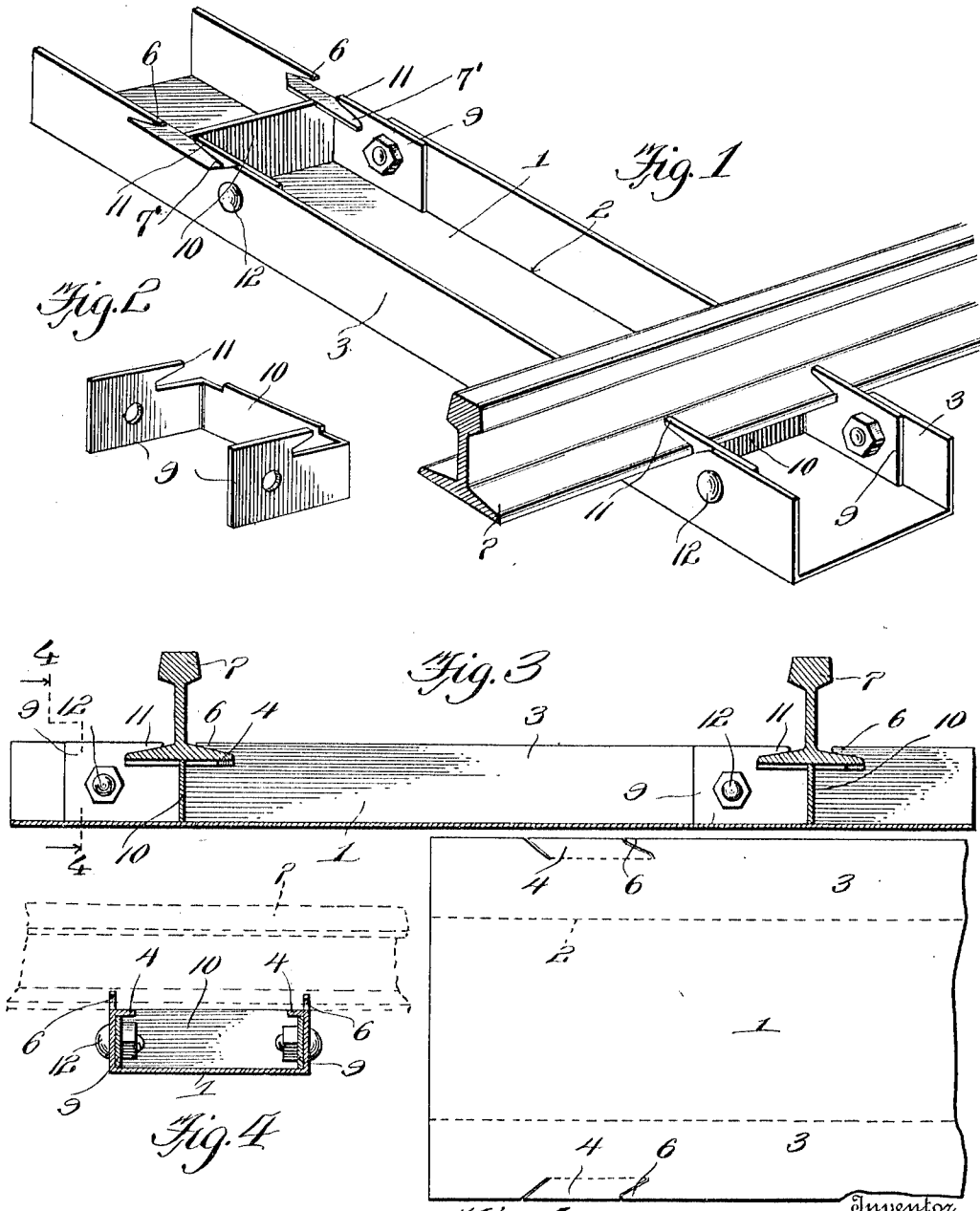


G. E. HUMPHREY.
RAILROAD TIE.
APPLICATION FILED MAY 6, 1911.

1,001,407.

Patented Aug. 22, 1911.



Witnesses
W. S. Lowell
[Signature]

Fig. 5
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UNITED STATES PATENT OFFICE.

GEORGE E. HUMPHREY, OF MEDFORD, OREGON.

RAILROAD-TIE.

1,001,407.

