J. P. MAROIS.

RAILWAY TRACK.

APPLICATION FILED NOV. 6, 1911.

1,027,490. **Patented May 28, 1912.**

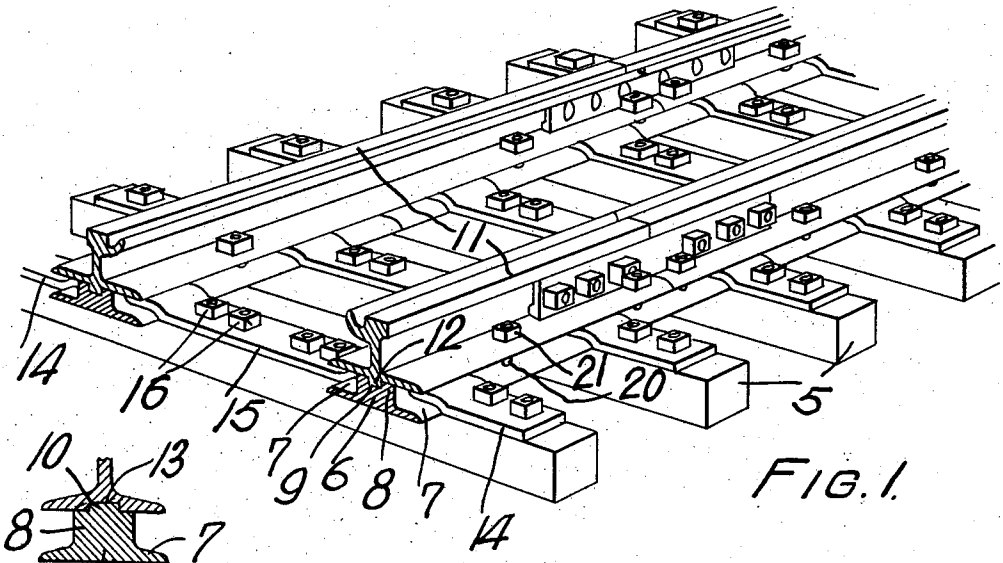


FIG. 1.

FIG. 4.

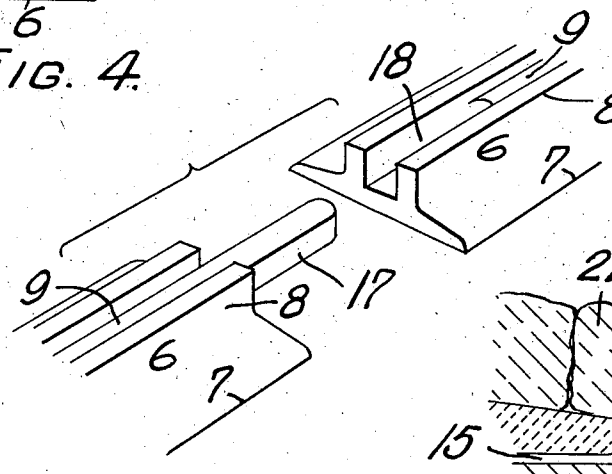
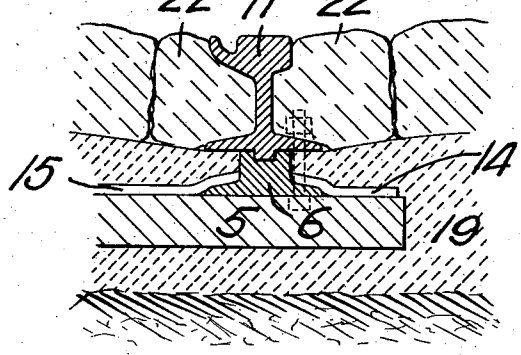


FIG. 2.

FIG. 3.



Witnesses

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RAILWAY-TRACK.

1,027,490. Specification of Letters Patent. Patented May 28, 1912.

Application filed November 6, 1911. Serial No. 658,631.

To all whom it may concern:

Be it known that I, JOSEPH P. MAROIS, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented new and useful Improvements in Railway-Tracks, and do hereby declare that the following is a full, clear, and exact description.

This invention relates to improvements in railway tracks, and the object is to provide means whereby a permanent foundation may be laid in the ground to which the rails may be attached easily and quickly.

