

B. J. SHEEHE.

METALLIC TIE.

APPLICATION FILED MAY 15, 1914.

1,138,694.

Patented May 11, 1915.

2 SHEETS—SHEET 1.

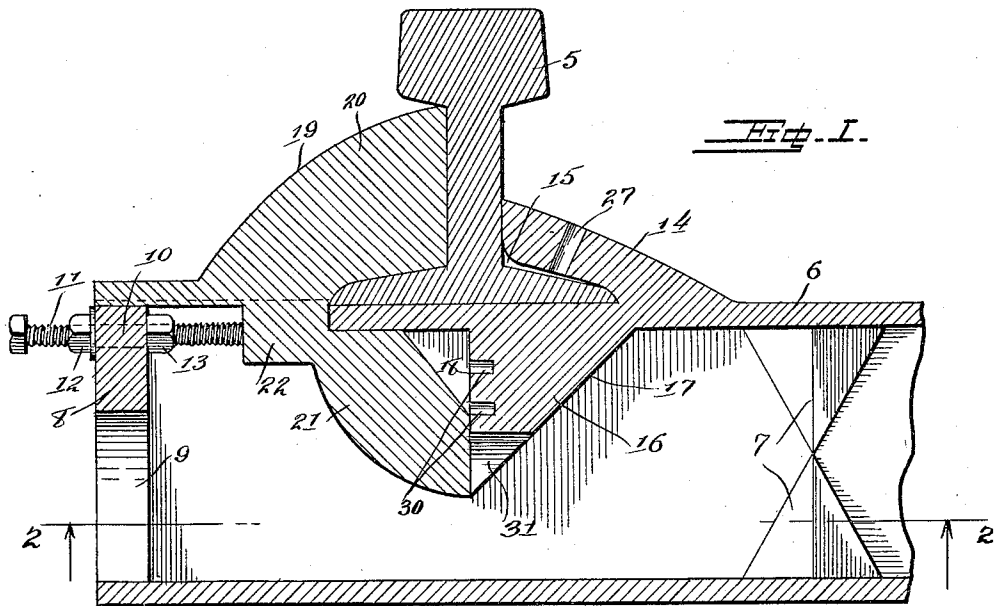


Fig. 1.

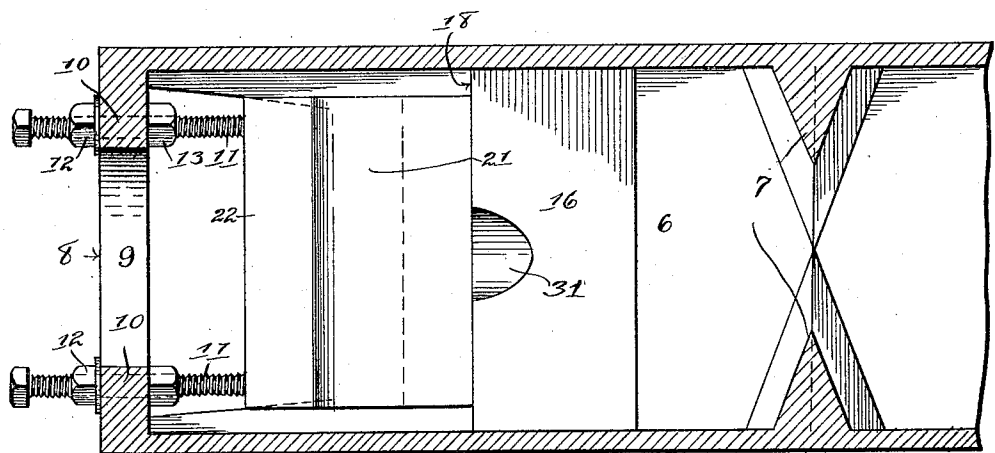


Fig. 2.

Witnesses
Edw. S. Hall.
B. F. Garvey Jr.

Inventor
Bartholomew J. Sheehe.

By Richard Owen.

