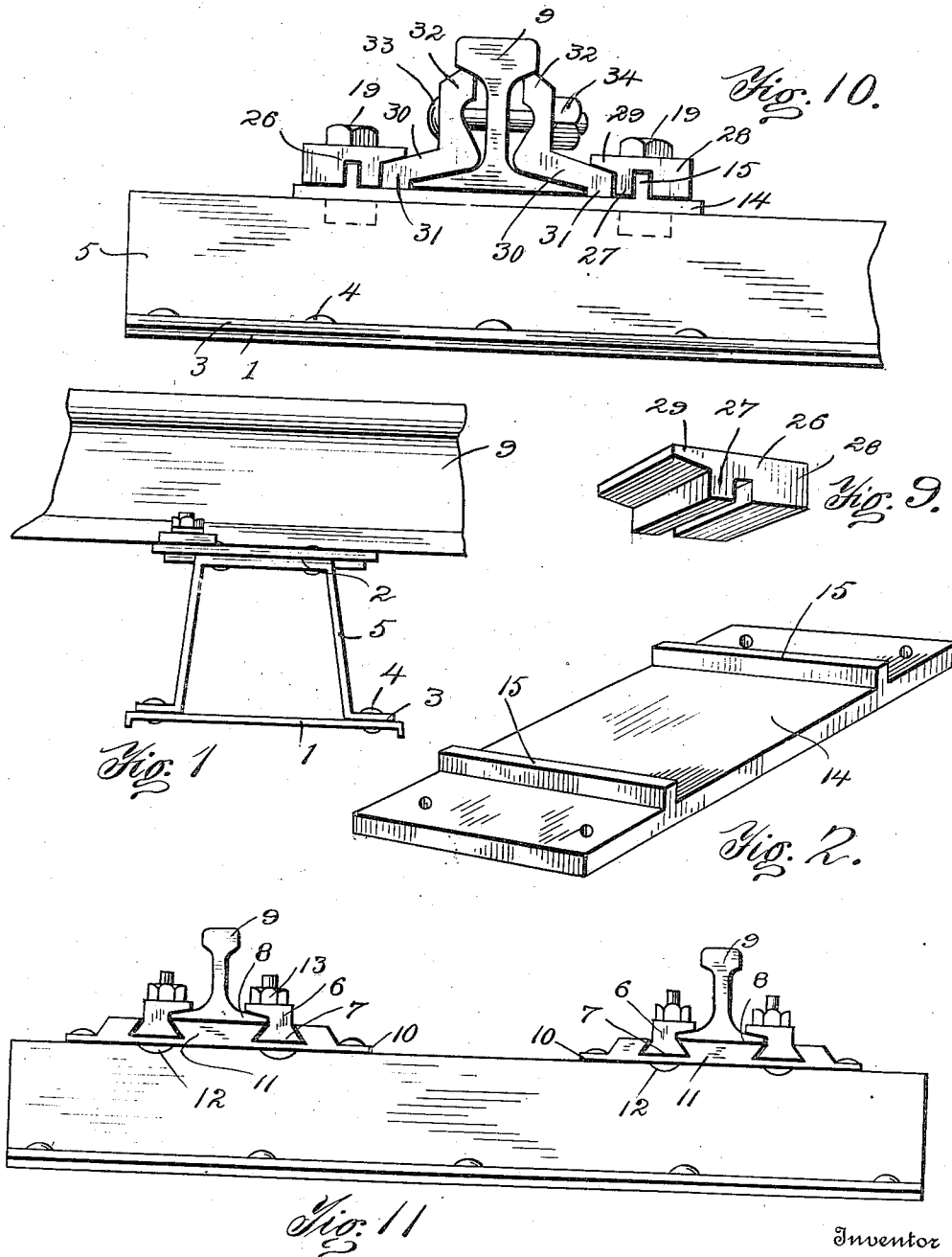


J. H. MESSNER.
RAILROAD TIE.
APPLICATION FILED JULY 5, 1911.

1,065,827.

Patented June 24, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

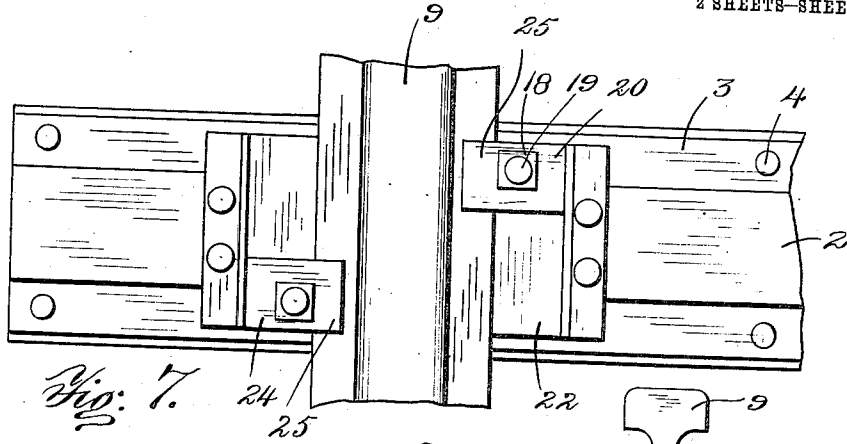


Fig. 7.

