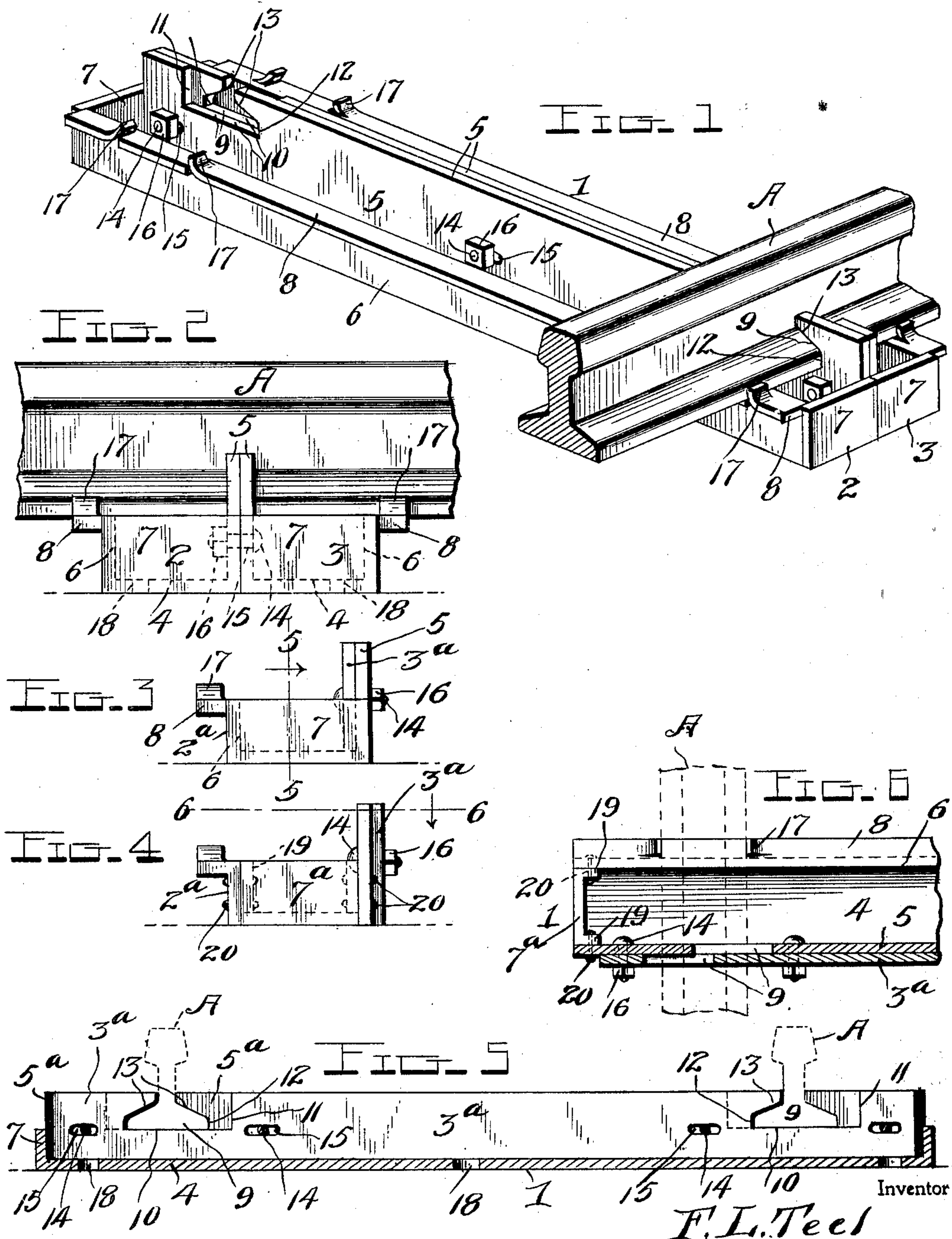


No. 756,733.

PATENTED APR. 5, 1904.

F. L. TEEL.
METALLIC RAILROAD TIE.
APPLICATION FILED AUG. 27, 1903.

NO MODEL.



Witnesses

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METALLIC RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 756,733, dated April 5, 1904.

Application filed August 27, 1903. Serial No. 171,019. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN L. TEEL, a citizen of the United States, residing at Logan, in the county of Harrison and State of Iowa, have invented certain new and useful Improvements in Metallic Railroad-Ties; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railroad-ties, and particularly to certain new and useful improvements in the metallic tie shown and described in my patent numbered 724,412 and dated March 31, 1903.

The object of my present invention is to improve and simplify the construction of a device of this character, and thereby render the same stronger and more durable and effective in use.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved tie, showing one of the railroad-rails secured thereto. Fig. 2 is an end elevation of the same. Figs. 3 and 4 are end elevations of modified forms of my improved tie. Fig. 5 is a vertical longitudinal sectional view taken on the line 5 5 of Fig. 3. Fig. 6 is a detail horizontal sectional view of one end of the tie, taken on the line 6 6 of Fig. 4.

