

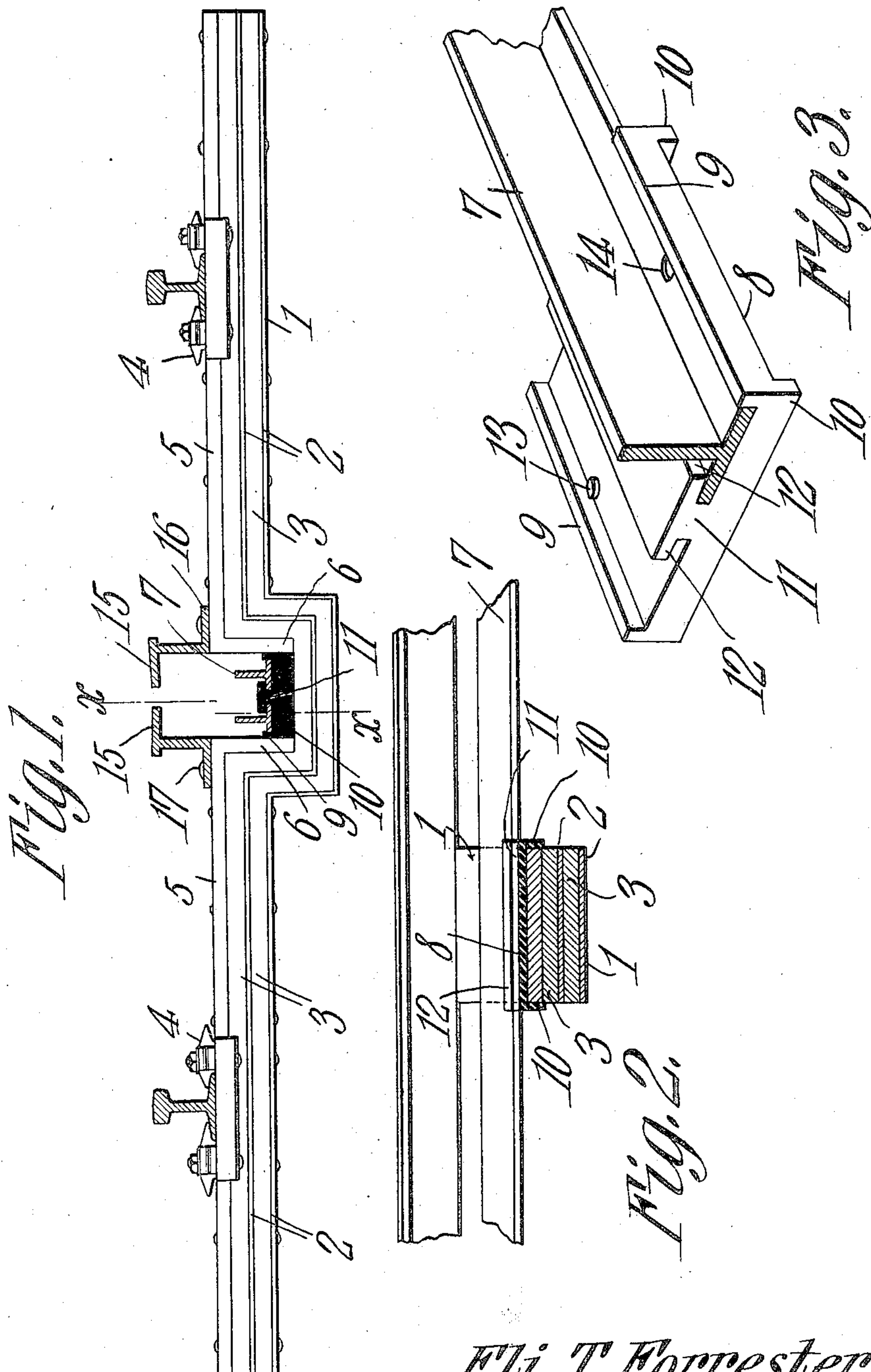
No. 875,057.

PATENTED DEC. 31, 1907.

E. T. FORRESTER.

RAILWAY TIE.

APPLICATION FILED JUNE 29, 1907.



WITNESSES:

E. T. Forrester
Herbert D. Lawson

Eli T. Forrester,
INVENTOR.

By *C. A. Snow & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ELI T. FORRESTER, OF WASHINGTON, DISTRICT OF COLUMBIA.

RAILWAY-TIE.

No. 875,057.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed June 29, 1907. Serial No. 381,462.

To all whom it may concern:

Be it known that I, ELI TAYLOR FORRESTER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented a new and useful Railway-Tie, of which the following is a specification.

This invention relates to railway ties and more particularly to devices of this character for use in connection with electric railway systems in which the conductors of electricity are located below the cars.

