No. 826,265. PATENTED JULY 17, 1906.

J. McLELLAN.

RAIL FOR STREET RAILWAYS.

APPLICATION FILED OCT. 26, 1905.

Fig. 1.

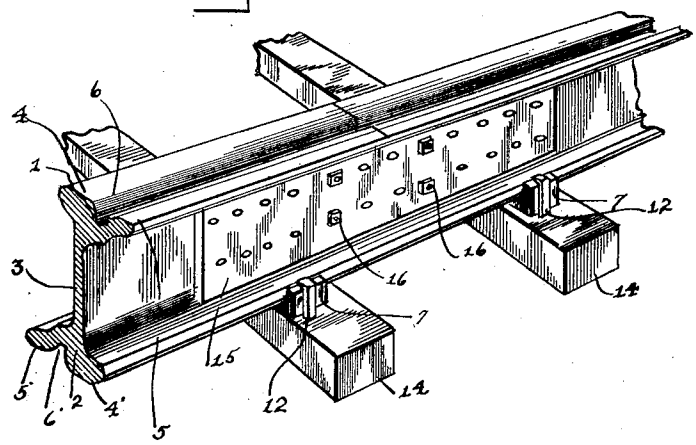


Fig. 2.

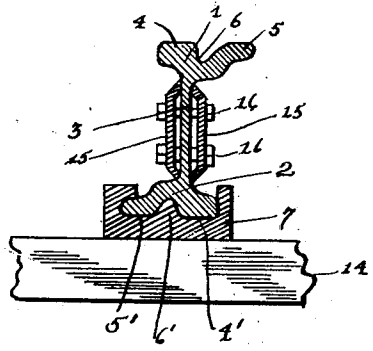


Fig. 4

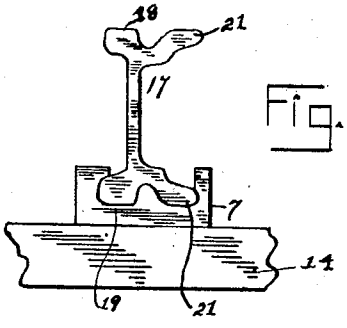
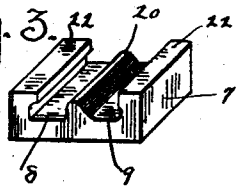


Fig. 3.



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UNITED STATES PATENT OFFICE.

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RAIL FOR STREET-RAILWAYS.

No. 826,265. Specification of Letters Patent. Patented July 17, 1906.

Application filed October 26, 1905. Serial No. 284,520.

To all whom it may concern:

Be it known that I, JACK McLELLAN, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rails for Street-Railways, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in rails for street-railways; and the primary object of the invention is to provide a rail that can be readily reversed, thereby giving the rail a twofold use, which has not been experienced in connection with the present type of rails.

My invention is particularly applicable to that type of rails used upon street-railways, especially that type of rail used upon curves, these rails being provided with inner flanges.

Instead of providing the rail with a conventional form of base I form the base of my improved rails similar to the head of the rail—in other words, construct a double-headed rail having an intermediate web portion.

In order that rails constructed in accordance with my invention may be firmly supported upon ties or suitable road-bed, I have provided plates which serve functionally as the base of the rails, these plates being formed to receive one head of the rail and firmly support it upon a tie.

The construction entering into my improved rail and the manner of securing two of the rails together will be hereinafter more fully described, and reference will now be had to the accompanying drawings, forming a part of this application, wherein like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of the confronting ends of two sections of rails as secured together and mounted upon two ties. Fig. 2 is a vertical sectional view of one of my improved rails. Fig. 3 is a perspective view of a base-plate used in connection with the same; and Fig. 4 is an end view of a rail used upon curves.

