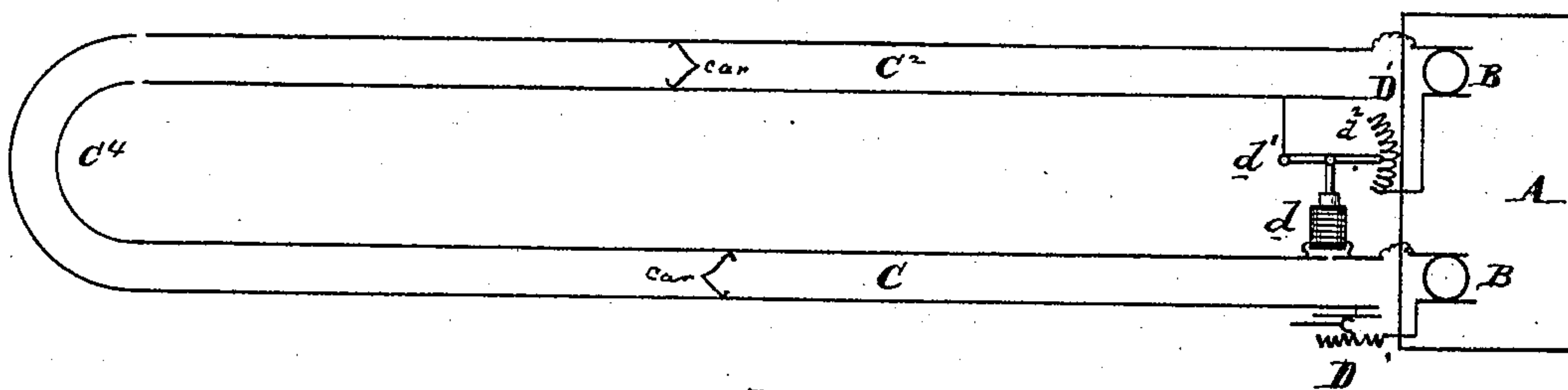
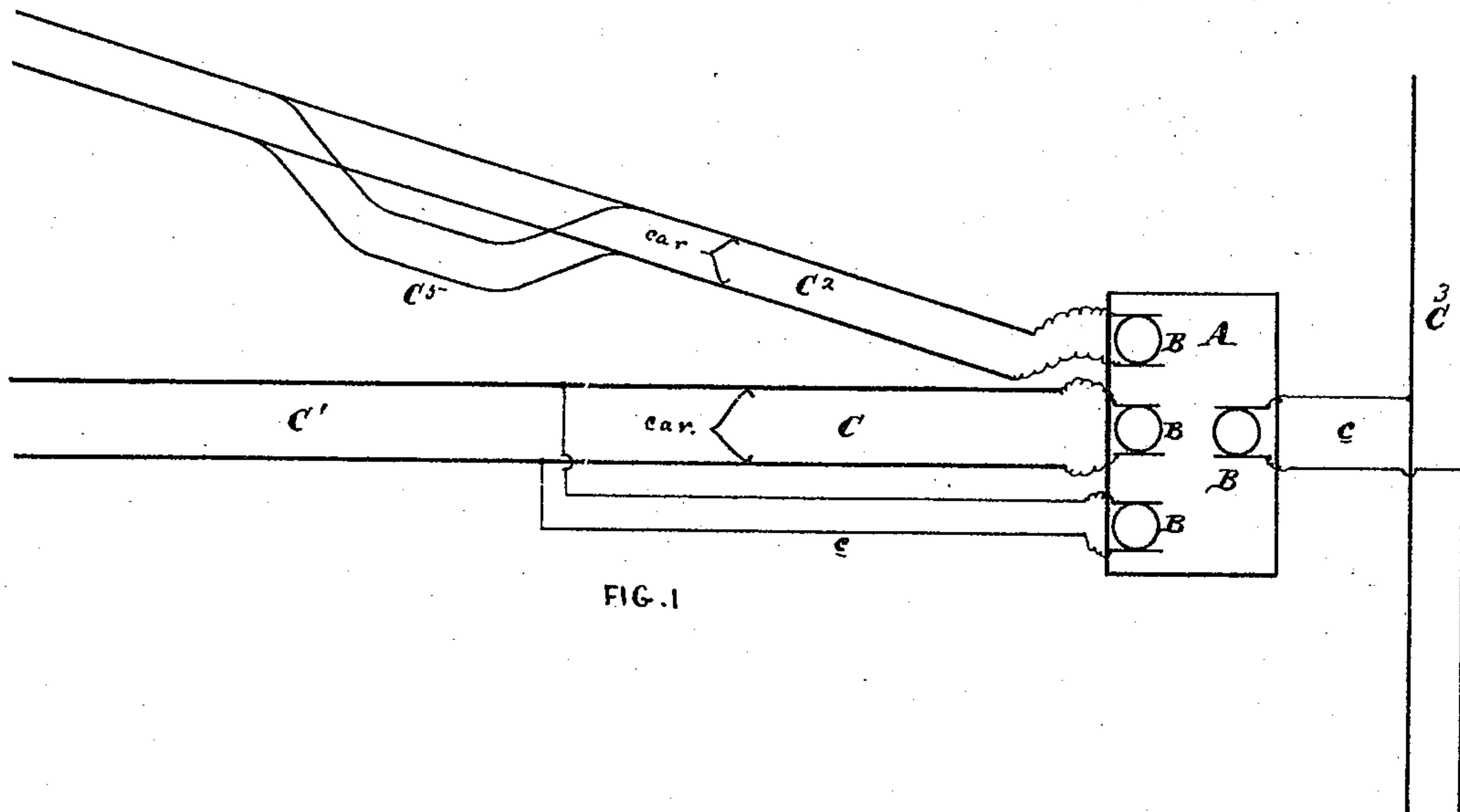


(No Model.)

