

D. C. BLOSE & M. SHULTZ.
RAIL TIE.
APPLICATION FILED JUNE 17, 1913.

1,089,309.

Patented Mar. 3, 1914.
2 SHEETS-SHEET 1.

Fig. 1.

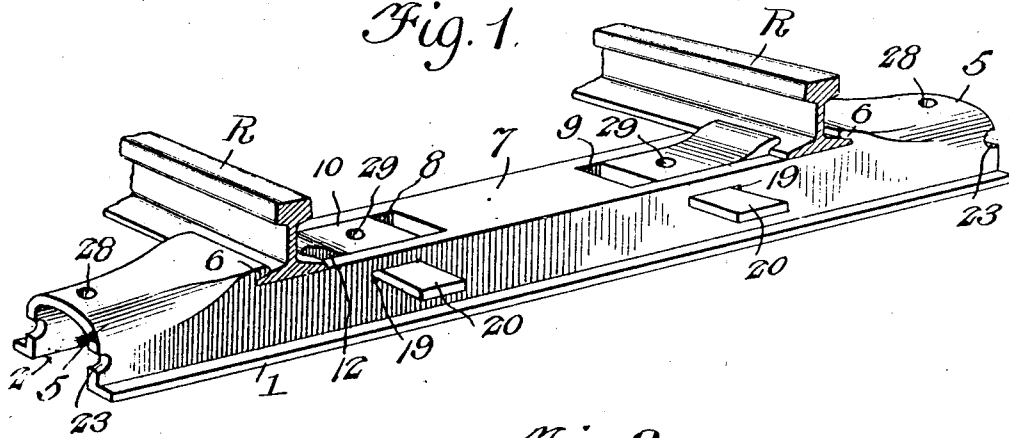


Fig. 2.

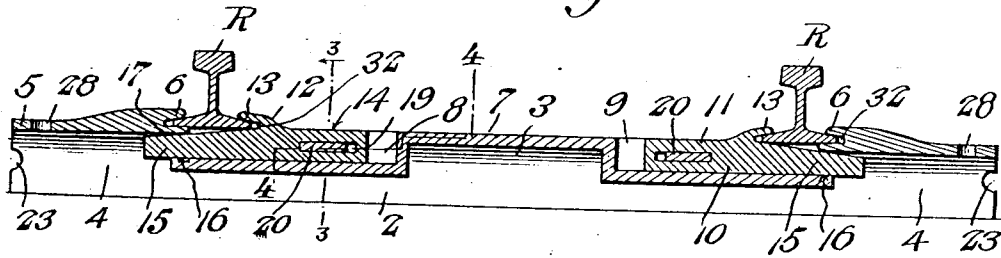


Fig. 5.

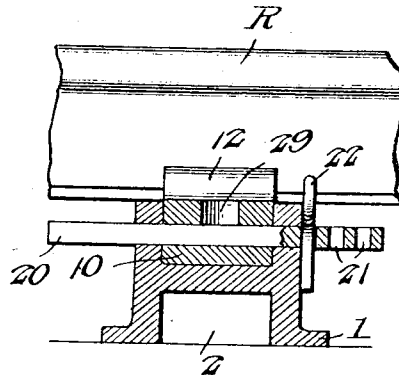
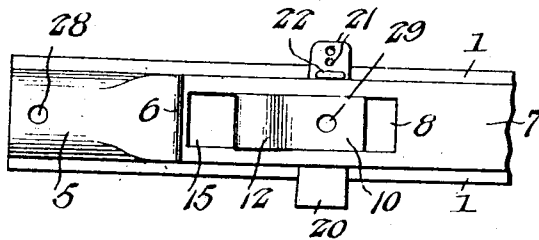


Fig. 6.