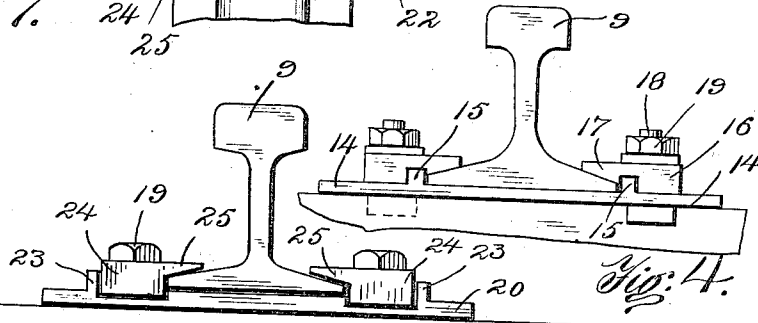


Fig. 4.



Fig. 5.

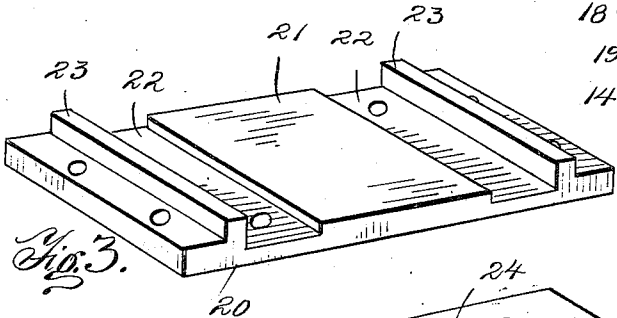


Fig. 3.

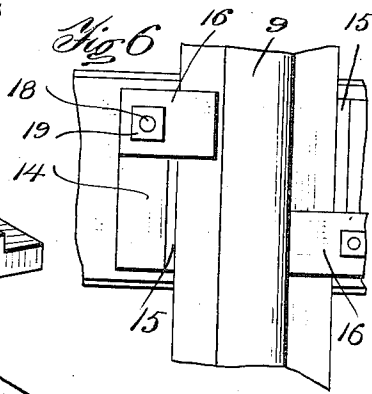


Fig. 6.

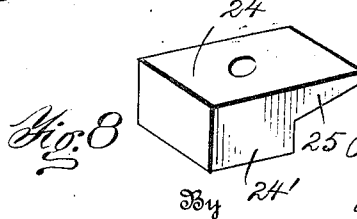


Fig. 8.

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UNITED STATES PATENT OFFICE.

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RAILROAD-TIE.

1,065,827.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed July 5, 1911. Serial No. 636,984.

To all whom it may concern:

Be it known that I, JOHN H. MESSNER, citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to improvements in a railroad tie and more specifically to a novel form of combined railroad tie and seat cooperating to hold the rail rigidly in position.

The object of my invention is to provide a simple, inexpensive, and highly efficient device that will readily secure a rail with the minimum of parts.

Another object of my invention is to provide a rigid base-plate upon which are suitably mounted, in staggered relation, bearing blocks held upon said plate in a rigid interlocked position, said bearing blocks adapted to impinge against opposite flanges of the rail.

With these and other objects in view I have shown in the accompanying drawings the forms of my invention as now best known to me.

Reference being had to the drawings, wherein similar reference characters designate similar parts in the respective views, Figure 1 is a vertical end elevation of a railroad tie formed out of a sheet metal blank, upon which is shown mounted a rail. Fig. 2 is the base-plate showing one form thereof. Fig. 3 is another form of a base-plate. Fig. 4 is a side-elevation of Fig. 1 showing the base-plate of Fig. 2 in position clamped down by a suitable bearing block. Fig. 5 is a side elevation, similar to Fig. 4, but showing the base-plates of Fig. 3 in operative position. Fig. 6 is a top plan view of Fig. 4. Fig. 7 is a top plan view of Fig. 5. Fig. 8 is a detailed view of the bearing block cooperating with the base-plate shown in Fig. 3. Fig. 9 is a bearing block for the base-plate shown in Fig. 2. Fig. 10 is a side elevation of my device embracing another modification thereof. Fig. 11 is a side elevation showing still another modification thereof.

A sheet metal seat for a rail 9 is shown in Fig. 1, and comprises a base portion 1 formed with flanges, and secured thereto by means of the horizontal flanges.

