

(No Model.)

2 Sheets—Sheet 1.

C. M. YOST.
CONDUIT SYSTEM.

No. 533,836.

Patented Feb. 5, 1895.

Fig. 3.

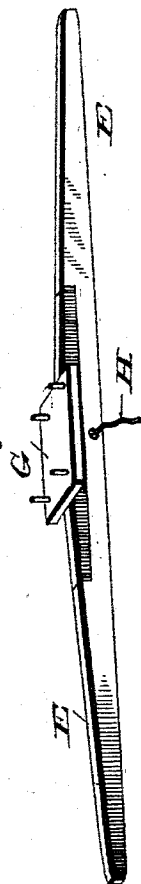
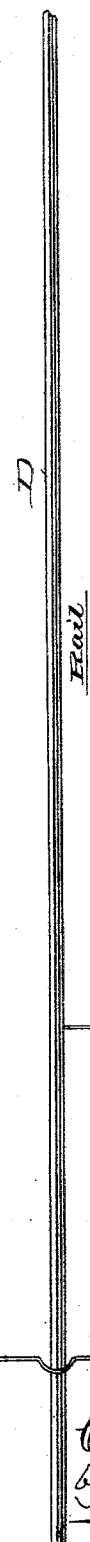
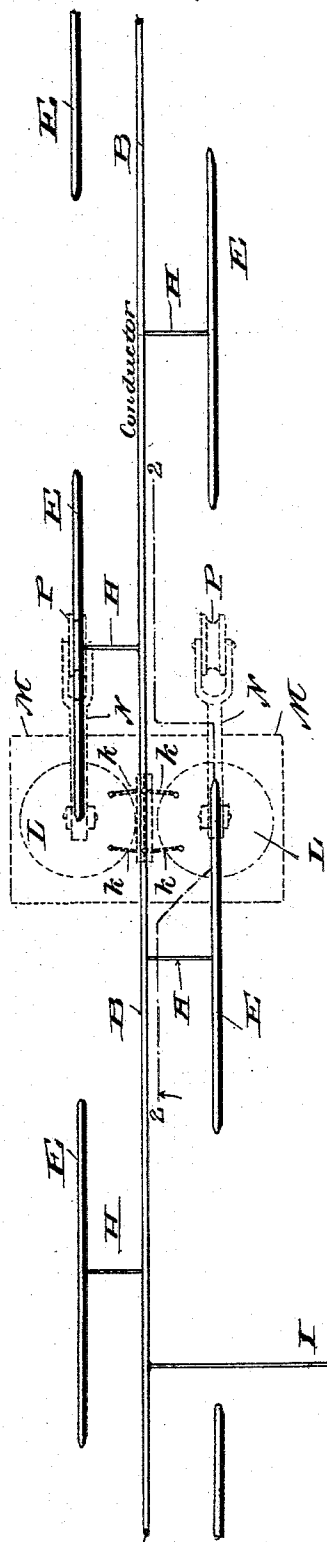


Fig. 1.



Witnesses:
L. C. Hills.
A. L. Hough

Inventor:
Charles M. Yost
by Franklin H. Hough
Att'y

(No Model.)

