

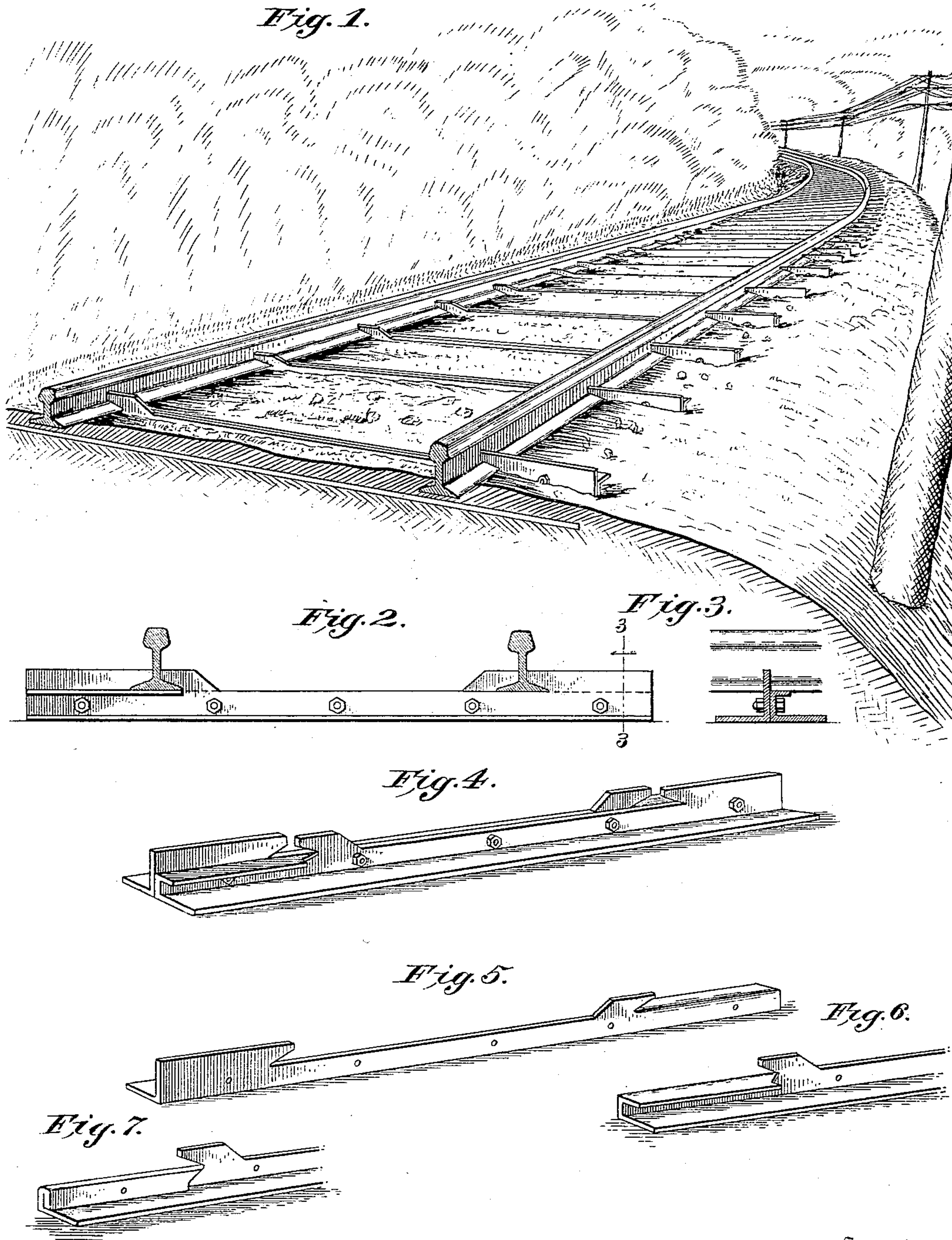
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Patented Jan. 24, 1899.

E. L. BROWN.
RAILWAY TIE.

(Application filed Jan. 20, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

EDWARD L. BROWN, OF CALVERTON, NEW YORK.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 618,220, dated January 24, 1899.

Application filed January 20, 1898. Serial No. 667,239. (No model.)

To all whom it may concern:

Be it known that I, EDWARD L. BROWN, a citizen of the United States, residing at Calverton, in the county of Suffolk and State of New York, have invented a new and useful Railway-Tie, of which the following is a specification.

My invention relates to railway-ties, and more especially to that class of railway-ties made wholly or partially of metal.

