(No Model.) 2 Sheets—Sheet 1.

A. T. FAY.

ELECTRIC RAILWAY CONDUIT.

No. 522,460. Patented July 3, 1894.

Fig. 1.

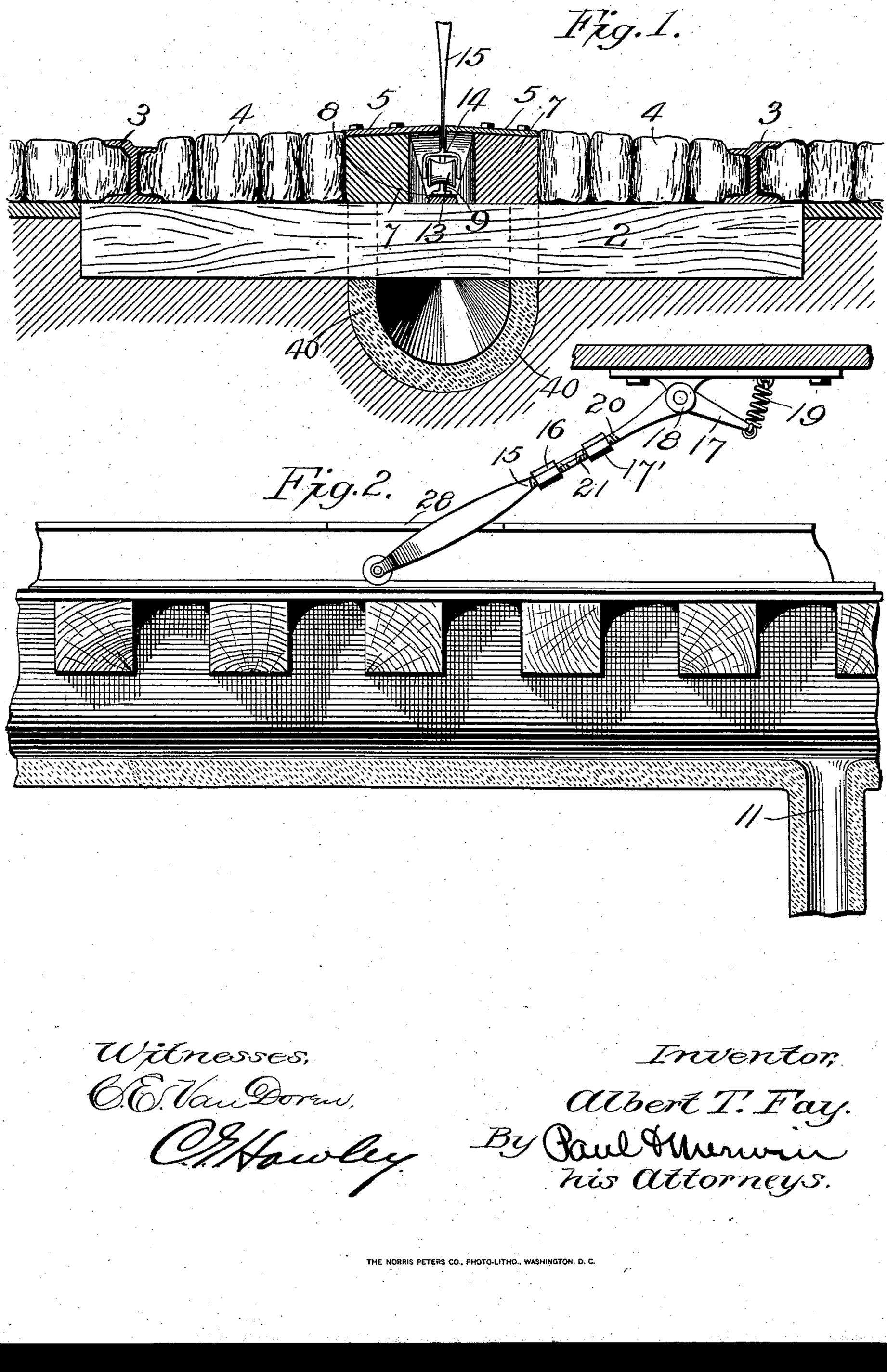

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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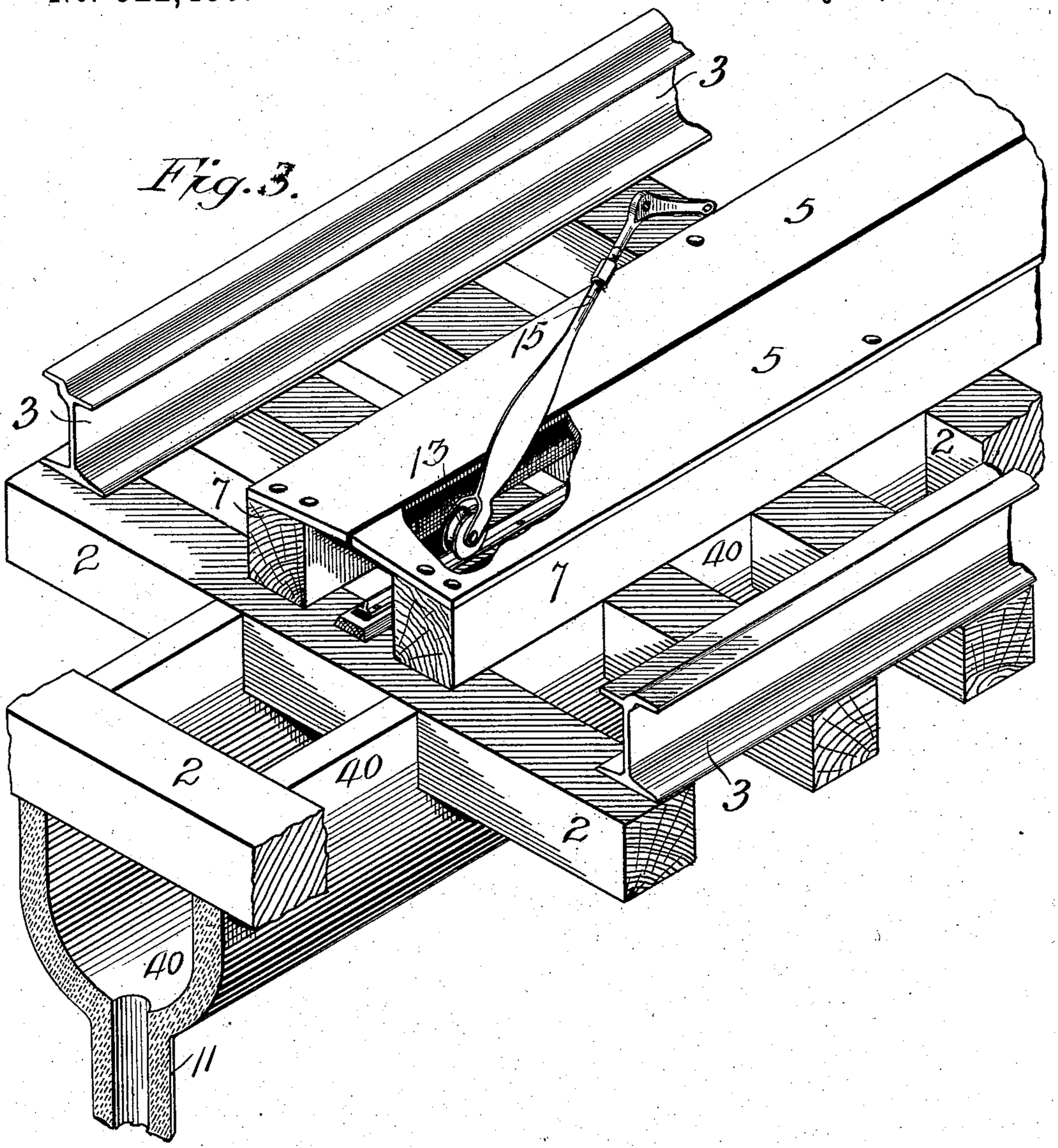
ELECTRIC RAILWAY CONDUIT.

No. 522,460. Patented July 3, 1894.

Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT T. FAY, OF MINNEAPOLIS, MINNESOTA.

ELECTRIC-RAILWAY CONDUIT.

SPECIFICATION forming part of Letters Patent No. 522,460, dated July 3, 1894.

Application filed April 15, 1892. Renewed November 16, 1893. Serial No. 491,161. (No model.)

To all whom it may concern:

Be it known that I, ALBERT T. FAY, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Underground Conduits, of which the following is a specification.

My invention relates to an underground conduit for electric street railways and its object is to greatly simplify the construction of such conduits and to lessen their cost.

