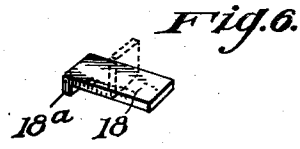
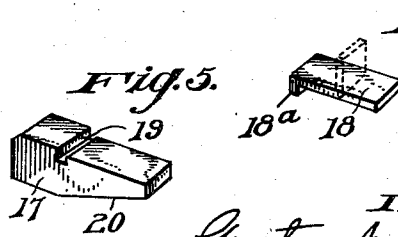
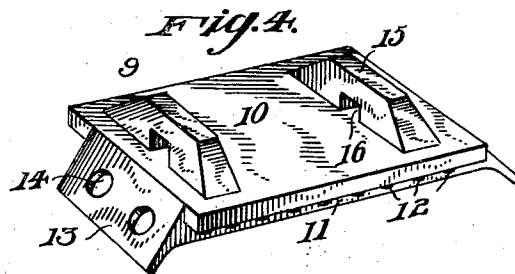
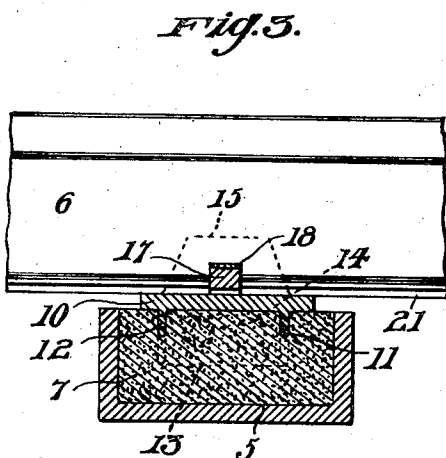
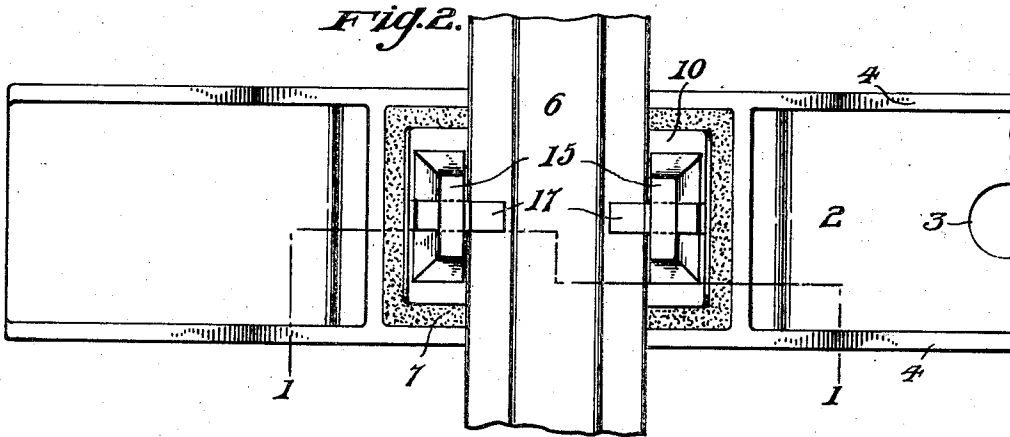
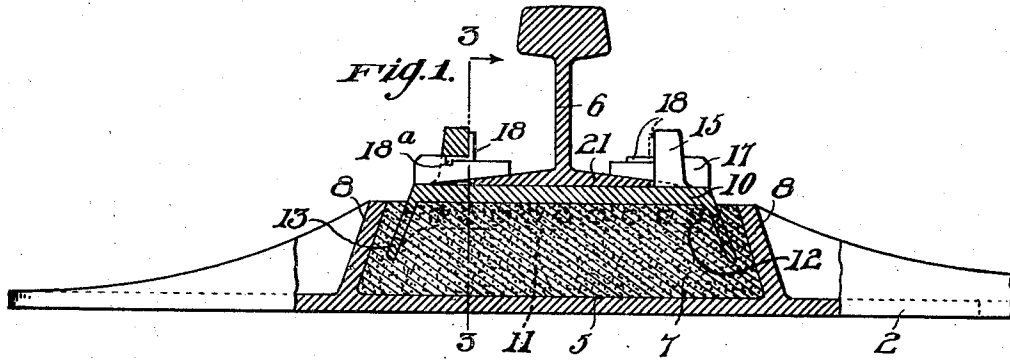


G. A. HASSEL.
METALLIC TIE AND RAIL FASTENING.
APPLICATION FILED SEPT. 29, 1908.

940,966.

Patented Nov. 23, 1909.



witnesses:

J. P. Hoffman,
A. C. Way

Inventor,
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Attorney

UNITED STATES PATENT OFFICE.

GUSTAV A. HASSEL, OF McKEESPORT, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH TRACK SPECIALTY COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF DELAWARE.

METALLIC TIE AND RAIL-FASTENING.

940,966.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed September 29, 1908. Serial No. 455,239.

To all whom it may concern:

Be it known that I, GUSTAV A. HASSEL, of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain
5 new and useful Improvements in Metallic Ties and Rail-Fastenings, of which the following is a specification.

