

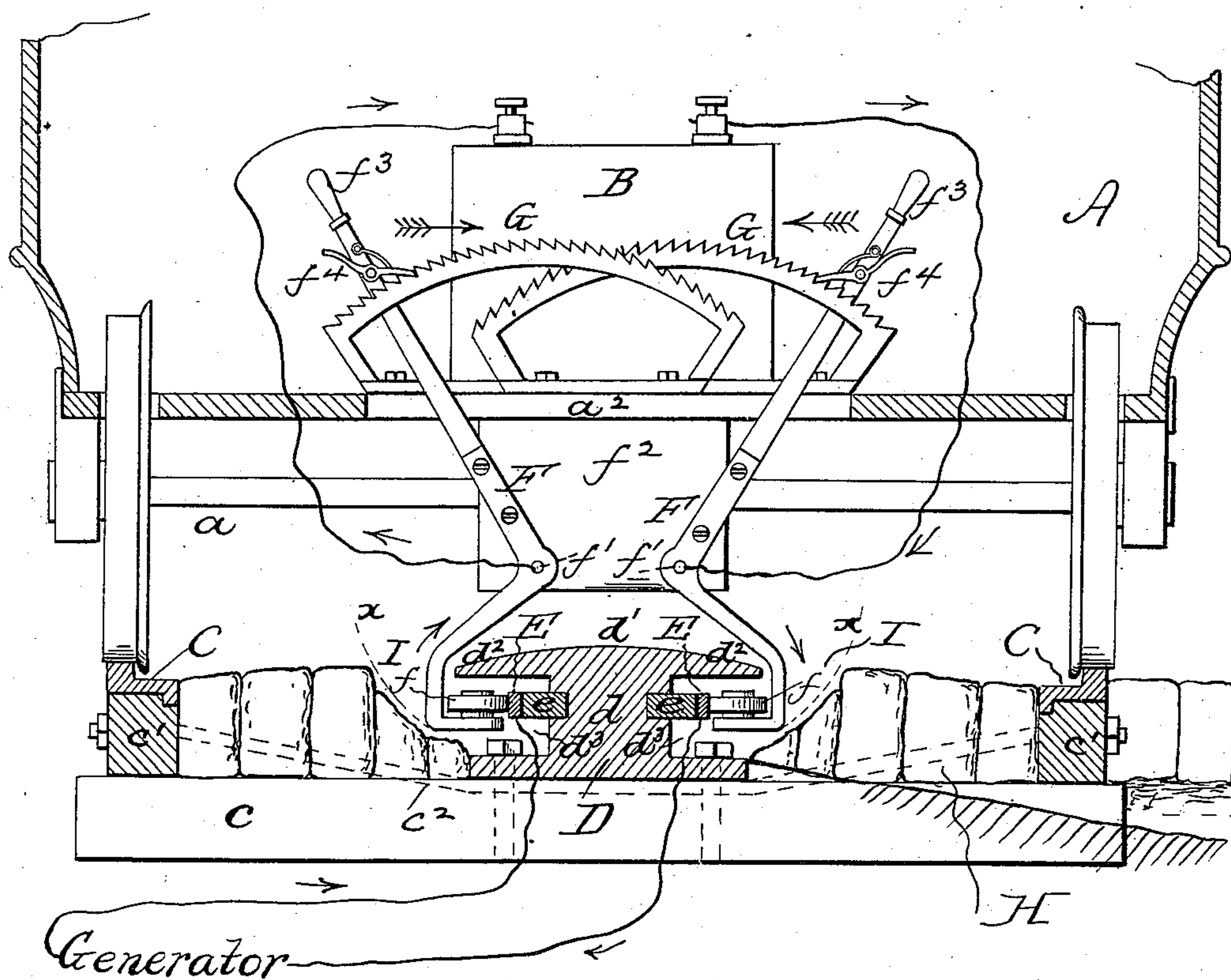
(No Model.)

J. F. McLAUGHLIN.

ELECTRICAL RAILWAY.

No. 332,926.

Patented Dec. 22, 1885.



WITNESSES:

L. W. Williams
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UNITED STATES PATENT OFFICE.

JAMES F. McLAUGHLIN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO THE NATIONAL ELECTRIC RAILWAY SYSTEM,
(LIMITED,) OF SAME PLACE.

ELECTRICAL RAILWAY.

SPECIFICATION forming part of Letters Patent No. 332,926, dated December 22, 1885.

Application filed January 12, 1885. Serial No. 152,613. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. McLAUGHLIN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented
5 certain new and useful Improvements in Electric Railways, of which the following is a specification.

The main object of my invention is to so construct the attachments of an electric rail-
10 way-car as to insure a perfect electrical connection between the contact brushes or wheels carried by the car and the electrical working-conductors; and this object I attain in the manner hereinafter fully described.

15 The view in the accompanying drawing is a transverse section of part of a car and roadway embodying my improvements.

A is the body of the car, mounted on wheels adapted to travel on the ordinary tracks, C,
20 which may be laid on suitable stringers, c' , with transverse sleepers c , the stringers being united, if desired, by braces c^2 . The electrical conductors are carried by a rail, D, arranged centrally between the car-tracks and bolted to
25 the sleepers c . The rail D is shown as consisting of a central web, d , provided with longitudinal grooves d^3 , for the reception of the conductors E, where the rail itself is of insulating material; but where the rail D is of
30 metal, strips e , of insulating material, are inserted in the grooves thereof, and the conductors E secured to these insulating strips, as illustrated in the drawing. The web d of the rail D carries a top piece, d' , which may form
35 the upper part thereof, or be secured thereto, this top piece having overhanging edges d^2 , to protect the conductors E. To the under side of the car is secured a bracket, f^2 , and to the latter are pivoted levers F F, carrying contact
40 wheels or brushes f , which normally are adapted to make contact with the conductors E, the roadway on each side of the rail D being open at I for the free passage of the lower ends of the levers F, and thus forming practically two

conduits on opposite sides of the rail D. The
45 levers F are provided with suitable handles, f^3 , of insulating material, or insulated from the lower parts of the said levers. These arms pass up through a slot or slots in the bottom of the car, and are provided near their upper
50 ends with spring-pawls f^4 , engaging with curved racks or ratchets G G, secured to the car, so that when these levers are pulled over in directions opposite to those pointed out by
55 the arrows the brushes or wheels f are brought into contact with the conductors E, and the pawls f^4 , then engaging with the racks G, lock the levers F, so as to maintain the said brushes or wheels in close traveling contact with said
60 conductors. By releasing the pawls and moving the levers, or either of them, as indicated by the arrows, the brushes or wheels may be removed from contact with the conductors. The lower metallic parts of the levers F are connected by suitable conductors to the poles
65 of the motor B, carried by the car, which motor may be suitably geared to one of the axles of the car.

The openings I, forming the conduits on opposite sides of the central rail, D, may be pro-
70 vided at intervals with inclined gutters H, to carry off the water, &c., collecting therein.

I claim as my invention—

The combination of a rail carrying insulated
75 conductors on its opposite sides with an electric railway-car having two levers, F F, pivoted to the car and carrying at their lower ends contacts for the said conductors and at their upper ends spring-pawls, and curved racks G G on the car, with which the pawls
80 engage, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES F. McLAUGHLIN.

Witnesses:

S. J. VAN STAVOREN,
CHAS. F. VAN HORN.