Attorney

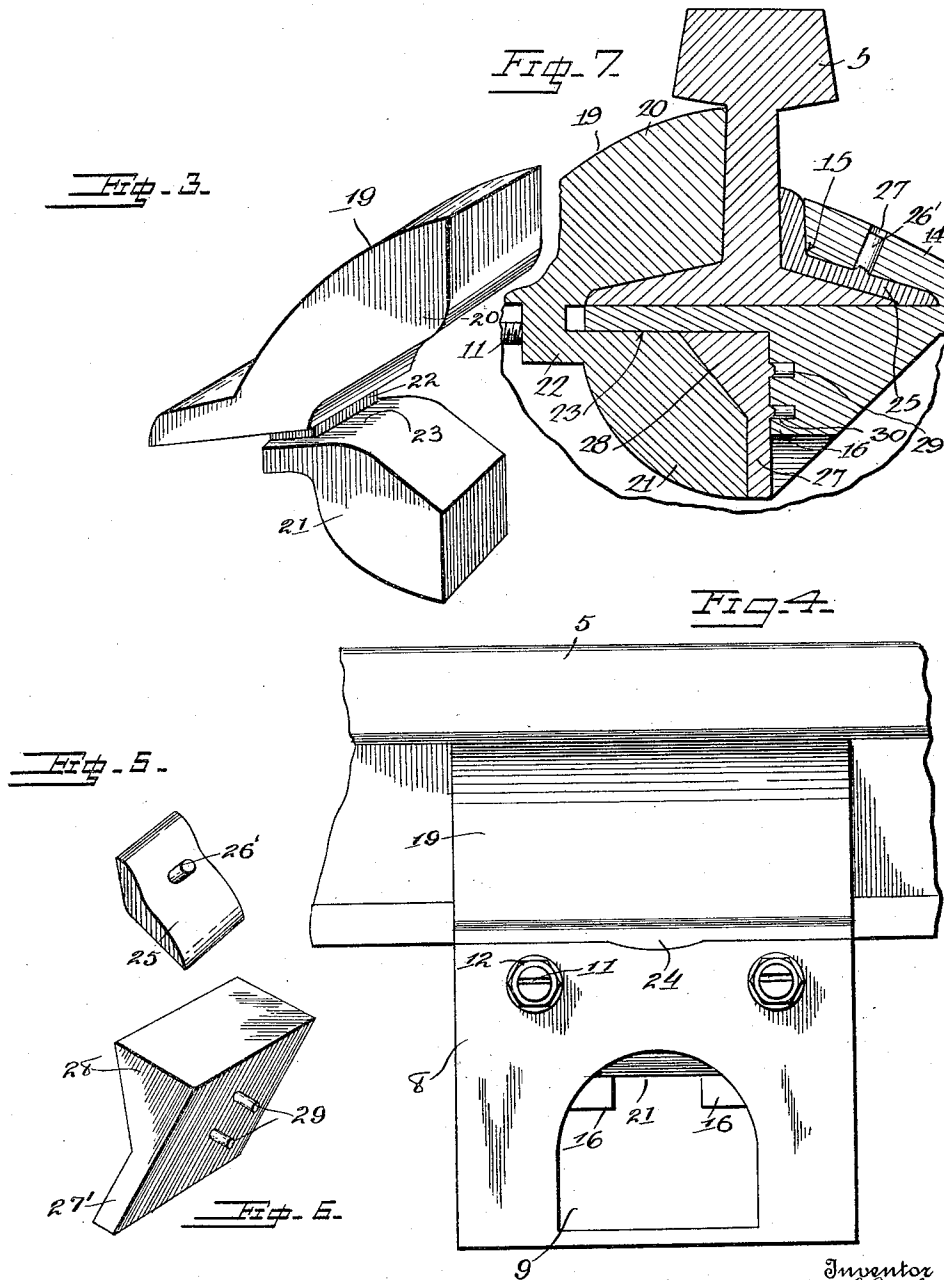
B. J. SHEEHE.
METALLIC TIE.

APPLICATION FILED MAY 15, 1914.

Patented May 11, 1915.

2 SHEETS—SHEET 2.

1,138,694.



Witnesses
Edw. S. Hall
D. J. Garvey, Jr.

Inventor
Bartholomew J. Sheehe.

By Richard Owen,

Attorney

UNITED STATES PATENT OFFICE.

BARTHOLOMEW J. SHEEHE, OF DUNKIRK, NEW YORK.

METALLIC TIE.

1,138,694.

Specification of Letters Patent.

Patented May 11, 1915.

Application filed May 15, 1914. Serial No. 838,805.

To all whom it may concern:

Be it known that I, BARTHOLOMEW J. SHEEHE, a citizen of the United States, residing at Dunkirk, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Metallic Ties, of which the following is a specification.

This invention relates to a combined metallic tie and rail fastener having for its primary object to eliminate the use of fish plates, likewise securing elements, such as spikes, etc., for securing the rails to the ties.