Specification of Letters Patent. Patented Aug. 22, 1911.

Application filed May 5, 1911. Serial No. 625,129.

To all whom it may concern:

Be it known that I, GEORGE E. HUMPHREY, a citizen of the United States, residing at Medford, in the county of Jackson and State of Oregon, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to metallic railway ties, and the primary object of the invention is to provide a tie having its body formed of a single piece of metal, bent to provide sides, and the said sides being slitted and the metal provided thereby being bent downwardly to provide seats for the base flanges of the rails, the tie being further provided with brace elements having sides formed with angular extensions which engage with the said bent portions of the sides of the tie and which are adapted to engage with the base flanges upon this side of the rails.

With the above object in view, and others which will be more apparent as the nature of the description progresses, the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings—Figure 1 is a perspective view of a tie constructed in accordance with the present invention, a rail being shown in clamped position upon one of the ends of the tie. Fig. 2 is a perspective view of one of the brace and rail supporting members. Fig. 3 is a central longitudinal sectional view of the device. Fig. 4 is a transverse sectional view upon the line 4—4 of Fig. 3. Fig. 5 is a view of the blank from which the tie is constructed.

In the accompanying drawings, the numeral 1 designates the tie. This tie, as illustrated in Fig. 5 of the drawings, is constructed of a single blank of metal. The metal is of a rectangular formation, and is provided with longitudinally extending score lines 2, the portions extending beyond the said scores being bent upwardly to form the sides 3. The said sides 3, adjacent the opposite ends thereof, are provided with angular slits, and the metal between the said slits is bent downwardly to provide rail supporting off-sets or shelves 4. These shelves 4 are arranged at a right angle to the vertical sides 3, and it will be noted that the inclined portions of the sides which overlie

the said shoulders 4 provide engaging flanges 6 which are adapted to contact with the base flanges of the rails 7. It will be further noted that the shoulders opposite the said engaging flanges 6 have their edges inclined toward the sides 3, the said inclined portions being adapted to serve as pockets 7' which are adapted to receive the reduced side walls 9 of substantially U-shaped brace and rail supporting members 10. The side walls 9 of the said elements 10 are formed with openings, and these openings are adapted to align with similar openings provided in the sides 3 of the tie. These registering openings are adapted for the reception of suitable securing elements, such as bolts and nuts as illustrated in the drawings. By reference to Fig. 2 of the drawings, it will be noted that the connecting wall of the U-shaped member 10 underlies the downturned portions or shelves 4, and thus effectively supports the said shoulders. It will be further noted that the enlarged portions or ends of the sides 9 of the member 10 have their inner edges inclined to provide rail engaging flanges 11, and the said flanges engage with the base flanges of the rail opposite to that contacted by the flanges 6 of the sides.

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. It will be noted that the hollow or U-shaped tie may be readily filled with the ballast of the road to prevent either the lateral or the longitudinal movement of the tie, and that the U-shaped members 10 sustain the sides of the tie in proper spaced relation with each other, thus effectively reinforcing the tie as well as supporting the downturned portions or shoulders 4 of the tie.

Having thus fully described the said invention, what I claim is:—

1. A metallic tie comprising a substantially U-shaped member, said member having its sides adjacent the ends thereof formed with annular slits, the metal between the said slits being bent downwardly to provide shoulders, and substantially U-shaped brace members having reduced portions underlying the shoulders and the enlarged side portions thereof and having their edges inclined

from their reduced portions toward the inclined projecting portions provided by the annular slits of the sides of the tie.

2. A tie for railway rails constructed of a blank of metal, said metal being bent to provide sides and a face, the sides adjacent their ends being formed with slits, all of said slits being arranged at a common angle, the metal between the slits being bent downwardly to form shoulders, said shoulders being arranged at right angles to the sides, the shoulder overlying the angular portions of the sides provided by the slits adapted to engage the base flange upon one side of the rail, the inclined portion of one of the ends of each of the shoulders adapted to

serve as a pocket, a U-shaped brace member having a reduced portion engaging the said pockets and underlying the oppositely arranged shoulders, the enlarged sides of the said U-shaped members having their edges inclined to provide flanges adapted to engage the base flanges of the rails opposite those engaged by the angular portions of the sides, substantially as described.

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

GEORGE E. HUMPHREY.

Witnesses:

T. W. DAILY,
L. L. SMALL.

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