The invention relates particularly to the laying of street railway tracks, where the rails are embedded in a permanent pavement and where the renewal of the rails necessitates tearing up the pavement, thus either entirely closing the street or greatly interfering with traffic thereon.

By the use of this invention the foundation or rail chair is permanently embedded in the foundation of the pavement, and to renew rails it is only necessary to remove a single row of paving blocks on each side of the rail.

In the drawings which illustrate this invention:—Figure 1 is a perspective view of the device as it would appear with all the pavement removed. Fig. 2 is a perspective view showing the bond between the sections of the rail chair. Fig. 3 is a cross sectional view of a single rail, showing the method of embedding the same in the pavement. Fig. 4 is a fragmentary cross sectional view, showing a slight modification of the invention.

Referring more particularly to the drawings, 5 designates the ties which may be of wood, but are preferably of metal, as the life and rigidity of metal is greater than that of wood. Mounted on the ties are rail chairs 6 having attaching flanges 7, similar to the ordinary rail base flanges. This rail chair is comparatively low and webless, the head 8 rising directly from the flanges. The top of the head is flat and provided with the central longitudinal groove 9. This groove specifically does not form one of the most important features of the invention, as it may be replaced by a rib 10, shown in Fig. 4, or by any other suitable means to prevent lateral movement of the rail on the chair. The rails 11 are of any suitable cross section and are similar to those in ordinary use with the exception of a small rib 12 depending from the base under the web. This rib engages in the groove 9 of the chair and prevents lateral movement of the rail on the chair.

In the form shown in Fig. 4, this rib is replaced by a groove 13, coöperating with the rib 10 of the chair. It will be understood that the groove 13 may be of sufficient width to embrace the entire top of the chair, thus eliminating the necessity of a special rib 10. An advantage of the grooved type of rail is that it may be laid in the ordinary manner, while the ribbed type of rail would require recesses formed in the ties, if the chair was not used. On the other hand, such ribbed type of rail would be more secure as the rib engaging in the tie would remove much strain from the spikes.

The preferred method of attaching the chair to the ties is by means of clamps 14 on the outside of the rails and similar clamps 15 between the rails. These latter clamps 15 extend from rail to rail and also form distance bars. These clamps overlap the flanges of the rail chair and are secured to the ties by bolts or spikes 16. As the rail chair is not of suitable form for the use of fish plates to connect the various sections, one end of each member is provided with a projecting tongue 17 of reduced size, while the opposite end is provided with a recess 18 for the reception of the tongue of the adjoining section.

In laying the track, the ties are put down in the usual manner and are preferably embedded in the foundation 19 of the pavement, which is usually of concrete. The rail chairs are then secured to the ties by the clamps 14 and 15, and the pavement foundation completed until the surface thereof is flush with the top of the rail chair, as seen in Fig. 3. The bolts 20 which pass through the flanges of the chair and rail are preferably placed in the chair flanges at the time that the same was laid, with the threaded ends up and projecting a suitable distance above the foundation 19. The rails which preferably have the necessary bolt holes formed in the base flanges thereof are placed in position on the chair, and secured by nuts 21. The pavement is then completed, one or more rows of removable blocks 22 being placed next to the rails, where the pavement is of asphalt or

a like material. If the pavement is entirely of the block type, no special provision will be required.

When the rails become worn out, they may be replaced by simply removing a single row of blocks on each side thereof, removing the worn rail and substituting a new one. As the ties and rail chairs are embedded in the foundation of the pavement, the entire track foundation becomes practically one piece and integral with the road. Furthermore, this embedding of the ties and rail chairs protects the same to a very large extent against decay, so that a single track foundation will outlast many sets of rails. As it is not necessary to disturb the track foundation in any way nor to gage the distance between the rails in relaying the track, the same may be accomplished with great rapidity and with practically no interruption of traffic.

Having thus described my invention, I declare that what I claim is:—

A railway track comprising a plurality of ties, flanged rail chairs mounted thereon, each of said chairs having at one end a tongue and at the opposite end a recess for the reception of the tongue of the adjacent chair, clamps spacing said chairs and securing the same to the ties, rails mounted on said chairs, bolts passing through the chair and rail, flanges securing the rails in position and locking ribs on said chairs and rails to prevent lateral movement of the rails on the chairs.

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

JOSEPH P. MAROIS.

Witnesses:
STUART R. W. ALLEN,
SOLL SIMON.