

No. 693,351.

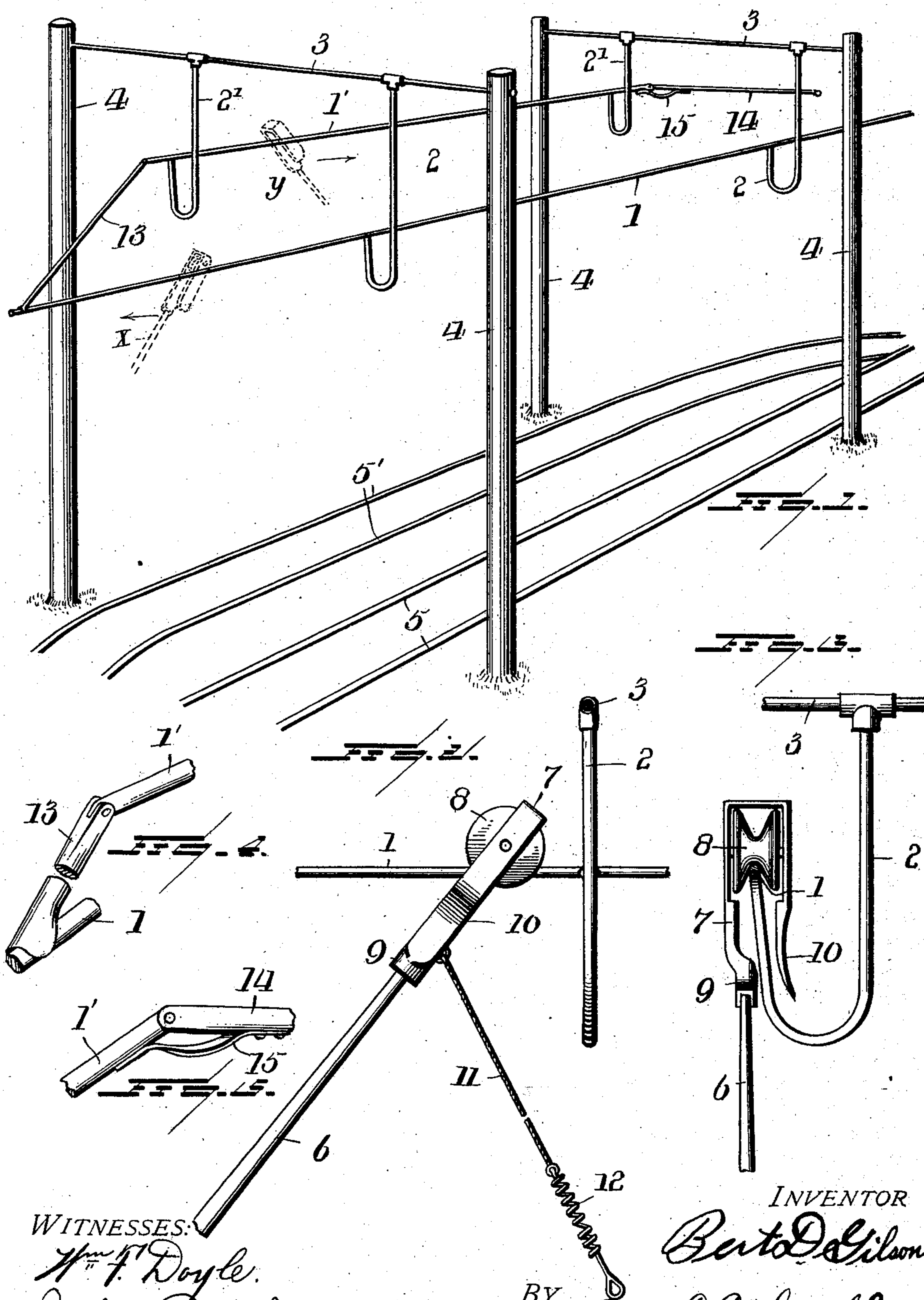
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B. D. GILSON.

OVERHEAD TROLLEY ELECTRIC RAILWAY.

(Application filed June 8, 1901.)

(No Model.)



WITNESSES:

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BERT D. GILSON, OF ALEXANDRIA, INDIANA.

OVERHEAD-TROLLEY ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 693,351, dated February 11, 1902.

Application filed June 3, 1901. Serial No. 62,962. (No model.)

To all whom it may concern:

Be it known that I, BERT D. GILSON, a citizen of the United States, residing at Alexandria, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Overhead-Trolley Electric Railways; and I do hereby 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.

My invention relates to certain new and useful improvements in overhead-trolley electric railways, and has for its object to produce a system by which the liability of the trolley leaving the trolley-wire is entirely avoided and the inconvenience and danger consequent thereto are obviated.

Another object of my invention is to provide such a system with sidings at which the cars passing in one direction automatically have their trolleys switched from the main trolley-wire onto a supplementary trolley-wire and back again, while those traveling in the other direction have their trolleys retain the main trolley-wire without interruption.

With the above and other objects in view my invention further consists in the novel details of construction and combination of parts to be clearly described in the following specification and fully set forth in the claim.