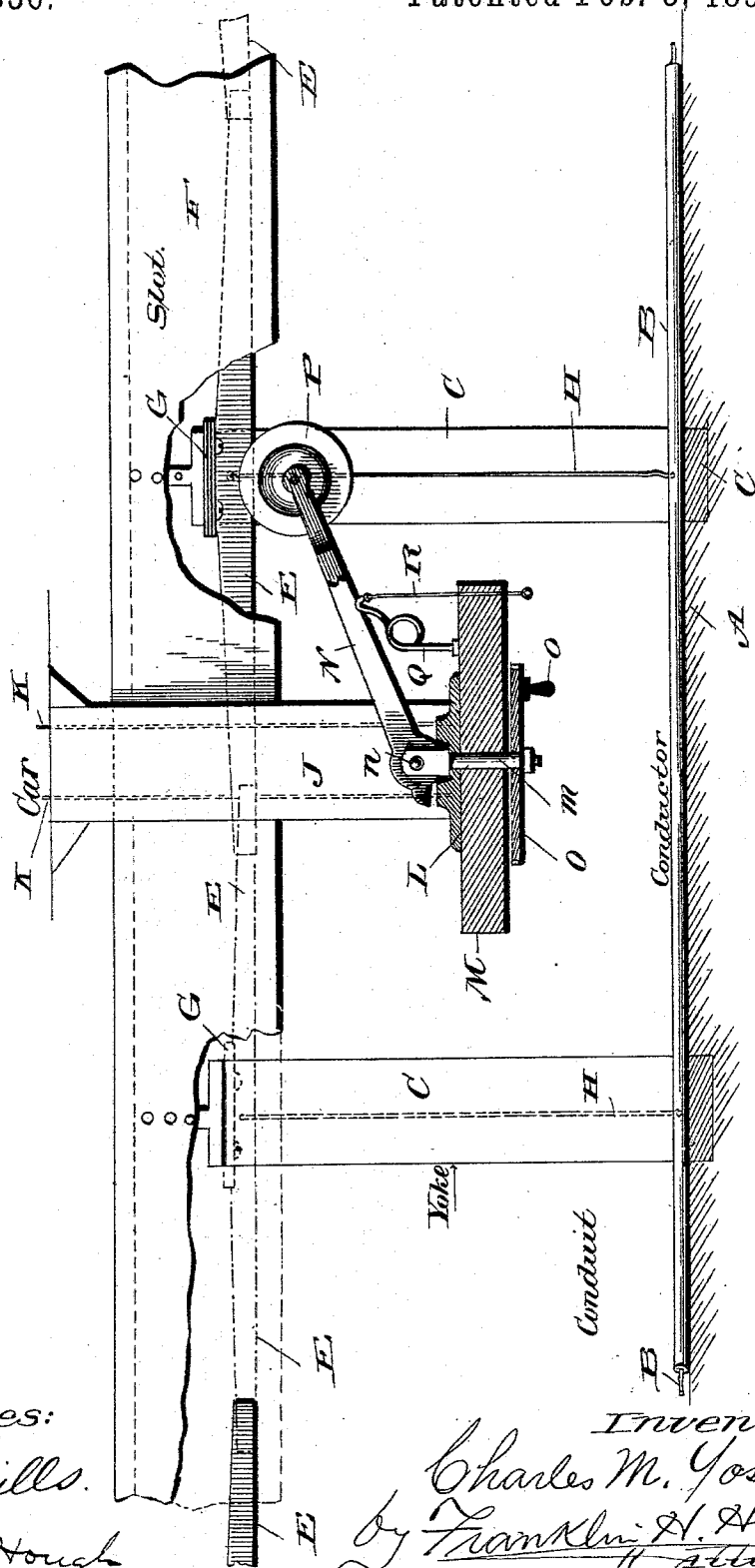
2 Sheets—Sheet 2.

C. M. YOST.
CONDUIT SYSTEM.

No. 533,836.

Patented Feb. 5, 1895.

Fig. 2.



Witnesses:

L. C. Mills.

A. L. Hough

Inventor:

Charles M. Yost,

by Franklin H. Hough
Atty.

UNITED STATES PATENT OFFICE.

CHARLES M. YOST, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF FORTY-ONE EIGHTIETHS TO GABRIEL EDMONSTON, LEMUEL F. BURNER, AND GEORGIANNA T. KING, OF SAME PLACE.

CONDUIT SYSTEM.

SPECIFICATION forming part of Letters Patent No. 533,836, dated February 5, 1895.

