J. M. BLAKE.

FASTENER FOR RAILWAY RAILS.

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974,635.

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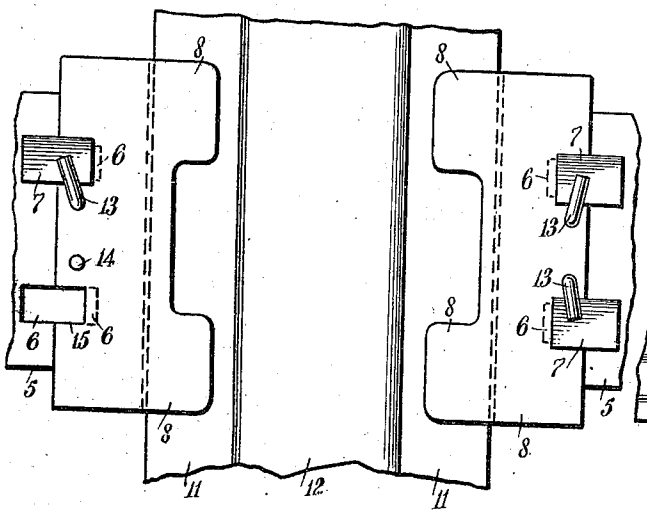

Fig. 1

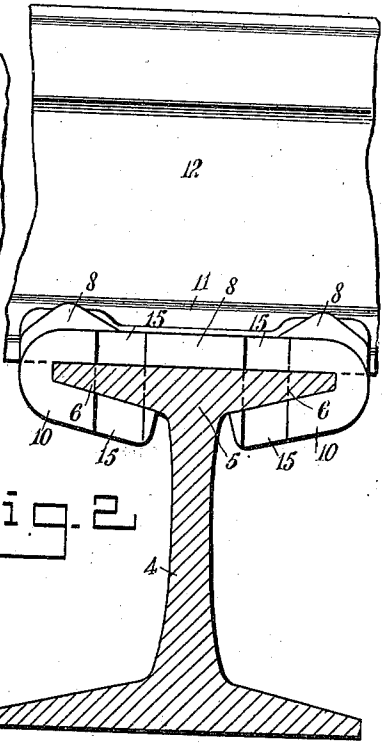

Fig. 2

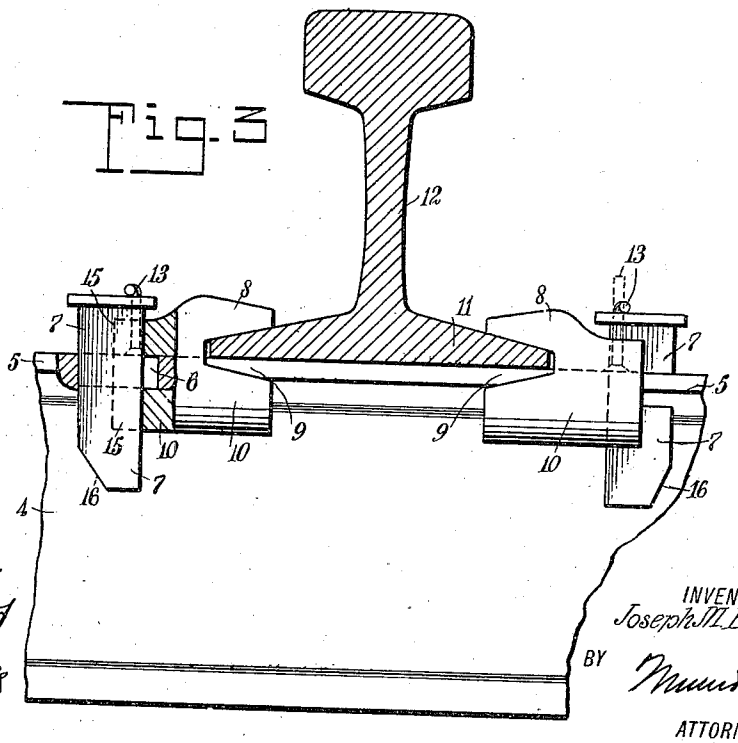

Fig. 3

WITNESSES:

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JOSEPH M. BLAKE, OF MEADVILLE, PENNSYLVANIA.

FASTENER FOR RAILWAY-RAILS.

974,635. Specification of Letters Patent. Patented Nov. 1, 1910.

Application filed February 23, 1910. Serial No. 545,283.

To all whom it may concern:

Be it known that I, JOSEPH M. BLAKE, a citizen of the United States, and a resident of Meadville, in the county of Crawford and State of Pennsylvania, have invented a new and Improved Fastener for Railway-Rails, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: To provide a fastening device quickly and easily adjusted to the railway rail and tie; to provide fastening devices which facilitate the alinement of the rails; to provide fastening devices which are readily adjusted to grip both the rail and tie; to provide fastening devices adapted to be locked in holding position; and to provide fastening devices simply and economically constructed.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a fragmentary view in plan, showing a railway rail held to the tie by fasteners constructed and arranged in accordance with the present invention; Fig. 2 is a side elevation of a railway rail, shown in operative relation to a metal I-beam tie, the tie being illustrated in cross section; and Fig. 3 is a cross sectional view of a railway rail, showing in side elevation the metal tie and fasteners for the said rail, part of the fasteners and tread of the tie being sectioned to illustrate the means for driving the holding spikes.