3 is an inverted U-shaped member composed of the outwardly tapering sides 5 and top 2.

Referring to Fig. 11 the base-plate is designated 10, being suitably secured to the top member 2 of the tie, which base-plate is formed with a central seat for a rail 9 which bears throughout its entire length thereupon. Each wall of the seat 11 of the base-plate defines one side of the dovetailed groove cut or otherwise formed in said plate. Suitably engaging the dove-tail groove in the plate 10 are bearing blocks 6 each composed of a bottom correspondingly shaped tenon 7 seated in said dove-tail groove and correspondingly inclined offset 8 for engaging the flange of the rail 9. The bearing-blocks 6 are preferably disposed at opposite sides of the rail in staggered relation to enhance the clamping effect, nut 13 being employed in conjunction with a bolt 12 to fasten each bearing block down upon the member 2 of the tie.

14 designates another form of base-plate, and as shown, is composed of transversely extending spaced apart ribs 15. The bearing block cooperates therewith and is designated 16 and is formed with a corresponding recess engaging the ribs 15 of the base-plate 14 and also with a tongue correspondingly inclined with respect to a flange of the rail 9 for rigid engagement therewith. The bearing blocks 16 having been fixed to the ribs 15 in staggered relation, each to each, bolts 18 and nuts 19 fasten them in position as shown in Figs. 4 and 6.

Another form of base-plate is shown in Fig. 3 and is composed of a central portion 21 upon which the rail 9 bears from end to end, each wall of said portion 21 defining one side of a guide-way 22 for the bearing block 24 shown in Fig. 8; the opposite sides of the guide-way 22 are ribs 23, and it will be noticed that the bearing block 24 is formed with a suitably inclined tongue 25 for engaging with a flange of the rail, and that it includes an under substantially rectangular base 24' of greater thickness than the central portion 21 of the base-plate. When the bearing blocks are fitted in the guide-ways 22 and in staggered relation each to each, as shown in Figs. 5 and 7, the tongue 25 will be brought into rigid contact with the adjacent flange of the rail 9 by another suitable means, such as the

nut 19, and when thus positioned it will be obvious that the web of the rail 9 including the opposite flanges thereof will suitably be held and guided by the free face of the rectangular base 24¹ projecting above the central portion 21 of the base-plate 20. And in conjunction with the form of base-plate 14 shown in Fig. 2 a different arrangement is shown in Fig. 10 for securing the rail 9. Clamping dogs 32 are here used to impinge against the entire effective surface of the rail 9, each of which dogs is composed of a correspondingly inclined portion 30 engaging the effective length of each flange of the rail, a flat bottom portion 31 bearing upon the base-plate 14, and an upper portion 32 for rigid engagement with each under flaring surface of the rail 9. The base plate 14 having been suitably secured upon a support the form of bearing block shown in Fig. 9 will be used, said block having a tongue portion 29 and spaced apart ribs 27 and 28 which form a recess between them for engagement with the ribs 15 of the base-plate 14. A nut 19 will fasten the bearing block 26 down upon the base plate 14 after the dog members 32 have been placed in the position shown in Fig. 10. The dogs 32 are clamped directly underneath the head of the rail 9 by a transversely disposed bolt 33 and a nut 34 thereby causing the bottom portion of the dogs 31 to have rigid contact with the base-plate 14, the portion 30 to engage rigidly the adjacent flange of the rail, the uppermost portion 32, impinging against the flaring wall of the rail 9; the bearing block 26 will then be clamped home so that the correspondingly inclined tongues 29 will rigidly contact with the surface 30 of the dogs.

Various modifications may be made with-

out departing in essence from the invention herein disclosed the purview of which will be defined in the appended claims.

What I claim is—

1. In a railway tie, a body, a rail seat comprising a plate secured upon the top of the body and provided with upstanding flanges extending in parallel relation to each other and in the general direction of the extent of the rail supported by the tie, the said plate projecting beyond the opposite sides of the body, and rail securing clamp members disposed upon the projecting portions of the rail seat and secured thereto in engagement with a rail upon the seat, each of the said members having a shoulder portion abutting against that side of the respective flange which is presented toward the rail.

2. In a railway tie, a body, a rail support comprising a base plate secured upon the top of the body and having its forward and rear edge portions projecting beyond the planes of the front and rear sides of the body, the said plate being provided with upstanding parallel flanges and rail clamping members secured upon the said supporting plate and each comprising a body having a groove receiving one of the flanges at the projecting portion of the plate and formed with a rail engaging lip, each of the said members being formed with a bolt-opening, and a bolt secured through each member and through the plate at one of its projecting edge portions.

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

JOHN H. MESSNER.

Witnesses:

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A. W. ACKERMAN.