W. J. BURKE.

METALLIC TIE AND RAIL FASTENER.

APPLICATION FILED FEB. 1, 1911.

1,003,328. Patented Sept. 12, 1911.

Fig. 1.

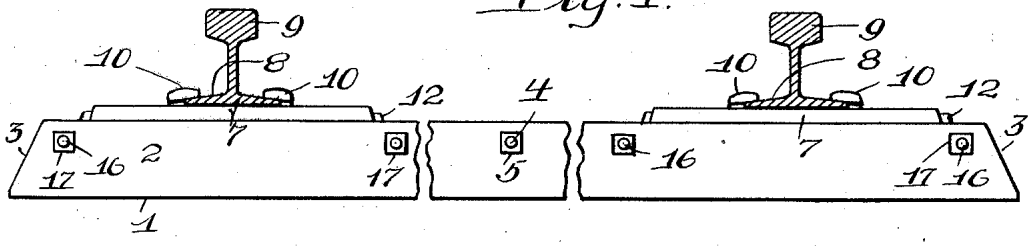


Fig. 2.

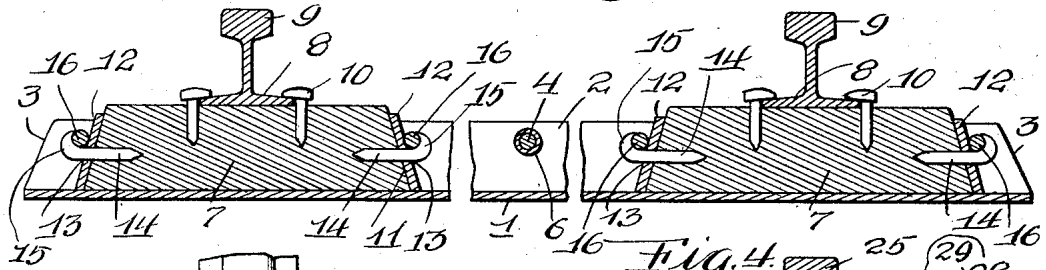


Fig. 3.

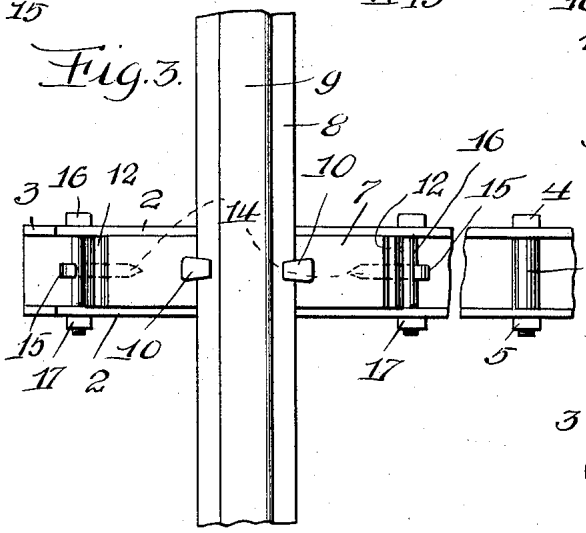


Fig. 4.

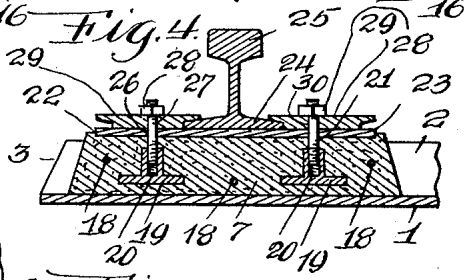
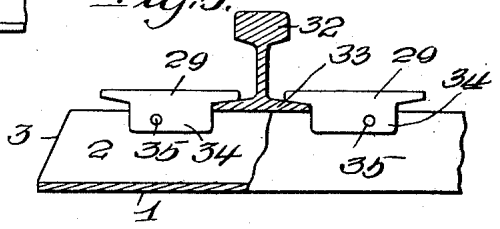


Fig. 5.



WITNESSES

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METALLIC TIE AND RAIL-FASTENER.

1,003,328. Specification of Letters Patent. **Patented Sept. 12, 1911.**

Application filed February 1, 1911. Serial No. 606,012.

To all whom it may concern:

Be it known that I, WILLIAM J. BURKE, a citizen of the United States of America, residing at Webster, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to metallic ties and rail fasteners, and the objects of my invention are to provide a simple and durable metallic tie for supporting the rails of a track, and to furnish a tie with novel rail supports whereby one rail may be insulated relatively to the other rail of the track, thereby permitting of the metallic tie being used in connection with a railroad equipped with an electrical signal system.

Other objects of my invention are to furnish a metallic tie with rail blocks that can be made of wood, concrete or other material, and to provide the rail blocks of the tie with means for preventing lateral and vertical displacement of the rails relatively to the tie.

Further objects of the invention are to provide a metallic tie that can be easily and quickly installed upon a roadbed and properly tamped, and to provide a tie that is inexpensive to manufacture and highly efficient as a track support or sleeper.

These and such other objects as may hereinafter appear are attained by the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing wherein there are illustrated the preferred embodiments of the invention, but it is to be understood that the structural elements thereof are susceptible of such changes as fall within the scope of the appended claims.