In its most approved form, the railroad construction using fasteners as herein illustrated employs metal ties 4, as substitutes for the ordinary wood ties. It will be understood, however, that if wood ties are desired they may be used in conjunction with a plate of usual and ordinary construction, which plate would take the place of the head 5 of the said ties 4. The flanges constituting the heads 5 are perforated at 6, 6 to receive the shanks of spikes 7, 7. The spikes 7, 7 are provided to hold fastening clamps 8, 8. The clamps 8, 8 are provided with end extensions 10, 10, overturned at the ends to encompass the flanges of the heads 5 of the ties 4. The curved portions of the extensions 10, 10 are shaped longitudinally to form recesses 9, 9 adapted to infold the base 11 of a rail 12. (See Fig. 3 of the drawings).

By reference to Figs. 2 and 3 of the drawings the arrangement of the fastening devices with, first, the tie 4, and second, the rail 12, is successively illustrated.

The clamps 8, 8 are provided with soft metal locks 13, which are in practice soft metal rivets driven through perforations 14 in the said clamps to upstand opposite the heads of the spikes 7 when the same are driven into the perforations 6, 6.

In practice the clamps 8, 8 are threaded over the heads 5 of the ties 4, 4 prior to setting the same and adjusting thereto the rails 12. The rails 12 are placed in position between the perforations 6, 6, when the fastening devices are moved forward so that the clamps 8, 8 extend both over and under the base of the rail 12, the top extension gripping the rail and the bottom extension gripping the tie. In this position it will be found that the rail 12 is centrally located between the perforations 6, 6, with the rear edge of recesses 15, 15 formed in the outer edge of the clamps 8, 8 slightly over-riding the inner edge of the perforations 6, 6. This construction provides for a drive fit of the clamps 8, 8 against the base 11 of the rail 12. The spikes 7, 7 are formed substantially as shown in Fig. 3 of the drawings, having a beveled rearwardly disposed surface 16, the contracted end of which is freely inserted in the perforations 6, the beveled face riding down into the said perforations by wedging the said clamps forward over the base 11. The spikes 7 are formed from suitable malleable or wrought material which will dent, and thereby permit a solid drive of the spikes 7 into the perforations 6, 6, forming a firm fit of the recesses 9, 9 over the said base 11. In the same action the incline of the upper surface of the base 11 lifts the extensions 10, 10 into firmer contact with the under side of the head 5 of the tie 4. When the spikes 7, 7 are driven home they are in a position substantially as shown in Fig. 3 of the drawings, wherein all of the parts, the rail 12, the tie 4, and the clamps 8, 8 are jammed firmly into holding relation. In this position the locks 13 are struck over to extend above and in holding relation with the heads of the spikes 7, as shown substantially in Figs. 1 and 3 of the drawings. The locks 13, in this posi-

tion, prevent a loosening of the spikes 7 caused by vibration or otherwise.

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

1. A fastener for railway rails, comprising a tie having a laterally extended head and perforations disposed on opposite sides of a rail seat; a railway rail seated thereon; a plurality of clamps slidably mounted on said tie to infold the base of said rail; a plurality of wedge-shaped spikes to be driven in said perforations to force the said clamps over the base of said rail; and fixed locking members carried by said clamps arranged to be bent over said spikes to prevent the removal thereof from said perforations.

2. A fastener for railway rails, comprising a tie having a laterally extended head and perforations disposed on opposite sides of a rail seat; a railway rail seated thereon; a plurality of clamps slidably mounted on said tie to infold the base of said rail, and provided in the outer edge with recesses alined with said perforations; and a plurality of wedge-shaped spikes to be driven in said perforations to force the said clamps over the base of said rail.

3. A fastener for railway rails, comprising a tie having a laterally extended head and perforations disposed on opposite sides of a rail seat; a railway rail seated thereon; a plurality of clamps slidably mounted on said tie to infold the base of said rail, and provided in the outer edge with recesses alined with said perforations; a plurality of wedge-shaped spikes to be driven in said perforations to force the said clamps over the base of said rail; and soft metal bars fixedly mounted in said clamps and adapted to be extended over said spikes to prevent the lift thereof from said perforations.

4. A fastener for railway rails, comprising a tie having a laterally extended head and disposed transversely across the railway rails; a plurality of clamping members slidably mounted upon said tie and each having a plurality of extensions adapted to extend over the base of said rails and under the head of said tie when in superimposed relation; and a plurality of anchor devices holdingly connecting said clamping members and said tie.

5. A fastener for railway rails, comprising a tie having a laterally extended head disposed in transverse relation to said railway rail and provided with perforations disposed on opposite sides of a rail seat; a railway rail seated thereon provided with laterally extended base flanges; a plurality of clamps slidably mounted on said tie and provided with separated forwardly extended clamping members superimposed, the upper to extend over the flange of the base of the railway rail and the under member to be disposed beneath the head of the tie in vertical relation with the said upper member; and a plurality of wedge-shaped spikes adapted to be driven into said perforations to force the said clamps over the base of said rail and head of said tie.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH M. BLAKE.

Witnesses:
BERT SALEN,
CURTIS L. WEBB.