

G. PERKINS, SR.
CONSTRUCTION OF ROAD BEDS AND RAILROAD TRACKS.
APPLICATION FILED SEPT. 9, 1912.

1,046,635.

Patented Dec. 10, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

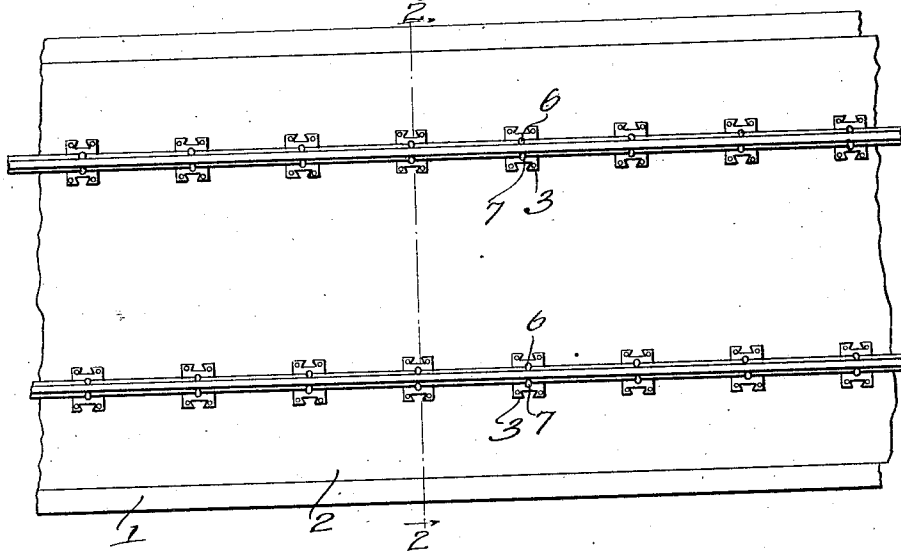


Fig. 2.

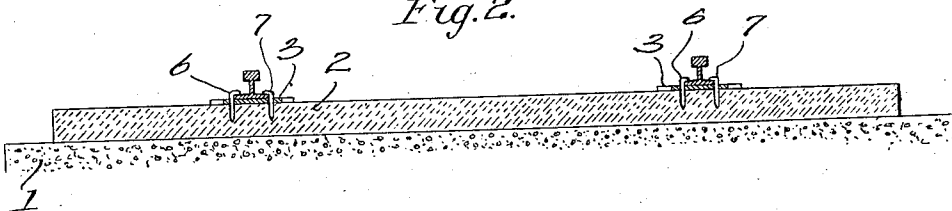
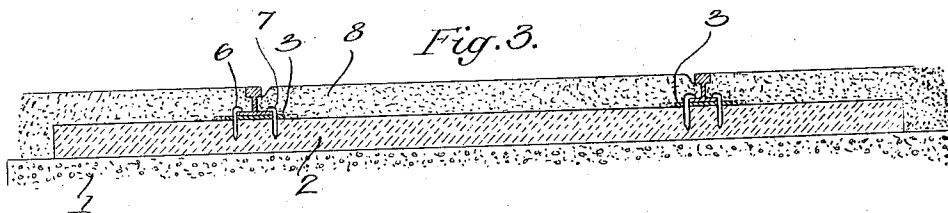


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

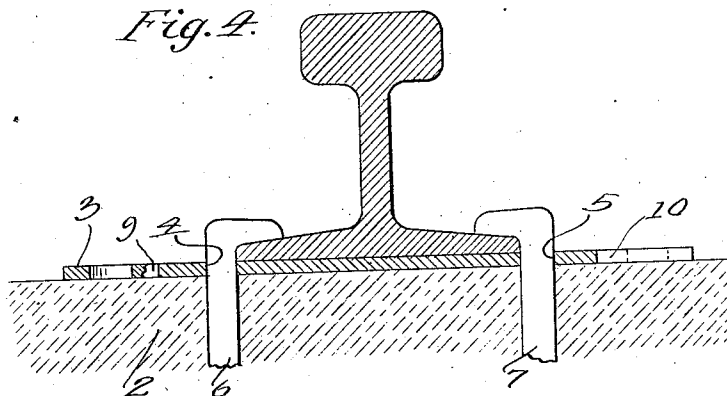


Fig. 5.

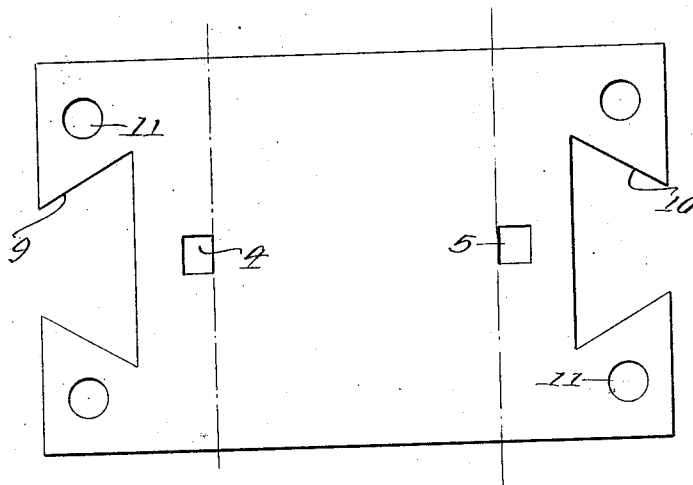
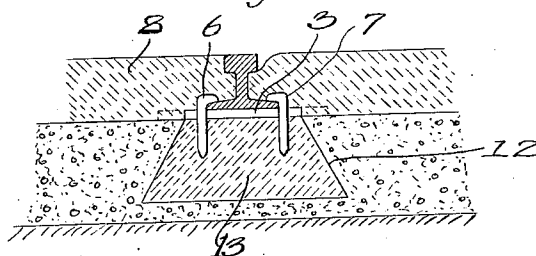


Fig. 6.