The object of my invention is to provide a railway-tie of the class described comprising two duplicate parts of improved construction which when brought together will form a complete tie and rail-clamping device.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view illustrating my invention in practical operation. Fig. 2 is a transverse section through the rails of the track, illustrating my improved tie in side elevation. Fig. 3 is a transverse section through the tie on the line 3 3 of Fig. 2, looking in the direction of the arrow, illustrating the rail in side elevation. Fig. 4 is a perspective view of one of my improved railway-ties as it appears when complete and applied to the rails, the rails in this instance being omitted. Fig. 5 is a detail perspective view of one of the duplicate members of the tie. Fig. 6 is a fragmentary detail perspective view of one end of one of my improved duplicate members. Fig. 7 is a similar view of a modified form thereof.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

In the practical embodiment of my invention I have provided two members which are duplicates of each other, each comprising a flat horizontal portion A and a vertical flange B. The central upper portion of the vertical

flange, as at C, is cut away so as to leave a hook D near one end, and the portion near the outer end, as at E, is cut away likewise, leaving a hook F, pointing in the same direction, and about one-half of the height of the flange being left to form a support for the base of the rail. These two hooks are duplicates of each other and are formed at a distance apart to suit the gage of the railway upon which they are to be applied, the hooks D and F being intended to engage the outside of the flange or base of one rail and the inside of the flange or base of the other.

It will be readily understood that when two members constructed exactly alike, as hereinbefore described, are brought together, as shown in Fig. 4, with their upright flanges B against each other and the horizontal or base portions A lying in the same horizontal plane, the hooks D and F on one will stand opposite the hooks D and F of the other in positions to embrace the outer and inner sides of the flanges G of the rails H, as clearly shown in Fig. 2. When so brought together and tightened up against the flanges of the rails, the vertical flanges of the duplicate members may be secured together in any suitable manner—as, for instance, by means of bolts I, as shown—said flanges being provided with bolt-holes J, as shown in Fig. 5, to receive the bolts.

When the horizontal or base flanges of the duplicate members are properly embedded in the ground and the adjacent duplicate members secured together, as hereinbefore described, the rails will be supported at a slight distance above the horizontal flanges of the tie and securely held against spreading or rising from the ties by means of the hooks D and F and will be held from rising from the ground by reason of the embedding of the horizontal flanges A therein. The rails when held by these members, as before described, will rest upon the upper edge of the vertical flange B of the duplicate members, which will give a bearing to each rail of double the width of the thickness of the vertical flange and leave room to pack ballast upon the horizontal flanges and beneath the rails, and in order to afford a still wider bearing that portion of the vertical flange which was cut away at E (marked E') is bent over and downward

against the vertical flange, as shown in Fig. 7, or simply bent over into a horizontal plane, as shown in Fig. 6. When bent as shown in Fig. 7, a bearing will be afforded for the rail
5 of a width equal to four times the thickness of the vertical flange of one of the duplicate members, and when bent as shown in Fig. 6 a bearing will be provided of twice the width of the portion E', turned over from the ver-
10 tical flange, as shown.

It will be obvious from the foregoing description that with a cross-tie constructed in accordance with my invention no spikes will be necessary in order to secure the rail to the
15 tie and that the tie may be made of comparatively light metal, the tendency of the rails to spread being counteracted by the whole strength of the tie.

While I have illustrated and described the
20 best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown, but hold that any slight changes such as might suggest themselves to
25 the ordinary mechanic would properly fall within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

30 1. A railway-tie, comprising two duplicate metal members, each of which consists of a horizontal or base flange and a vertical flange, said vertical flange being cut away centrally

to form a hook to embrace the outer flange of one rail, and having a portion of the metal
35 at its opposite end turned aside leaving a hook to embrace the inside flange of the other rail and to form a widened support for the rail, substantially as described.

2. A railway-tie, comprising two duplicate
40 metal members, each of which consists of a horizontal or base flange and a vertical flange, said vertical flange being cut away centrally to form a hook to embrace the outer flange of one rail, and having a portion of the metal
45 at its opposite end turned aside and bent down to a vertical position against the vertical flange, leaving a hook to embrace the inside flange of the other rail and to form a
50 widened support for the rail, substantially as described.

3. A railway-tie, comprising two duplicate metal members, each of which consists of a horizontal or base flange and a vertical flange,
55 said vertical flange being cut away centrally to form a hook to embrace the outer flange of one rail, and having a portion of the metal at its opposite end turned aside leaving a hook to embrace the inside flange of the other rail
60 and to form a widened support for the rail, said members being bolted together in reverse position, substantially as described.

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Witnesses:

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