Referring to the accompanying drawings, forming a part of this application, and in which like characters of reference indicate similar parts throughout the several views, Figure 1 is a perspective view of a section of an overhead-trolley railway system embodying my improved construction and showing a portion of the main track, together with a switch-siding. Fig. 2 is a side elevation of a portion of the trolley-wire and its hanger and the trolley engaged therewith. Fig. 3 is a front elevation of the same. Fig. 4 is an enlarged perspective view of the drop-switch for a siding, and Fig. 5 is an enlarged perspective view of a spring-switch for a siding.

In the drawings, 1 represents the main trolley-wire suspended, by means of gooseneck hangers 2, from cross-rods 3, mounted between pairs of oppositely-disposed supporting-poles 4 on either side of the tracks 5.

6 is a trolley-arm carrying on its end the

head 7, which consists of a yoke, between the arms of which is journaled a trolley-wheel 8, adapted to travel on top of the trolley-wire 1. The yoke 7 is U-shaped, with its two arms extending downward and one having a socket 9 to receive the end of the trolley-arm 6 and the other curved outward to form a free tongue 10, which is adapted to pass on the inside of the gooseneck hanger 2, as shown in Fig. 3, and normally acts to prevent the trolley-wheel leaving the wire. A cord 11, containing a spiral spring 12, is connected to the trolley-head 7 and is attached to the car (not shown) in the usual manner and serves to draw the trolley-wheel tightly down upon the trolley-wire to insure constant engagement therewith.

From the foregoing it will be seen that with a construction as described the trolley-wheel rides above the trolley-wire, bearing constantly thereon, and is prevented from all possibility of becoming accidentally disengaged by means of the two depending arms of the yoke, which are, however, free from striking the hangers by having between them sufficient space through which said hangers may pass.

It is well understood that with single-track roads it is necessary to provide sidings at regular intervals to enable the cars traveling in one direction to pass those traveling in the other direction, and it is customary that the cars traveling in one direction be given the right of way—that is, that they should have the privilege of continuing straight through on the main track, while those traveling in the other direction are required to turn out on the sidings. To provide for this feature, I arrange a siding as shown in Fig. 1, in which 5' represents the siding or switch track arranged in the usual manner, with switches at each end (not shown) connecting it with the main track and a supplemental trolley-wire 1' centrally over the same and suspended from the cross-rods 3 by the gooseneck hangers 2' at a considerably higher level than the main trolley-wire 1. At the forward end of the short section of the supplementary trolley-wire 1' is pivoted, by a pin connection through its upper bifurcated end, an inclined trolley-switch 13, having its lower end flattened and curved to form side flanges em-

bracing the main trolley-wire 1. By this construction a trolley traveling on the main wire toward the left, as shown in Fig. 1 in dotted lines by x , would simply run beneath the switch 13, lifting it up from the trolley-wire 1 until having passed, when the switch would again return to the trolley-wire by its own weight and resume its normal position; but a trolley traveling to the right, as shown in dotted lines by y , would leave the main trolley-wire 1 on coming into engagement with the lower end of inclined switch 13 and travel upward and laterally onto the siding trolley-wire 1', and the track-switches having been set in the meantime by any usual means the car would be caused to take the siding without losing its connection with the source of electrical supply. At the farther end of the supplementary trolley-wire 1' there is located a trolley-switch 14, similar in all respects to trolley-switch 13, with the exception that it has connected therebeneath a strap-spring 15, bearing on the under side of the trolley-wire 1', so as to normally hold said switch 14 elevated from and out of contact with the main trolley-wire 1. By this arrangement the trolley traveling in the direction of x would pass beneath the switch 14 without engagement; but the trolley y on the siding would descend said switch 14, and its downward tension caused by its spring 12 would depress said switch 14 into engagement with the main trolley-wire 1, and so the trolley y would be lead back upon the main trolley-wire 1 at the same time that the car is returning to the main track.

The operation of a system embodying my improved construction is obvious, the cars traveling in one direction having their trolleys automatically switched upon a supplementary trolley-wire as the car turns into the

siding and again automatically returned to the main trolley-wire as the car passes off the siding and the cars traveling in the other direction having their trolleys retain the main trolley-wire without being disturbed.

What I claim as new, and desire to secure by Letters Patent, is as follows:

In a device of the character described, a main track, a siding therefor, posts arranged in pairs on opposite sides of the track and siding, cross-rods connecting the posts of each pair, a main trolley-wire suspended by gooseneck hangers from the cross-rods and located centrally over the main track, a supplementary trolley-wire also suspended by gooseneck hangers from the cross-rods but located centrally over the siding and at a greater elevation than the main trolley-wire, a gravity-switch pivoted at one end of the supplementary trolley-wire and having its end flattened with depending side flanges to normally engage the main trolley-wire, a similar-shaped switch pivoted at the other end of the supplementary trolley-wire, a spring holding said second-named switch normally elevated, in combination with a spring-pressed trolley-arm, a yoke thereon having depending arms embracing the trolley-wire, and a trolley-wheel journaled in the yoke and bearing on the top of the trolley-wire, said trolley-wheel being adapted to ride upon the first-named switch when the car takes the siding and to descend to the main trolley-wire by the second-named switch when the car returns to the main track.

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

BERT D. GILSON.

Witnesses:

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W. M. SHUMACK.