The object of the invention is to provide a combined tie and yoke both of which are of the composite or cushion form such as disclosed in Patent #810,200, granted to me on January 16, 1906.

A still further object is to provide simple and efficient means for securing the conductor rails in the yoke portion of the tie, said fastening means being disposed to insulate the rails.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is an elevation of a tie embodying the present improvements, the rails being shown in section. Fig. 2 is a section on line $x-x$, Fig. 1. Fig. 3 is a detail view of the insulating support and rail fastening means.

Referring to the figures by characters of reference, 1 designates the body of the tie which, as disclosed in my patent before mentioned, is made up of superposed metallic strips 2 having cushioning material 3 interposed between them. Suitable rail fasteners 4 are arranged upon the top plate 5 of the tie and are designed to securely hold rails in position on the tie. These fasteners do not constitute any portion of the present invention.

The middle portion of the tie is extended downward to form a yoke 6 preferably rectangular in form and designed to receive the conductor rails 7 such as ordinarily used in connection with electric railway systems. Resting upon the bottom of the yoke 6 is an insulating support comprising a base 8 having upstanding side flanges 9 designed to fit snugly against the sides of the yoke. Downwardly extending end flanges 10 are formed integral with the base and are disposed to

lap opposite faces of the yoke so as to hold the base 8 against longitudinal displacement. A rib 11 is formed longitudinally along the center of the base 8 and has laterally extending retaining flanges 12. Stop lugs 13 extend upward from the base close to the flanges 9 and are disposed to fit within notches 14 formed in the rails 7. L-shaped slot rails 15 are disposed upon the tie at opposite sides of yoke 6 and have base flanges 16 designed to be fastened by means of screws 17 or in any other suitable manner to the tie.

As shown in the drawings the conductor rails are preferably T-shaped. In assembling the parts the conductor rails are slipped under the flanges 12 and swung downward so that the lugs 13 will rest within the notches 14. This is permissible in view of the fact that sufficient play is allowed to enable the rails to be tilted between the flanges 9 and 12. After the rails are once in position they can not become displaced because they will rest by gravity on the bases 8 and are, of course, connected together at their ends to form a continuous conductor. It is of course to be understood that the bases 8 are placed in position in the yokes before the rails are fastened to them and before the slot rails are secured to the ties.

By constructing the parts in the manner herein described it becomes necessary to utilize the clumsy and heavy yokes such as ordinarily employed.

Although the device is particularly designed for use in connection with urban railways it can also be used advantageously in connection with mine railways and in connection with the ordinary rails of steam railway systems. In other words, it becomes possible with the present invention, to convert a steam railway system into an underground electric railway system at the minimum expense.

It is to be understood that the base 8 and the parts integral therewith can be formed of any suitable insulating material such as porcelain and the like. The lugs 13 upstanding therefrom serve to hold the rails 7 in proper relation to the base.

Although the invention has been described as utilizing a composite or cushioned tie structure it is to be understood that the tie may be of any other preferred form if desired.

It will of course be obvious that the

invention can be used in connection with various forms of railways whether or not the same be overhead, underground, or surface systems.

5 What is claimed is:

1. A railway tie having an angular depressed portion constituting a yoke, an insulating device resting upon and detachably engaging the bottom of the yoke, a conductor and means integral with said device for engaging the conductor.
2. A railway tie having an angular depressed portion constituting a yoke, an insulating base bearing upon the yoke, means integral with the base and engaging the yoke to prevent displacement of the base, a conductor, and means integral with the base for engaging the conductor.
3. A railway tie having a depressed portion constituting a yoke, angular slot rails secured upon the tie adjacent opposite sides of the yoke, a conductor, and insulating means within and detachably mounted upon the yoke for engaging the conductor.
4. A railway tie having a depressed portion constituting a yoke, an insulating base within and bearing upon the bottom of the yoke, retaining flanges depending from the base and lapping the bottom of the yoke, a conductor, and means upon the base for engaging the conductor

5. A railway tie having a depressed portion constituting a yoke, an insulating base detachably engaging the bottom of the yoke, a longitudinal rib upon the base, laterally extending flanges integral therewith, a conductor, and side flanges cooperating with the lateral flanges to retain the conductor upon the base.

6. A railway tie having a depressed portion constituting a yoke, an insulating base detachably engaging the bottom of the yoke, a longitudinal rib upon the base, laterally extending flanges integral therewith, side flanges cooperating with the lateral flanges to retain a conductor upon the base, and means upon the base for holding the conductor and base against independent longitudinal movement.

7. A railway tie having a depressed portion constituting a yoke, said tie including a cushioning means extending throughout the length thereof and in the walls and bottom of the yoke.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ELI T. FORRESTER.

Witnesses:

E. HUME TALBERT,
FLORA E. BRIGGS.