In the drawing:—Figure 1 is a side elevation of a portion of the metallic tie, Fig. 2 is a longitudinal sectional view of the same partly broken away, Fig. 3 is a plan of a portion of the tie, Fig. 4 is a longitudinal sectional view of a portion of a modified form of tie, and Fig. 5 is a side elevation of a portion of another modified form of tie, partly broken away and partly in section.

A tie in accordance with this invention comprises a channel bar having a base plate 1 and side walls 2, the channel bar corresponding in length to the present type of wooden ties used for supporting the rails of a track or rails adjacent to a switch. The side walls 2 of the channel bar are beveled, as at 3 to obviate any sharp obstructions or corners, the side walls intermediate the ends of the tie being connected by a bolt 4 and a nut 5, said bolt being provided with a spacing sleeve 6 which prevents the walls 2 from collapsing.

Mounted in the channel bar adjacent to the ends thereof are rail blocks 7, preferably made of wood and extending above the side walls 2 of the channel bar to support the base flanges 8 of rails 9, said base flanges being secured to the blocks 7 by spikes 10 or other fastening means. The ends of each block are beveled, as at 11 and mounted against the ends of said block are angularly disposed plates 12 having the lower and side edges thereof engaging the base plate 1 and the walls 2 of the tie. The angularly disposed plate 12 is provided with an opening 13, and driven through said opening into the block 7 is a spike 14 having a hook-shaped head 15 adapted to engage a bolt 16 arranged transversely of the tie and against the plate 12, said bolt being mounted in the side walls 2 and retained in position by a nut 17. The rail block 7 is placed in position, then the plates 12, then the bolts 16, and then the spikes 14, said spikes engaging the bolts 16 and the bolts 16 the plates 12 and preventing longitudinal and vertical displacement of the rail blocks 7 relatively to the tie.

In Fig. 4 of the drawing there is illustrated a modification of the invention, wherein the rail block 7 is made of concrete and retained between the walls 2 of the tie by a plurality of transversely arranged pins 18. When molding the rail blocks 7, sockets 19 having interiorly threaded bores 20 are embedded in the concrete rail blocks 7, and easy access is had to the threaded bore 20 of each socket through the medium of a vertical opening 21 provided therefor by employing a suitable core when molding the block 7. The top of the concrete rail block 7 is provided with a seat 22 for a rail plate 23 adapted to support the base flanges 24 of a rail 25. The rail plate 23 is provided with openings 26 registering with the openings 21, and extending through said openings are bolts 27 having both ends thereof threaded, whereby the lower end of each

bolt can be secured in the bore 20 of the socket 19 and the upper end thereof provided with a detachable nut 28. The detachable nut 28 is adapted to retain a rail fastener 29 upon the rail plate 23, said rail fastener being provided with an opening 30 to receive the bolt 27. The opening 30 of the rail fastener 29 is located off-center or nearer one end of the fastener than the opposite end, each end of the fastener having an overhanging lip 31, whereby one of said lips can engage the base flange 24 of the rail 25. Should the rail 25 be of another gage with the base flanges 24 of a less width than that shown in Fig. 4, the fasteners 29 can be removed from the bolts 27 and replaced thereon with the opposite ends of the fasteners in engagement with the base flanges 24 of the rail.

In Fig. 5 of the drawing there is illustrated another modification, wherein the rail 32 has the base flanges 33 resting directly upon the upper edges of the walls 2, and the fasteners 29 have depending flanges 34 that are connected to the outer sides of the walls 2 by transverse pins or rivets 35.

It is thought that the manner of assembling the various parts of the metallic tie will be understood without further description, and I reserve the right to make the tie of various kinds of metal and of various proportions.

What I claim is:—

1. In a metallic tie and rail fastener, the combination with rails, of a channel bar constituting a tie adapted to support said rails, blocks arranged in said tie adjacent to the ends thereof and supporting the base flanges of said rails, plates arranged at the ends of said blocks, bolts arranged transversely of said bar and engaging said plates, and spikes driven through said plates into said blocks and having the outer ends thereof engaging said bolts.

2. In a metallic tie and rail fastener, the combination with rails, of a channel bar constituting a tie adapted to support said rails, blocks arranged in said tie adjacent to the ends thereof and supporting the base flanges of said rails, plates arranged at the ends of said blocks, bolts arranged transversely of said bar and engaging said plates, spikes driven through said plates into said blocks and having the outer ends thereof engaging said bolts, a bolt arranged transversely of said bar intermediate the ends thereof, and a spacing sleeve mounted upon said bolt between the walls of said tie.

3. In a metallic tie and rail fastener, the combination with rails, of a channel bar constituting a tie adapted to support said rails, blocks arranged in said tie adjacent to the ends thereof and supporting the base flanges of said rails, plates arranged at the ends of said blocks, bolts arranged transversely of said bar and engaging said plates, spikes driven through said plates into said blocks and having the outer ends thereof engaging said bolts, a bolt arranged transversely of said bar intermediate the ends thereof, a spacing sleeve mounted upon said bolt between the walls of said tie, and means carried by said blocks and adapted to engage the base flanges of said rails.

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

WILLIAM J. BURKE.

Witnesses:
JOHN VOGLE,
MAX H. SROLOVITZ.