Another object of the invention is to provide an adjustably mounted space block in order to permit of the removal of the rails as desired, or for an adjustment of the rails on the ties should it be desired to widen the track.

A further object is to provide a simple and efficient device of this character which will be durable and inexpensive to manufacture, and at the same time, will positively prevent the accidental displacement of the rails, especially lateral thrust which is very often occasioned during the travel of the rolling stock around sharp curves.

Other objects as well as the nature, characteristic features and scope of my invention will be more readily understood from the following description taken in connection with the accompanying drawings and pointed out in the claims forming a part of this specification.

Referring to the drawings: Figure 1 is a longitudinal fragmentary sectional view of a tie constructed in accordance with my invention illustrating the application thereof, Fig. 2 is a horizontal sectional view taken on the line 2—2 of Fig. 1 and looking in the direction of the arrow, Fig. 3 is a detailed enlarged perspective view of the adjustable rail clamping member, Fig. 4 is an end view of the tie, showing a rail mounted thereon, and Fig. 5 is a detailed enlarged perspective view of a spacing plate used when it is desired to widen the track. Fig. 6 is a detailed enlarged perspective view of a spacing plate which is to be used on the interior of the tie and Fig. 7 is a longitudinal fragmentary sectional view of the tie illustrating the application of the spacing block, the latter being shown in cross section.

In the drawings wherein is illustrated the preferred embodiment of this invention in

order to illustrate the application thereof, a rail 5 is provided which in the present instance is of the usual construction comprising a head, web and base flange.

My improved tie as indicated on the drawings at 6 is in the present instance of the usual oblong configuration and has arranged therein reinforcing elements 7, so as to prevent the collapsing or incapacitating of the tie, should undue pressure be exerted thereon by the heavy rolling stock passing thereover, or the like. The opposite ends 8 of the tie are closed and provided with openings 9 through which communication is gained to the interior of the tie, for a purpose which will subsequently appear, said end plate being further provided with openings 10 through which are engaged bolts 11, jam nuts 12 and 13 being threaded on the bolt and engaged with the outer and inner faces, respectively, of the ends 8, so as to positively prevent the accidental displacement of the bolt 11 by the vibration caused when the rolling stock passes over the rails 5.

Extending from the upper face of the top of the tie 6 is a rail-engaging member or plate 14, which is preferably of an arcuate configuration so as to conform to the contour of the base flange of the rail, the free marginal edge of said plate being engaged with the web of the rail slightly above said base flange so as to provide a space 15 between the inner face of the plate 14 and the base flange of the rail 5. An abutment 16 depends from the inner face of the top of the tie, one face 17 of which is beveled and the opposite face 18 abrupt or straight, providing not only an abutment, but likewise, a reinforcement for the top of the tie, since the rail will be placed directly above this abutment and the greatest pressure on the tie will be at this point.

The opposite end of the tie is provided in its upper face with openings in which are adjustably mounted rail securing members or fasteners 19, each of which comprises a main section 20 for engagement with the web of the rail and the top of the tie and being integral with an auxiliary section 21 through the medium of a neck 22, said main section lying exterior of the tie while the auxiliary section 21 is arranged on the interior thereof, said auxiliary section having a portion 23 of its upper face straight for engagement with the inner surface of the top of the tie, thereby reinforcing the

top of the tie in conjunction with the abutment 16, directly beneath the rail 5 at the point where the greatest stress will be occasioned by the movement of the rolling stock over the rails. The neck 22 of the rail fastener provides a contact for the inner end of the bolts 11, in order to snugly engage the main section 20 of the fastener with the web of the rail when pressure is exerted on the bolt so as to force the same through the openings 10. In order to prevent lateral displacement of the rail fastener 19 from the tie, the fastener has an arcuate projection 24 extending from the inner face thereof which engages in a complementary recess in the end plate 8 of the tie, as advantageously illustrated in Fig. 4.

Should it be desired to widen the track at any time, a spacing plate 25 is provided which is of such a configuration as to be engaged in the space 15 so as to be snugly engaged between the plate 14 and the base flange of the rail, said spacing plate or block 25 having extending from its outer face a stud 26' which engages through a complementary opening 27 in the plate 14, so as to prevent the displacement of the block 25. It is, of course, obvious that the block 25 may be made elongated if so desired, in order to extend the entire width of the tie, or may be of any desired thickness as required, according to the distance which the rails 5 are to be placed.