To put my invention into practice, I preferably construct my improved rails of steel or similar strong and durable metal or material. Each rail embodies an upper head 1, a lower head 2, and an intermediate web portion 3. The upper head 1 consists of a tread portion 4 and an inner flange portion 5, these portions being integral and forming a longitudinally-disposed groove 6. The lower head 2 is similar to the upper head 1, with the exception that the tread 4′, flange 5′, and groove 6′ are reversed—that is, the tread 4′ is upon the inner side of the rail, while the flange 5′ is upon the outer side, corresponding with the tread 4 of the upper head. This arrangement is provided whereby the rail may be reversed and the lower head 2 used in lieu of the upper head 1 when the same has become worn by constant use. The reversal of the rail shown in Figs. 1 and 2 is accomplished merely by giving the rail a one-half revolution on its longitudinal axis.

In order to provide a sound foundation for my improved rails upon ties or the like road-bed, I employ plates 7 7, these plates being provided with longitudinally-disposed grooves 8 to accommodate the flange 5′ and grooves 9 to accommodate the tread 4′, the formation of said grooves providing an intermediate rib 10, adapted to engage in the groove 6′. The formation of the grooves 8 and 9 also provide outer ribs or sides 11 11, which embrace the sides of the lower head 2, as clearly illustrated in Fig. 2, and prevent lateral displacement of the rails relative to the plates 7 7. Spikes 12 or the like fastening means may be employed for clamping the plates 7 and the rails upon the ties 14 14.

In connection with the rails just described I employ fish-bars 15 15 for clamping the confronting ends of two sections of rails together. These fish-bars are of a conventional form, with the exception that they are made longer to further strengthen the confronting ends of the rails when they are secured together. Ordinary nuts and bolts 16 16 may be employed for clamping the fish-bars to the web portions 3 3 of the rails. I do not care to confine myself to any particular type of fastening means for securing the confronting ends of two sections of rails together, neither do I care to limit myself to the manner of securing the plates 7 to the ties 14 or the road-bed of a railway.

In Fig. 4 of the drawings I have illustrated a rail 17, similar in all respects to the rails just described, with the exception that this rail has the treads 18 and 19 of the upper and lower heads formed upon the same side, this also being true of the flanges 21 and 21. This rail is particularly adapted for use upon curves, it being a well-known fact that the flanges of

rails become worn by frictional engagement of the flanges of the wheels bearing against the same, and in the course of a short time the rails become worn and useless for the purpose for which they are intended. Instead of renewing the rails, it is only necessary to reverse my improved rails when they are used, thereby gaining practically a new rail, and in this manner the cost of maintenance in connection with a railway is greatly reduced, the cost of the rails being reduced approximately one-half. The rail shown in Fig. 4, which, as above stated, is adapted for use upon curves, is reversed by turning it end for end instead of rotating it on its longitudinal axis, as is the case with the rail shown in Figs. 1 and 2. This manner of reversing the rail shown in Fig. 4 is necessary, owing to the curved form of the rail.

The simple construction of my improved rails permits of them being readily rolled, this also being true of the plates which I employ as base-plates, these plates being rolled or sheared or cut into the desired lengths, according to their use.

It will be observed that a plurality of rails can be readily turned at one time, it not being necessary to disconnect the different sections of rails when performing this operation; but for convenience the joints of the rails may be severed at every six or ten rail lengths, thus preserving the intermediate joints.

I desire again to call attention to the fact that on straight tracks the treads are diagonally disposed from one another, while on curved tracks the treads are opposite. In the turning of the rails the curved rails are turned over and reversed end for end; but with the straight rails it is only necessary to simply turn the rails.

While I have herein described the preferred embodiments of my invention, it is obvious that the same are susceptible to structural change without departing from the spirit and scope of the invention.

What I claim, and desire to secure by Letters Patent, is—

The combination with a rail having an upper head comprising a tread portion and flange and an intermediate groove, and a lower head conforming in shape to the upper head, of a base-plate formed with two parallel grooves conforming in cross-section to the cross-sectional contour of the head of the rail.

In testimony whereof I affix my signature in the presence of two witnesses.

JACK McLELLAN.

Witnesses:

THEO E. KNAPP,

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