My invention relates to improvements in metallic-ties, and an object of the present
10 invention is, to provide a new and improved metallic-tie.

A further object of my invention is to provide an improved tie-plate and rail fastening means employed in conjunction with
15 my tie.

A still further object of the present invention is to provide a simple and efficient method of insulation between the rails and the metallic-ties.

In the accompanying drawing which illustrates an application of my invention, Figure 1, is a part sectional view and a part
20 elevational view of a portion of a tie embodying my invention: Fig. 2, a plan; Fig. 3, a transverse sectional view, the section being taken on line 3—3 of Fig. 1; Fig. 4, a
25 detail perspective view of the tie-plate and Figs. 5 and 6 detail views of a clamp and key respectively.

Referring to the drawing, the metallic-tie proper as illustrated and as preferred, comprises an integral structure made of cast-steel and formed with a base-portion 2, preferably cut away as shown at 3, tapering side-flanges 4, and pockets or receptacles 5.
35 Pockets 5 are disposed near each end of the tie and are designed, when the ties are placed in position under the rails 6, to come directly under the bases of the rails. These
40 pockets are designed to receive and hold a suitable insulating filling 7, such as concrete, or some other plastic insulating material. By employing the insulating filling, I thereby provide a convenient and efficient
45 non-conductor of electricity between the rails and the metallic-ties.

Pockets 5, are each formed by a portion of the base and the side-flanges 4, and by transversely extending inclined walls 8, thus
50 forming pockets which are larger at their bottoms than at their tops, or pockets having a large base-portion and a somewhat contracted upper portion.

9 designates a tie-plate having a rail contacting or supporting-member 10, depending

longitudinally extending vertical flanges 11 formed with apertures 12, and depending transversely extending inclined flanges 13 formed with apertures 14. In addition to the parts mentioned, each tie-plate is provided with upwardly projecting engaging-members. As shown I employ two upright-members 15, extending upwardly from the upper face of member 10. Each member 15 is formed with an opening or slot 16 designed to receive a clamp-member 17 and a key 18. The form of clamp preferably employed is particularly shown by Figs. 1 and 2 and comprises a flat upper face formed with a groove 19 and an inclined face or bearing-member 20, the latter being adapted when in position to bear upon an upper face of the rail-base or flange 21.

By means of the engaging-members of the tie-plate and coacting members 17 I am enabled to secure the rails to the tie-plates without the employment of spikes.

The upright-members 15 are so disposed on the tie-plate as to be in contact with the sides of the rail-bases and act as guards therefor when the plate is in position.

Key 18 is formed with a flange 18^a adapted to fit into the groove 19 of clamp 17 and said key is adapted to be bent up into contact with member 15, as particularly shown by Fig. 1. The tie-plates are designed to rest upon the insulating filling in the pockets 5 with the downwardly projecting flanges thereof embedded in the filling.

What I claim is:

1. The combination with a metallic-tie having a pocket, an insulating filling in the pocket, of a metallic tie-plate having an upwardly extending-member, a downwardly extending member projecting into the pocket and embedded in the filling, and a member engaging the upwardly extending member of the tie-plate for securing a rail thereto.

2. The combination with a metallic-tie formed with a recess, of a metallic tie-plate having a member projecting upwardly therefrom and a member projecting into the recess, means for securing the tie-plate to the tie, and means engaging the upwardly projecting member for securing a rail to the tie-plate.

3. The combination with a metallic-tie having a pocket, of a filling in the pocket, a tie-plate having an apertured upright-mem- 110

ber, a downwardly extending member projecting into the pocket and embedded in the filling, and a clamp engaging the upright-member and the base of a rail.

5 4. The combination with a metallic-tie having a recess, a filling in the recess, of a metallic-tie-plate having an apertured upright-member and a member projecting into the recess, and means for securing a rail to
10 the tie-plate comprising a member projecting through the upright-member.

5. The combination with a metallic-tie having a recess, a filling in the recess, a metallic tie-plate having an apertured upright-
15 member and a member projecting into the recess, and means for securing a rail to the tie-plate comprising a grooved clamp-member projecting through the upright-member and a key extending into the upright-member
20 and having a portion located in the groove of the clamp-member.

6. The combination with a metallic-tie having a pocket formed with a large base portion and a contracted upper portion, a
25 filling in the pocket, a tie-plate having upright-members to engage a rail-base and downwardly extending members projecting

into the pocket and embedded in the filling, and a clamp-member engaging each upright member and a base of a rail. 30

7. The combination with a metallic tie-plate provided with two upwardly projecting apertured-members spaced apart to permit a rail to be moved vertically on to the tie-plate, of a clamp-member projecting 35 through each apertured-member, said clamp-member comprising a flat upper face formed with a groove and an inclined rail contacting-member, and a laterally inserted key entering each of the apertured-members 40 and having a portion located in the groove of the clamp-member.

8. A metallic tie-plate comprising an integral structure comprising a base portion, upwardly projecting apertured members, 45 transversely disposed inclined flanges, and longitudinally disposed vertical flanges.

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

GUSTAV A. HASSEL.

Witnesses:

A. C. WAX,

W. G. DOOLITTLE.