A spacing block 27' is provided which is to be used on the interior of the tie between the members 16 and 21, said plate having a V-shaped lateral projection 28 on one face thereof for engagement in a corresponding cut out portion in the member 21 as advantageously illustrated in Fig. 1, the opposite face being straight for abutment with the face 18 of the member 16, said straight face provided with parallel studs 29 which engage in complementary recesses 30 in the member 16 thereby preventing accidental displacement of the spacing plate, at the same time permitting its expeditious removal in view of an opening 31 which is formed in the lower marginal edge of the member 16.

In operation, the rail 5 is first engaged with the fastening plate 14, after which the other fastening plate which cooperates with the plate 14 is engaged through the opening in the top of the tie and advanced into engagement with the rail, the main section 20 of said fastening member 19 being engaged with the web and base flange of the rail, while the neck 22 engages with the top of the tie and the auxiliary section 21 abuts the member 16, as shown to advantage in Fig. 1. In order to prevent the accidental displacement of the fastening member 19, from the rail 5, the bolts 11 are threaded into engagement with the neck 22 of the fastening

member, so as to snugly engage the latter with the rail and the abutment, said bolts being held from casual displacement by the jam nuts 12 and 13, which are engaged with the outer and inner faces, respectively, of the end 8. In order that access may be gained to the interior of the tie for manipulating the nuts 13, the opening 9 is provided which will allow the insertion of the arm, so that said nuts 13 may be readily turned by a wrench or an analogous tool. In using the spacing blocks 25 and 27', the fastening plates or members 19 are disengaged from the rail, thereby permitting lateral movement of the rail 5 toward the end of the tie and permitting the insertion of the block 25 between the base flange and the fastening plate 14, the studs 26' of said block being engaged through the opening 27, as previously pointed out. In this position, it is seen that the base flange of the rail does not extend to the terminal of the opening which is provided in the tie and fastening plate 14; therefore, consequently, the abutting of the auxiliary section 21 of the fastening member 19 with the abutment 16, is likewise prevented, leaving space for block 27'.

It will be understood that the above description and accompanying drawings comprehend only the general and preferred embodiment of my invention and that various minor changes in details of construction, proportion and arrangement of parts may be made within the scope of the appended claims and without sacrificing any of the advantages of my invention.

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

1. A hollow tie including a rail engaging portion formed on the upper face of the tie to brace the rail from lateral displacement in one direction, and having a portion depending on the interior of the tie, subjacent the rail to reinforce the tie, and a common means to coact with the bracing and reinforcing portion to brace the rail from lateral displacement in the opposite direction, and increase the reinforcing means.

2. A device as specified, including a metallic tie having a portion extending from the upper face thereof for engagement with the base flange of a rail, and a portion depending from the upper face of the top of the tie to form an abutment, and a base flange engaging member adjustably mounted in the tie and normally contacting with said abutment to reinforce said tie directly beneath said rail.

3. A metallic tie, in combination with a rail, including a rail engaging plate integrally formed with the top of the tie, and a rail fastening member adjustably mounted in the tie having a portion extending there-

above for engagement with the web and base flange of the rail, and a portion extending beneath the top of the rail so as to lie subjacent thereof for reinforcing the tie.

5 4. A metallic tie, in combination with a rail, including a rail engaging plate extending from the upper face of the tie, a rail-clamping member adjustably mounted in the tie for coöperation with said plate, and bolts
10 threaded through the end of the tie and being engaged with said clamping member for holding the same snugly in engagement with the rail.

15 5. A device as specified, including a tie having a portion of its upper face extended to provide a rail engaging plate, a rail clamping plate adjustably mounted in said tie for coöperation with said plate, bolts
20 extending through the ends of said tie and being engaged with said member for holding the same snugly in engagement with the rail, nuts engaged with said bolts on the end of said tie, said end provided with an open-

ing therein through which access is gained to the interior of the tie for manipulating
25 the nut mounted on the bolt within the tie.

6. A device as specified, including a tie, a portion of its upper face being extended to provide a rail-engaging plate having an opening therein, a rail clamping member
30 adjustably mounted in said tie for coöperation with said plate, and a spacing block adapted for detachable engagement with said rail engaging plate, said block having
35 a stud extending therefrom for engagement through the opening in said plate for preventing the accidental displacement of said block, and means mounted in the end of the tie for retaining the rail clamping member
40 snugly in engagement therewith.

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

BARTHOLOMEW J. SHEEHE.

Witnesses:

JOHN W. SHEEHE,
J. J. SULLIVAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."