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UNITED STATES PATENT OFFICE.

GREGORY PERKINS, SR., OF LOS ANGELES, CALIFORNIA.

CONSTRUCTION OF ROAD-BEDS AND RAILROAD-TRACKS.

1,046,635.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed September 9, 1912. Serial No. 719,335.

To all whom it may concern:

Be it known that I, GREGORY PERKINS, Sr., a citizen of the United States of America, residing at Los Angeles, county of Los Angeles, and State of California, have invented new and useful Improvements in the Construction of Road-Beds and Railroad-Tracks, of which the following is a specification.

My invention relates to improvements in the construction of roadbeds and railroad tracks, and the object of my invention is to eliminate the use of any kind of tie or sleeper, and in its place construct a permanent roadbed, by using the composition known as "paving asphalt" as a bearing for, and the holding of the rails in the required position. It may be noted that paving asphalt is heavy, tough, adhesive, practically non-compressible, its volume is very slightly varied by contraction and expansion, is scarcely affected by abrasion, is practically waterproof, and a non-conductor of electricity, the latter quality being of great importance in the construction of roadbeds and tracks for electric railways.

A point of great importance in my invention, is the realization of an exact and permanent surfacing of the rail bearings, and, consequently, giving the rails a continuous and equal support in every lineal inch of their length, which provides for the smooth and almost noiseless running of the cars, as well as preserving an even surface of the street, and a great saving in wear of rolling stock.

By my method of construction, it is practically impossible for the rails to become loose, spread or creep, as a layer of paving asphalt on which the rails rest, and to which they are fastened by spikes, is made to adhere to the foundation of concrete by coating the latter with liquid asphalt before the first layer of paving asphalt is laid, and as before the upper or surface layer of paving asphalt is laid, the bearing plates, spikes and both sides and the under sides of the rails are painted with liquid asphalt, the resultant effect is the adhesion of both layers of paving asphalt to every part of the bearing plates, and to the rails, and the formation of a solid compact mass from the foundation to the surface of the street.

Referring to the drawings which form a part of the specification, Figure 1 is a plan

view of a section of track laid in accordance with my invention, before the top layer has been applied. Fig. 2 is a cross section taken upon the line 2—2 of Fig. 1. Fig. 3 is a view analogous to Fig. 2, with the top layer applied to the street level. Fig. 4 is an enlarged cross section of a rail and bearing plate. Fig. 5 is a plan view of the bearing plate. Fig. 6 is a cross section of a modified construction.

Referring to the drawings in detail; in constructing roadbeds I first excavate, and then lay a foundation of asphalt or cement concrete, and when dry enough, sweep off all loose material, then brush on a coating of liquid asphalt, and then proceed to lay a layer of paving asphalt 2, then roll the same to an even surface, and when hard enough, lay at proper distances apart iron bearing plates 3, in which two holes 4 and 5 are drilled to allow spikes 6 and 7 to be inserted into the layer of paving asphalt 2, then lay the rails on bearing plates and drive spikes through the holes 4 and 5 into the asphalt, then paint bearing plates and all parts of the rails, except the top, with liquid asphalt, for the purpose of securing perfect adhesion of the upper or surface layer 8 of paving asphalt to every part, which asphalt I lay of the required thickness to bring it up to the official grade of the street and level with the top of the rails. The bearing plates 3 are rectangular in plan, as shown in Fig. 5, and are provided with spike openings 4 and 5, dovetail slots 9 and 10 upon each end thereof, and perforations 11. When these plates are laid upon the asphalt bed 2, in the course of construction, and the rails laid and spiked, and a top layer of paving asphalt spread over these plates, it is obvious that the perforations 11 and dovetail slots will be filled with this mass, thereby making it impossible for the bearing plates to shift in any direction.

In the modification shown in Fig. 6, dovetailed openings 12 are formed in the concrete foundation and the asphalt filler 13 is tamped in, the plates are laid upon this filler, the rails are laid upon the plates and the rails and plates are spiked to said filler. In this construction it is obvious that a great deal less asphalt is required, and the shape of the dovetail openings in the concrete foundation makes it impossible for the filler to be loosened.

After having described my invention, what I do claim and desire to secure by Letters Patent is:

5 A support and bearing for railway rails, comprising the combination of a layer of concrete laid upon a solid level foundation, a coating of liquid asphalt spread over this layer, a layer of paving asphalt placed upon said concrete foundation, bearing plates laid
10 upon said layer of paving asphalt, dovetailed openings and perforations in said plates, rails placed upon said plates and

spiked to said paving asphalt, a coating of liquid asphalt spread over said bearing plates and upon the sides of the rails, and a surface layer of paving asphalt placed upon said last mentioned layer, thereby forming a compact mass from the foundation to the street surface.

GREGORY PERKINS, SENIOR.

Witnesses:

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