Referring more particularly to Figs. 1 and 2 of the drawings, the numeral 1 denotes my improved metallic railroad-tie, which comprises two similar counterpart members 2 and 3, as shown in the drawings. Each of said members is in the form of an open-top rectangular trough or box, which comprises a bottom or base 4, an inner side 5, an outer side 6, which is of less height than the side 5, and two ends 7. While the members or sections 2 and 3 may be cast or otherwise formed, they are preferably constructed of heavy galvanized sheet iron or steel, the sides and ends being bent up at right angles from the body por-

tion, so that the members are substantially L-shaped in cross-section. The outer side 6 of each member is formed with a longitudinally and outwardly projecting flange or rib 8, which is bent at right angles to the side 6 and which lies in a horizontal plane at the upper edge of the same. The inner side 5 of each member is formed with two incisions or recesses 9, in which the railroad-rails A are adapted to seat. Each of said incisions or seatings comprises a bottom portion 10 in alinement with the upper surface of the flange 8, a straight vertical portion 11, a short vertical portion 12, and an overhanging portion 13, shaped so as to fit snugly and closely upon the bottom and against the web of the rail A. The overhanging or undercut portion 13 of each of the two seatings in each member project in the same direction, so that when the two members 2 and 3 are brought together with their inner sides 5 contiguous and with the rails A in said seatings the portions 13 on the two members will engage the opposite sides of the base-flange and web of the rails and securely clamp the same down upon the tie. The bottom of the rail rests upon the bottom portions 10 of the seatings and upon the upper surface of the flanges 8 on the outer sides 6 and is thus substantially supported. In order to secure the two members together and upon the rails, bolts 14 are passed through alining openings or apertures 15 in the inner sides 5, and nuts 16 are screwed upon said bolts to securely clamp said members together. The apertures 15 in one or in both of said members 2 and 3 are made elongated, as shown, to permit said members to be moved or shifted longitudinally with respect to each other to adjust the tie upon the rails and to readjust the same when the parts become worn.

In order to attach the tie more firmly and to lessen the liability of the tie shifting laterally upon the rails after it has been secured, the flanges 8 on one or both sides of the base-flange of the rails are bent up, as shown at 17, to form stop-shoulders, which engage said base-flange of the rail and prevent the tie from slipping longitudinally.

If desired, the troughs formed by the sides and ends of the members 2 and 3 are filled

with a suitable ballast, and suitable openings 18 are formed in the bottoms of the members to permit the water collecting in said troughs to escape. In laying the track earth, gravel, or ballast of any description is packed around the sides and ends of the ties, so as to hold them more securely in place and to prevent any liability of the track shifting laterally.

In Figs. 3 to 6 of the drawings I have shown several modifications of my invention. As illustrated in Figs. 3 and 4, I may construct the tie of but one member, 2^a, by substituting for the other member, 3^a, a slot-bar 3^a, which is identical in construction to the inner side of member 3, as clearly shown in Fig. 5. Said slot-bar 3^a is secured to either the inner face of the side 4^a of member 2^a, as shown in Fig. 3, or to the outer face of said members, as shown in Fig. 4. Bolts or other fastening means are employed to securely lock the rails to the tie member 2^a, as previously described. When the slot-bar 3^a is secured upon the inner face of the side 5^a, as shown in Figs. 3 and 5, its bottom or lower edge rests upon the bottom of the trough, thereby supporting said bar and relieving the fastening-bolts of a great portion of the strain. In Fig. 6 I have shown the bent-up end 7^a provided with right-angled inwardly-projecting flanges 19, which are secured by bolts 20 to the ends of the sides 5 and 6 of each member, thus securely fastening the ends and sides together in order to give the tie greater strength.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. A metallic tie comprising a member substantially L-shaped in cross-section, the shorter vertical member or side having a horizontal flange at its upper edge and the higher vertical member or side having incisions the bottoms of which come in alinement with the upper surface of the flange of said shorter member or side, and stop-shoulders upon said flange adapted to engage the sides of the rail, substantially as described.

2. A tie comprising two counterpart members substantially L-shaped in cross-section, the shorter side of each member having a horizontal flange along its upper edge and the higher side having seatings for the rails, the bottoms of said seatings being in alinement with the upper surface of said flange, stop-shoulders formed on said flanges in alinement with said seatings in the higher sides, and means for uniting said members with their higher sides contiguous so as to clamp and hold the rails, substantially as described.

3. A metallic tie comprising a rectangular box-like body or shell having closed ends and sides of unequal height, the shorter side having a horizontal flange along its upper edge and the higher side having rail-seatings formed therein, the bottoms of said seatings being in alinement with the upper surface of said flange, stop-shoulders formed on said flange in alinement with said seatings, in combination with railroad-rails and means for securing said rails in said seatings and between said stop-shoulders, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANKLIN L. TEEL.

Witnesses:

C. S. BROWN,
J. C. JOYCE.