having one or both ends provided with compressible end wings, whereby the meeting end of one car may enter or telescope with the ends of contiguous front cars.

4. In an electric-railway system for mail and parcels, a car of approximately uniform diameter throughout provided at its end with pivoted wings, whereby said end may be compressed to enter the end of a contiguous car, and cushions behind the wings resisting their inward movement.

5. In an electric-railway system for mail and parcels, a locomotive having a pointed front end filled with non-heat-conducting packing.

6. In an electric-railway system for mail and parcels, a locomotive having a pointed front end and open rear end, in combination with cars having compressible ends adapted to telescope with the open end of the locomotive and with each other.

7. In an electric-railway system for mail and parcels, a locomotive, and telescoping cars having coupling devices, in combination with wings or doors by which access may be had to said devices.

8. In an electric-railway system for mail and parcels having an upper guide-rail and lower bearing-rails, a locomotive and succeeding cars having guide-wheels, and suitable housings inclosing the front faces of said wheels.

DAVID G. WEEMS.

Witnesses:
WM. M. PEGRAM,
GEO. B. MICHAEL.