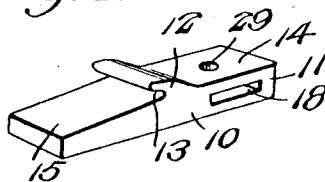


Fig. 3

Witnesses

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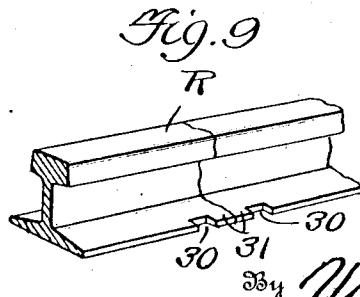
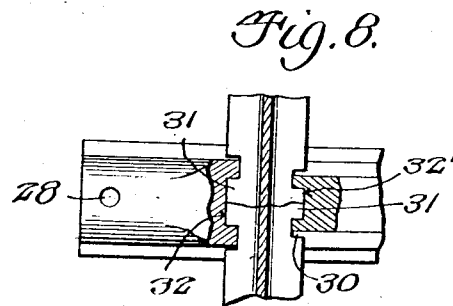
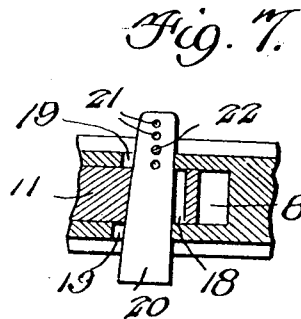
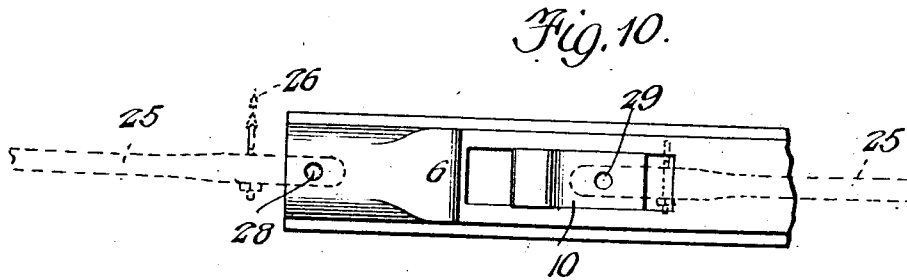
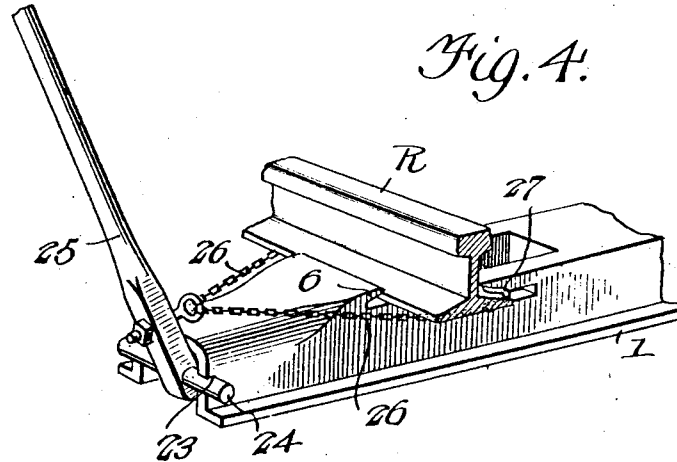
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UNITED STATES PATENT OFFICE.

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RAIL-TIE.

1,089,309.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, DANIEL C. BLOSE and MICHAEL SHULTZ, citizens of the United States, residing at Kaylor, in the county of Armstrong and State of Pennsylvania, have invented new and useful Improvements in Rail-Ties, of which the following is a specification.

The present invention relates to rails for railway-ties and rail retaining elements associated therewith, and the improvement resides in the construction, combination and arrangement of parts set forth in the following specification and falling within the scope of the appended claims.

In the drawings: Figure 1 is a perspective view of the improved tie illustrating the rails secured thereon, Fig. 2 is a central longitudinal sectional view through the same, Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 2, Fig. 4 is a view illustrating the manner whereby the rails will be forced into engagement with the rail engaging lips provided upon the tie. Fig. 5 is a top plan view of one of the ends of the ties, Fig. 6 is a perspective view of one of the rail engaging members associated with the tie, Fig. 7 is a detail horizontal sectional view on the line 4—4 of Fig. 2, Fig. 8 is a view illustrating the broken ends of a rail secured upon the tie, and Fig. 9 is a view of the said broken rail having its flanges shaped to be received upon the tie. Fig. 10 is a detail plan view illustrating by dotted lines the means for moving the tie transversely of the rail as well as the means whereby one of the rail engaging members is brought toward the rails.

My improved tie is preferably constructed of metal and embodies a rectangular member of a suitable size and shape which has its lower longitudinal edges provided with flanges 1, and its bottom channeled, as at 2, between the flanges, and the said channel is interrupted by depressions 3 and 4—4, the depression 3 being arranged centrally of the tie, while the depressions 4 are arranged at the ends of the tie and open into the said ends. The top of the tie adjacent the ends thereof is preferably rounded, as indicated by the numerals 5, the same being beveled from the ends inwardly toward the center of the tie, and the said rounded portions terminate in transverse beveled walls

which provide rail engaging lips 6. The portion of the tie between the lips 6 is flat or horizontally straight and is disposed a suitable distance below the upper walls providing the lips, the said flat face being indicated by the numeral 7. The flat top 7, at a suitable distance from the inner walls provided by the lip 6, is formed with longitudinally extending depressions providing pockets 8 and 9. Each of these pockets is adapted to receive a slidable rail retaining member 10 which have their main or body portions shaped to snugly engage within the said pockets. The solid portion of the tie is arranged over the central depression 3 of the said tie, and the rail retaining members 10 are each of a length greater than the length of the pockets 8 and 9.

Each of the rail retaining members comprises what we will term a body 11 which has its upper face formed with an extension or projection 12 which terminates in an angular transverse wall which provides a rail flange engaging lip 13. The portion of the body beyond the said lip is horizontally straight for a suitable distance, as indicated by the numeral 14, and the other portion has its upper face beveled or inclined, to provide what we will term fingers 15, and the said fingers 15 are adapted to pass through openings 16 that are provided upon the outer transverse walls of the pockets 8 and 9, the said openings having their upper walls beveled, as at 17. The body portions of each of the members 10 are formed with transversely arranged elongated slots or openings 18, and the sides of the ties are also provided with rectangular openings 19 which enter the pockets, one of the said openings being of a greater length than the adjacent opening, and the side walls provided by each of the openings are preferably inclined or beveled.

