

(No Model.)

O. F. EVANS.  
TROLLEY WIRE SUPPORT.

No. 474,375.

Patented May 10, 1892.

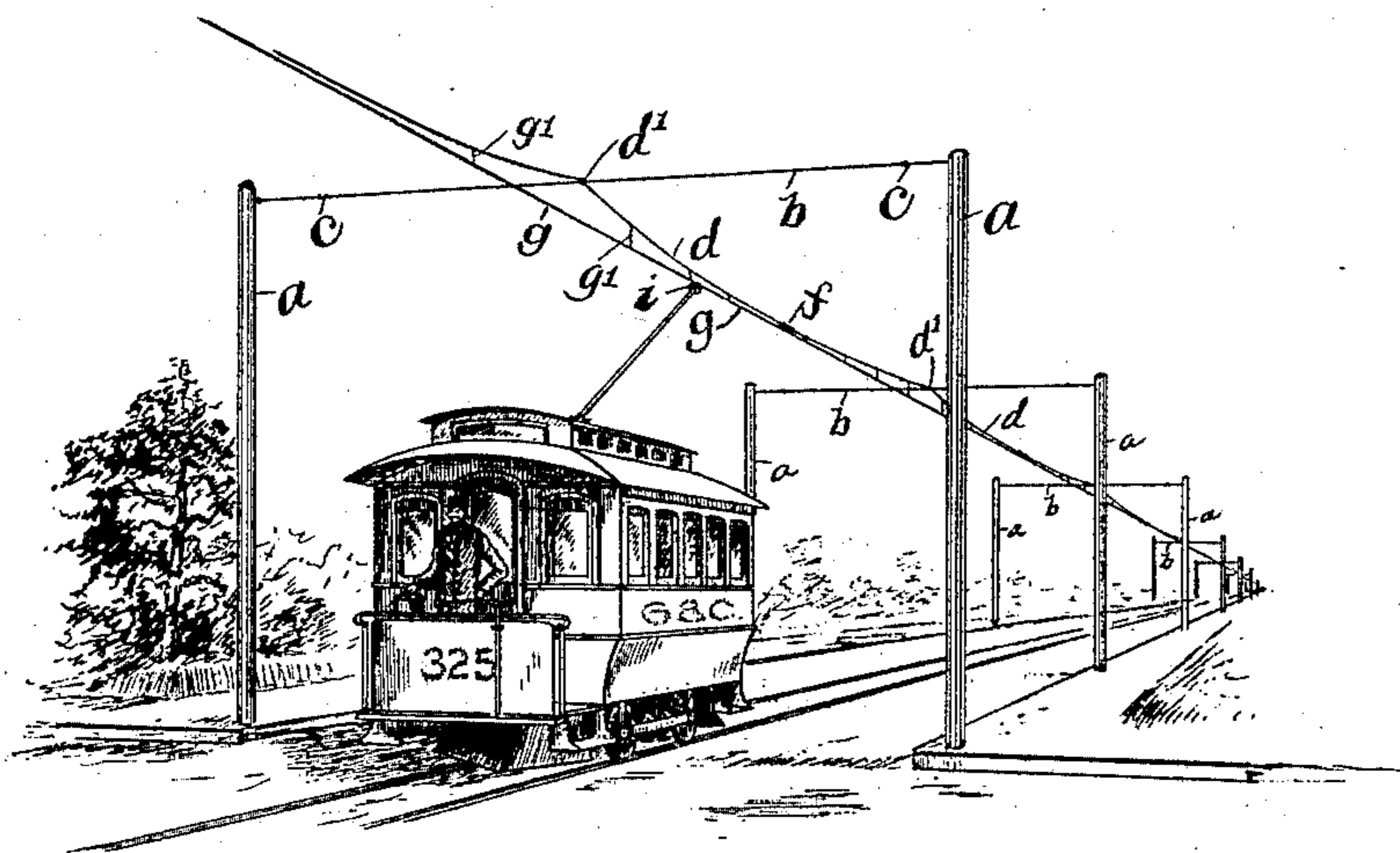


Fig. 1

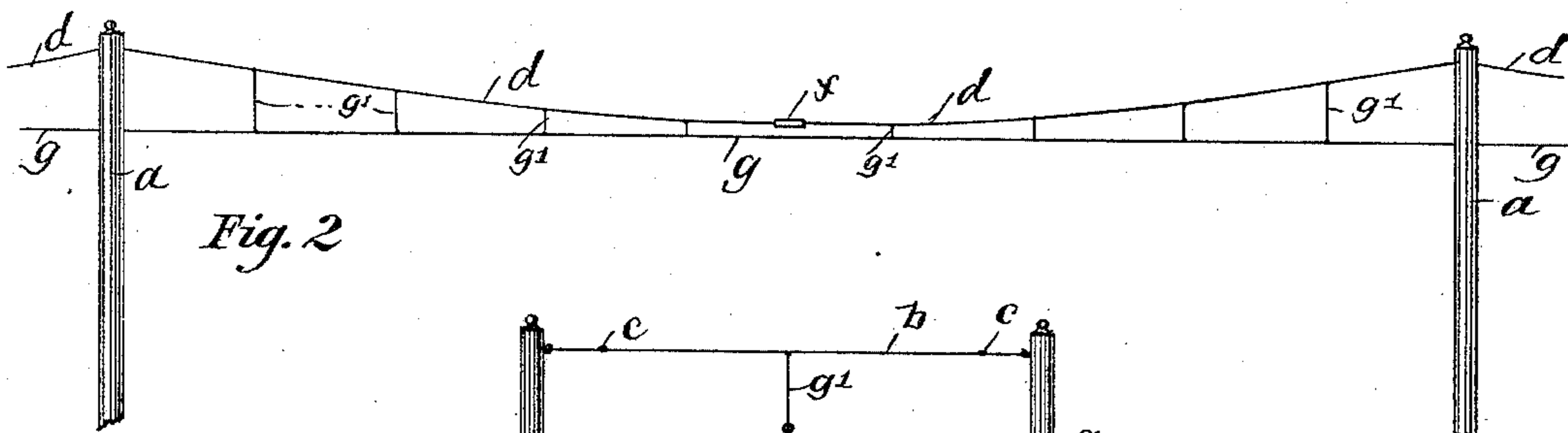


Fig. 2

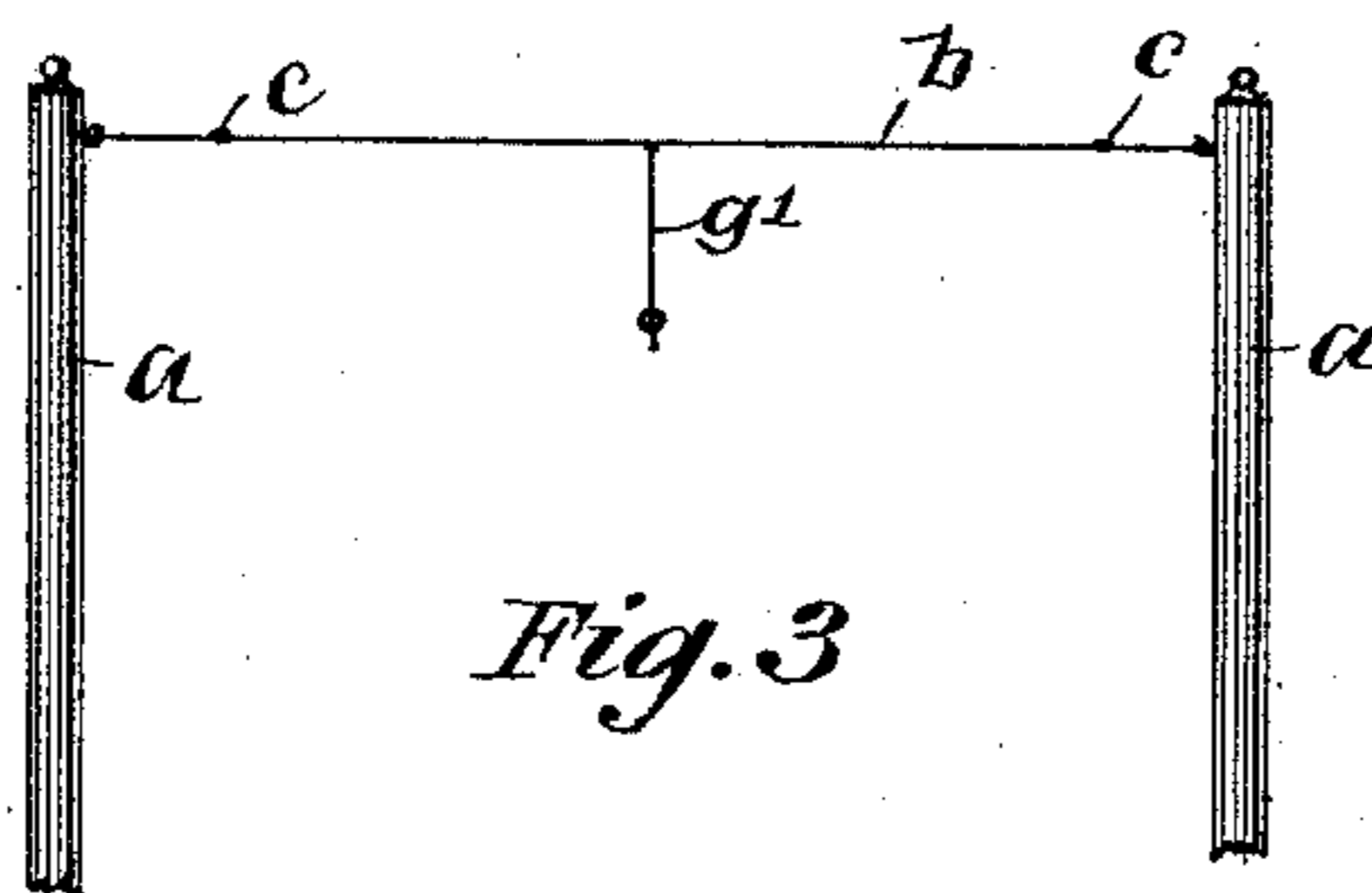


Fig. 3

WITNESSES:  
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# UNITED STATES PATENT OFFICE.

OWEN F. EVANS, OF COLUMBUS, OHIO, ASSIGNOR OF ONE-FOURTH TO  
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## TROLLEY-WIRE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 474,375, dated May 10, 1892.

Application filed January 24, 1891. Serial No. 378,971. (No model.)

*To all whom it may concern:*

Be it known that I, OWEN F. EVANS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Trolley-Wire Supports for Electric Railways, of which the following is a specification.

My invention relates to trolley or track wire supports for electric railways; and its objects are to provide a superior support of this class the arrangement of which will admit of the employment of a comparatively small number of poles placed at comparatively long distances apart, thus doing away to a great extent with a well-known objectionable feature in electric railways.

A further object of my invention consists in employing the electric conducting-wire as a support for the trolley-wire, and thus arrange said wires in a neat and compact manner.

These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of an electric-railway line showing my improved wire-support. Fig. 2 is a side elevation showing the upper portion of two poles and my improved wire-support, and Fig. 3 is a transverse view at right angles with that shown in Fig. 2.

