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UNITED STATES PATENT OFFICE.

PAUL STARKE, OF BERLIN, GERMANY.

TRAMWAY-TRACK.

1,038,982.

Specification of Letters Patent. Patented Sept. 17, 1912. Application filed June 3, 1919. Serial No. 701,319.

To all whom it may concern:

Be it known that I, PAUL STARKE, a subject of the German Emperor, and resident of Berlin, Germany, have invented certain new

5 and useful Improvements in Tramway-Tracks, of which the following is a specification.

The present invention relates to an improved tramway track and the object consists in that the track may be changed without injuring the concrete bed of the street.

The invention consists in that the rails are mounted on ties and laterally provided at both sides with removable separating plates 15 which allow of uncovering and releasing the

rail fastening means. The invention is shown in the accompany-

ing drawing in which:

- Figure 1 is a cross section of the improved 20 device. Fig. 2 is a corresponding longitudinal section; Fig. 3 is a cross section of the fastening means, drawn on a larger scale. As shown in the drawings, in the improved street railway track the rails a are secured,
- 25 by means of sole pieces σ , rail clips d and bolts e, onto ties b which are embedded in the street formation. Alongside the rails and on both sides, are placed isolating plates f and g covering the rail foot and connected 0 together. After that a layer of concrete his placed at each side of said plates and the street level is completed by a layer of asphalt *i*.
- For changing the track the asphalt layer is broken to an amount corresponding to the plates f and g, then said plates are withdrawn and the rails are set free and may be removed without injuring the concrete. After having put in place and secured the
- After having put in place and secured the 40 new rails to the ties b, the plates f and g are put in place again and the asphalt layer i is repaired. Owing to this arrangement the replacing of the track is much simplified and accelerated, securing an economy of time 45 and money.
 - Having now fully described my said in-

vention, what I claim and desire to secure by Letters Patent, is:

1. In a street railway track, a tie, chairs mounted on the tie, rails supported on the 50 chairs, clamps secured to the chairs, and overlapping the flanges of the rails to fasten said rails in position, plates located on opposite sides of each rail below the upper surface of the latter, each of said plates having 55 an undercut portion to receive the clamps, a layer of concrete between the inner plates of the track, and a layer of surfacing material over the plates and abutting against the rails. 60

2. In a street railway track, a layer of concrete in which the track is embedded, grooved rails, ties for supporting said rails, means for securing said rails onto said ties, and comprising a sole piece on which rests the 65 rail foot and embedded in said tie, clips on top and on each side of said rail foot and said sole piece, and bolts securing said clips and consequently said rail to said tie, removable separating plates between said con-70 crete layer and said rail, extending alongside the rail webs and covering the rail foot and an asphalt covering at level with the rail head and covering said concrete and said plates. 75

8. In a street railway track, a tie, rails supported by the tie, means on opposite sides of each rail to secure the latter to the tie, a plate located on each side of each rail below the upper surface of the latter, each of 80 the plates having an undercut portion to receive the rail securing means, a layer of concrete abutting against the plates, and a layer of surfacing material located over the plates and the layer of concrete. 85

In testimony whereof I have hereunto set my hand in presence of two witnesses.

PAUL STARKE.

Witnesses: Woldemar Haupt, HENRY HASPER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