The numerals 20 designate keys which are adapted to pass through the openings 19 and 18, and the said keys have their longitudinal edges beveled or inclined from one of their ends to their opposite end and the keys are further adapted to exert a pressure upon one of the walls provided by the openings 18 to slide the members 10 toward the lips 6 of the tie. The keys 20 have adjacent their reduced ends, a plurality of openings 21, any one of which being adapted for the

reception of a securing element in the nature of a cotter pin 22.

The ends of the ties are formed with depressions 23 which are adapted to receive a cross bar 24 provided upon a handle member 25, the said handle being thus fulcrumed within the depressions 23, and connected with the handle are flexible elements 26 which have their ends provided with hooks 27, and the said hooks may engage with the base flanges of the rails R to move the said rails to bring their outer base flanges into engagement with the lips 6 of the ties. The rounded upper face of the tie, at its ends, is formed with openings 28 within which one of the projecting sides of the cross bar may be received, so that the tie may be moved transversely of the roadbed and the body of the rail securing members 10 are also provided with openings 29, which may receive one of the ends of the cross bar 24 so that the said member 10 may be quickly adjusted toward or away from the lip 6 of the tie as well as toward or away from the rail which is arranged upon the tie.

When our improved tie is to be employed for securing the broken ends of a rail, the said rail adjacent its broken portion has its base flanges sawed to provide depressions 30 and the ends of the base flanges with what may be termed hook 31, (see Fig. 8). With such an arrangement, the lips 6 are provided with longitudinally extending depressions 32 which have their lower walls arranged parallel with the wall of the flat top 7 of the tie below the said lip, and the lip 13 of the rail engaging flange of the rail engaging member 10 is also provided with a longitudinally extending slot or depression 32'. the said slots providing pockets for the hooks of the rail, and when the members 10 are properly adjusted with relation to the rails, it will be noted that the tie firmly supports a broken rail and retains the same against accidental movement in any direction.

From the above description, taken in connection with the accompanying drawings the simplicity of the device, as well as the advantages thereof will, it is thought, be perfectly apparent to those skilled in the art to which such inventions appertain without further detailed description.

Having thus described the invention, what we claim is:

1. A metallic tie having its lower edges flanged outwardly, its bottom channeled between the flanges, the said channeled bottom being provided with end depressions and with a central depression, the upper face of the tie at its ends being rounded and flared outwardly to provide transverse angular rail receiving lips, the top of the tie adjacent the lips being provided with pockets for the reception of longitudinally adjustable

rail engaging members, means for retaining the said members within the pockets, and means for locking the said members in an adjusted position upon the tie.

2. A metallic tie having its lower edges flanged, its bottom channeled between the flanges, the said channeled portion being provided with a central and end depressions, the upper face of the tie, at the ends thereof being rounded and terminating in transversely arranged outwardly inclined rail receiving lips, the portion of the tie between the lips being horizontally straight and being provided with longitudinally extending depressions, the outer walls of which terminating adjacent the lips, and the inner walls of which terminating adjacent the central depression of the tie, said depressions forming pockets for the reception of longitudinally movable rail engaging members, means for locking the members within the pockets, and said means also sustaining the members in an adjusted position.

3. A metallic tie having its lower edges flanged outwardly, its bottom channeled between the flanges, the said bottom being provided with a central depression and with end depressions, the upper face of the tie being rounded and terminating in transverse angular rail receiving lips, the portion of the tie between the lips being straight and disposed below the lips, the said straight portion being formed with pockets which are disposed adjacent the lips, the walls of the pockets adjacent the lips being provided with openings which enter the end recesses of the tie, and the upper walls provided by the openings being beveled, rail sustaining members of a greater length than the pockets, each of said members comprising a body portion formed with a lip, a flat portion extending beyond the lip, and a beveled portion projecting from the flat portion and adapted to pass through the openings in the ends of the pockets and to contact with the inclined walls provided thereby, the members having their bodies provided with transverse elongated slots, the sides of the tie having transverse openings which enter the pockets, wedge members passing through the slots of the ties and the slots of the rail engaging members for adjusting the said members with relation to the rail engaging lips of the tie and for sustaining the said members within the pockets, and means for locking the wedge keys.

4. A tie having its lower edges flanged outwardly, its bottom channeled between the flanges, its upper face adjacent its ends rounded and terminating in rail engaging lips, longitudinally adjustable rail engaging members upon the ties and adapted one to co-act with each of the lips of the tie, each of said members being formed with rail engaging lips, means for securing the said

members in an adjusted position upon the tie, and the lips of the tie at their juncture with the tie being formed with depressions which are adapted to register with similar
5 depressions formed in the lower portion of the lips of the adjustable rail engaging members.

In testimony whereof we affix our signatures in presence of two witnesses.

DANIEL C. BLOSE.
MICHAEL SHULTZ.

Witnesses:

FRANK CROW,
PETER OLCUS.