Similar letters refer to similar parts throughout the several views.

*a* represents the poles, which, as shown, are of the ordinary telegraph-pole form, and which for convenience of use with my improvements are somewhat taller than the poles ordinarily used. Between the upper end portion of each pair of poles is stretched a transverse wire or cable *b*, which may be insulated from the poles at the points of connection therewith or by insulation in the cross-wires, as shown at *c*. To the centers of these cross-wires *b* is secured an electric conducting and supporting wire *d*, which, as shown, is allowed to sag slightly between its points of suspension *d'* to form between each of said points a truss-wire. The suspension or truss wire *d* is preferably broken at its slow points between the cross-wires, and the ends

thereof connected by any desirable form of turnbuckle *f*.

*g* represents the trolley or track wire, against which the trolley *i* of the car runs in the usual manner. This trolley-wire is suspended horizontally from the wire *d* by short vertical suspension hanger-wires *g'*, which depend from the upper wire *d* at intervals, and which are of such varying lengths as to support the trolley-wire in the desired horizontal position. The upper wire *d* is also utilized as an electric supply-wire, the current being supplied to the trolley-wire through the hangers *g'*. By this arrangement it will be seen that the use of double lines of wires ordinarily occasioned by the employment of a supply-wire at one side of the roadway is obviated.