R. M. HUNTER.
ELECTRIC RAILWAY.

No. 430,208.

Patented June 17, 1890.



Attest

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UNITED STATES PATENT OFFICE.

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PANY, OF BOSTON, MASSACHUSETTS.

ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 430,208, dated June 17, 1890.

Original application filed June 29, 1887, Serial No. 242,847. Divided and this application filed December 3, 1887. Serial No. 256,915.
(No model.)

To all whom it may concern:

Be it known that I, RUDOLPH M. HUNTER, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Electric Railways, of which the following is a specification.

My invention has reference to electric railways; and it consists in certain improvements, all of which are fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof—

My invention comprehends two or more railways or sections of electric railways, each supplied with a separate generator of electricity, and in which said generators are all located in the same central generating-station, whereby great economy and easy and proper management result. The various sections or railways may be worked under constant regulation, which may be governed by the current in one section or railway.

It is immaterial to my invention whether the conductors of the railways be separate, overhead, underground, or surface conductors, or whether they be independent or employed as the rails.

This application is a division of my application Serial No. 242,847, filed June 29, 1887.

In the drawings, Figure 1 is a diagram showing two or more electric railways or sections thereof supplied from separate generators of electricity located in a common central station, and Fig. 2 is a plan view of another arrangement of same.

A is the central station, which is supplied with two or more dynamos B, each supplying current to different electric railways or sections thereof.

C and C' represent one railway in which the conductors are arranged end to end, but fed from different dynamos, c being the conductor which leads the current to section C'.

C² is another railway supplied by its dynamo and provided with a turn-out C⁵.

C³ is still another electric railway, and is more or less distant; but, as in the case of the section C', it is supplied from its dynamos at the central station by conducting-wire c. By

this method great economy results in working of the system of roads, which may all be under the same management.

In the construction shown in Fig. 2 the two railways C and C² are supplied by separate dynamos at the same central station A, and the current passing to line C may be regulated by a resistance-changer D or other suitable well-known regulator. This current may be made to energize an electro-magnet d, which actuates an armature-switch lever d' to move over resistance D' to regulate the current in the railway C² in accordance with changes in railway C. The end of the railways C and C² may be united so far as mechanical operation is concerned, as shown by loop C⁴.

I do not limit myself to the details of construction, as they may be modified in various ways without departing from my invention.

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

1. In an electric railway, two or more electric railways or sections of railways in combination with a central station, and separate electric generators for each of said railways or sections of railways located in said central station, whereby the electrical source of all of the railways is concentrated at one place.

2. In an electric railway, two or more electric railways or sections of railways in combination with a central station, electric generators for each of said railways or sections of railways located in said central station, whereby the electrical source of all of the railways is concentrated at one place, and automatic current-regulating devices controlled by the current in one of said railways to regulate the current in the other railways to keep the current in the respective railways or sections of railways relatively constant.

3. The combination of a central station, an electric railway terminating at said central station, a second railway or section or railway located at a distance from said central station, separate dynamo-electric machines located in said central station for each of said railways or sections of railways, and supply-

conductors from one or more of said dynamos to one or more of said distant railways or sections of railways.

4. The combination of two lines of electric railways arranged end to end, so that a car may run from one railway onto the other, a curved portion of railway whereby the two lines of railways may be arranged out of the same straight line, a central station, a separate generator of electricity in said central station for each of said railways, and connecting-circuits between said generators and the conductors of the two lines of railways.

5. The combination of the conductors C and C² of two railways, separate generators for each of said railways located close together, an electro-magnet \bar{d} , energized by the current flowing in the conductors C, a switch-lever \bar{d}' , actuated by said magnet, and a variable resistance \bar{d}^2 in the other conductor C², controlled by said switch-lever.

6. The combination of the conductors C and C² of two railways, separate generators for each of said railways located close together, a resistance-changer D in the conductors C, an electro-magnet \bar{d} , energized by the current flowing in the conductors C, a switch-lever \bar{d}' , actuated by said magnet, and a variable resistance \bar{d}^2 in the other conductors C², controlled by said switch-lever.

7. The combination of two line-conductors of two electric railways, separate generators

for said conductors located near together, and regulating devices common to both of said railways to maintain a constant relation between the currents flowing in both line-conductors.

8. In an electric railway, a line-conductor divided into sections arranged end to end to form a mechanically-continuous conductor, a central station, a supply-conductor connecting the distant sections with the central station, and a separate generator of electricity for each of said sections.

9. The combination of a central station, an electric railway terminating at said central station, a second railway or section of railway located at a distance from said central station, separate dynamo-electric machines located in said central station for each of said railways or sections of railways, and supply-conductors from one or more of said dynamos to one or more of said distant railways or sections of railways, and in which the dynamo-electric machine of one section or railway has no electric connection with any other section or railway.

In testimony of which invention I hereunto set my hand.

RUDOLPH M. HUNTER.

Witnesses:

BUTLER KENNER HARDING,
E. M. BRECKINREED.