To this end my invention consists in the combination with the rails and the ties whereon the same rest, of stringers or beams resting upon said ties, the space above the same being closed by surface plates so arranged as to leave a continuous slot for the accommodation of a trolley arm. Beneath the ties and midway between the rails I provide an artificial stone trough, the upper walls of which extend upward between the several ties and join with the under sides of said stringers thereby leaving an opening between each two ties, and of a width equal to the distance between the inner walls of said trough or the lower part of the conduit.

The invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a cross section of a street car track provided with an electric conduit embodying my invention. Fig. 2 is a longitudinal vertical section thereof, and Fig. 3 is an enlarged isometric view showing more clearly the detail construction of the conduit.

As shown in the drawings, 2 represents the cross-ties upon which the street car rails are secured.

4 represents the pavement which arches toward the middle of the track and is completed at the middle by oppositely inclined surface plates 5 arranged so as to form a narrow slot between their inner edges. These plates are made in sections so that any portion of the conduit top may be readily removed to repair the inside thereof. The plates are supported upon the inclined tops of the stringers 7 between which is an opening of several inches adapted to receive the insulating strips 8 upon which the electrical conductor rail 9 is laid midway between the wooden stringers 7.

In the middle of the track I make a small excavation and mold therein the concave trough or lower part of the conduit. Thus as shown plainly in Fig. 3 the upper wall 40 extends upwardly between the cross ties 2 and makes a tight joint with the under sides of the stringers 7 which are laid thereon while the concrete or like water proof material of which the conduit is made is still comparatively soft. In this manner a continuous and water tight bottom or gutter is formed beneath the small conduit proper formed between the inner walls of the stringers 7, the tops of the cross-ties and the surface-plates, large openings being left between the cross-ties for all dirt and water to fall into the lower or gutter part of the conduit, from which branch pipes 11 lead to convenient sewer connections, thus at all times completely draining the conduit and keeping all parts thereof dry.

I have shown in the drawings a peculiarly constructed trolley arm which I prefer to employ with my conduit owing to the fact that with its use the tearing up of the surface plates is prevented by virtue of a breakable joint 21 which I provide in the trolley-arm, the same being weaker than the rest of the trolley arm and held in place by internally threaded sleeves 16 and 17′ lapping over upon the threaded parts 20 of the upper and lower sections of the arm. The trolley wheel 13 secured in the yoke 14 of the arm is held in place by a spring 19 attached to the part 17 extending forward from the pivot pin 18 for the arm. This device however forms the subject matter of a separate application of mine, which application is dated July 22, 1892, and was filed in the United States Patent Office July 26, 1892, receiving the Serial No. 441,236.

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

1. The combination, in an electric conduit, of the cross ties and the rails thereon, with middle stringers resting upon said ties, surface plates arranged on said stringers, a space being left between the inner edges of said plates, an insulating strip extending parallel with said stringers and secured on the tops of the cross ties, a conductor wire or rail provided on said strip and a trolley arranged to

travel in the conduit formed between said stringers and upon said conductor, substantially as described.

2. In an electric railway conduit, the combination with the cross ties and the rails thereon, of the stringers 7 resting upon the tops of said cross ties, surface plates secured upon the tops of said stringers, a slot being left between the inner edges of said plates, a strip of insulating material arranged parallel with said stringers and on the ties an electric conductor fixed on the top of said strip, and the lower part of the conduit, openings being provided between the ties and leading into said lower part, substantially as described.

3. In an electric railway conduit, the combination with the cross-ties of the stringers 7, 7 arranged thereon, the surface plates secured on said stringers, a slot being left between the inner edges of said plates, an insulating strip provided on the cross ties and carrying a conductor wire or rail, a trolley to engage the same, and the lower part of the conduit made up of water proof material and having its upper walls extending upward between the several cross ties and joining with the under sides of said stringers, substantially as described.

4. The combination with the cross ties and the rails arranged thereon, of the middle stringers 7 arranged on the ties, an insulating strip resting on the cross ties and parallel with said stringers, the slotted top of the conduit, the trough-like lower part of the conduit having its walls made up of water proof material and joining with the cross ties and with said stringers and sewer connections extending from said lower part of the conduit, substantially as described.

In testimony whereof I have hereunto set my hand this 31st day of March, 1892.

ALBERT T. FAY.

In presence of—
C. G. HAWLEY,
F. S. LYON.