It is well known that a sagging suspension-wire suspended between two points is capable of supporting a comparatively great weight, and by thus supporting the trolley-wire it will be seen that I am enabled to not only suspend the trolley or track wire in the desired horizontal position, but that this may be accomplished by making the attaching-points of the suspension and supply wire at long intervals. It will thus be seen that this mode of suspending the trolley-wire will result in doing away with a large number of the poles ordinarily employed in the construction of electric railways, and that this omission of poles will go far toward overcoming a well-known objection of electric-car lines in cities.

The sagging of the suspension-wire may be taken up or let out, as desired, by turning the turnbuckle *f* and drawing the connecting ends of the wire inward or letting them out in the well-known manner.

It will be observed that the compact arrangement of the trolley and supply wires and the comparatively small number of poles arranged long distances apart cannot but greatly add to the appearance of electric-railway lines and lessen the obstruction of the street thereby.

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

In a wiring for electric railways, the com-

5 bination, with the poles arranged in pairs, pole-connecting wires *b*, and suspension-wire *d*, charged with electricity and connecting wires *b* by sagging spans, each of said spans being provided with an intervening turnbuckle, as described, of the horizontal trolley-wire suspended from said suspension and supply wire

by conducting and supporting wires *g'* of varying lengths, substantially as and for the purpose specified.

OWEN F. EVANS.

In presence of—

C. C. SHEPHERD,  
BARTON GRIFFITH.