Application filed November 3, 1894. Serial No. 527,829. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. YOST, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Underground Electric-Railway Systems; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in electric railway systems of that class in which provision is made for the charging of that portion of the line only upon which the car is traveling. It has for its objects among others to provide a simple and cheap yet durable and efficient arrangement whereby alternately arranged conductors are employed and so connected that the trolleys which are in pairs will alternately contact with and travel upon the said conductors, the one contacting with its conductor before the other trolley has left the one upon which it has been traveling. The novelty in the present instance resides in the system or arrangement of the conductors and connections, the trolley and the manner of mounting of the same forming the subject matter of a companion application of even date herewith. Such portions only of the latter as are requisite to a proper understanding of the system are herein illustrated.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a diagrammatic plan view of a section of a track sufficient to show the application of my invention. Fig. 2 is a vertical longitudinal section, on an enlarged scale, the section being taken on the line 2—2 of Fig. 1, looking in the direction of the arrow. Fig. 3

is a perspective detail of one of the conductors and its attaching plate.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the bottom of the conduit in which is laid the insulated conductor B.

C are the yokes and D the rails.

E are separated conductor bars arranged within the conduit upon opposite sides of the central slot F, these conductor bars being alternately arranged as shown best in Fig. 1 but with their ends overlapping as seen in Figs. 1 and 2. They are each provided with a plate G which is secured to the yoke in proper proximity to the slot and each of these conductor bars is connected by conductor H with the main conductor B, and the conductor B is connected with the positive pole of the source of power at the power station as represented at I.

J is the trolley-supporting bar depending from the car and working through the slot F as shown. This bar or plate has extending vertically therethrough the insulated conductors K and at their lower ends these conductors are extended laterally as shown at L and are connected with the disks M on the plate N which is rigid with the plate or bar J, and on each side of the slot is pivotally mounted on this plate a trolley-wheel supporting arm O. This arm is mounted on the horizontal pivot shaft P held in the upper end of the swivel post or shaft Q which passes through the plate and disk as shown in Fig. 2 and fast upon the lower end of each swivel post or shaft is a pinion R one of which is provided with an insulated handle or knob S, the two pinions or gears being in mesh so that the turning of one will turn the other. The free end of the arms N are bifurcated and have journaled therein a trolley wheel P designed to travel upon the conductor bars E as seen in Figs. 1 and 2. The trolley arm N is supported yieldingly upon a spring Q mounted upon the plate M and adapted to be pulled down when desired to swing the trolley wheel around, by means of a cord or chain R as shown in Fig. 2. The construction and arrangement of this trolley

and its support forms no part of this invention, however, it being here described in order to afford a better understanding of the invention.

5 S is the return wire from the rail to the power station, as shown in Fig. 1.

With the parts constructed and arranged substantially as above described the operation will be readily understood. The conductor bars are charged from the main conductor B. The one trolley travels on one of these bars while the other trolley wheel is idle. The conductor bars overlap so that the one wheel will contact with its bar just at the moment the other is leaving the one upon which it has been running.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

20 I deem it important that the conductor bars E be fixedly supported instead of mounted upon swinging arms as has been proposed, for the reason that my arrangement is much cheaper, there is no danger of the system becoming inoperative by reason of the sections failing to rock when required so to do, and there is less wear than where the conductor sections are continually being thrown into con-

tact with each other. It is also deemed important that the conductor bars be arranged 30 as shown, that is, with a space between each two bars nearly equal to the length of the bar, whereby a great saving of material is effected over those forms where the rails or bars are practically continuous with alternating sections insulated as has been proposed. The bars being thus arranged and fixedly secured, also does away with the switches necessary in those forms where the bars are spaced, but are pivotally mounted, or as has heretofore 40 also been proposed.

What is claimed as new is—

The combination of the main conductor, alternately-arranged fixedly-mounted conductor bars having an independent connection 45 with the main conductor and arranged with their ends overlapping, and a separate plate for each bar by which it is secured in proper position with relation to the slot, substantially as specified.

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

CHARLES M. YOST.

Witnesses:

L. F. BURNER,

GEO. K. FINCKEL.