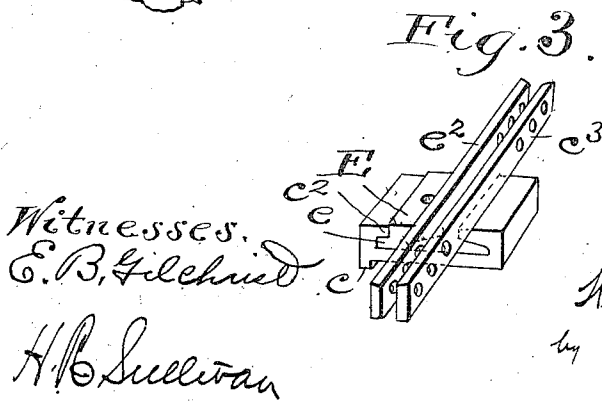
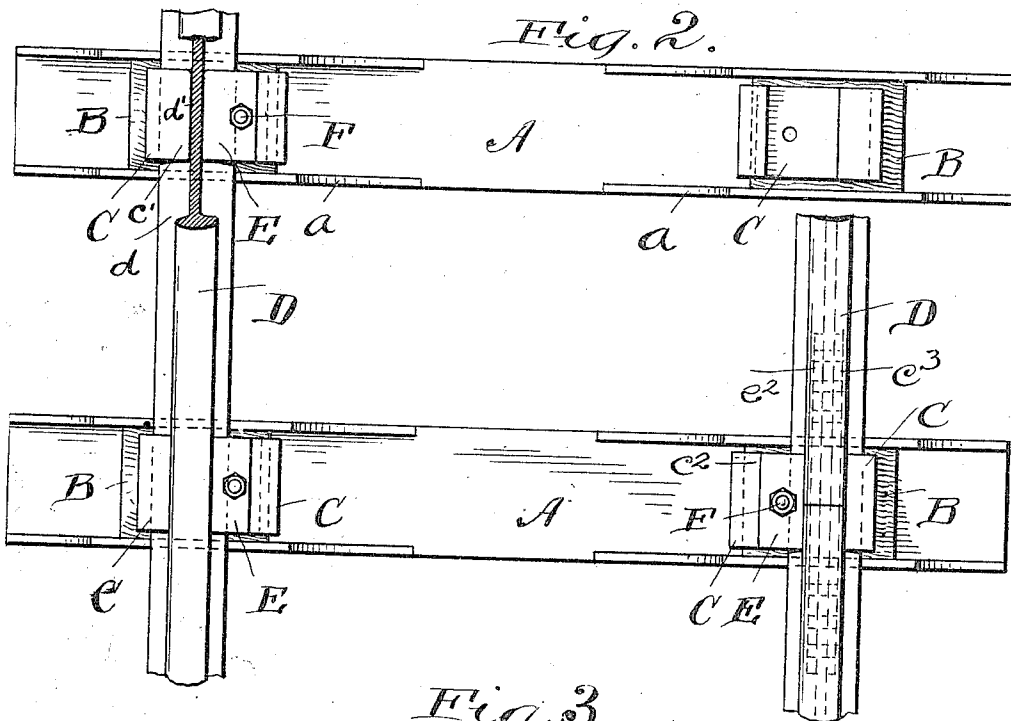
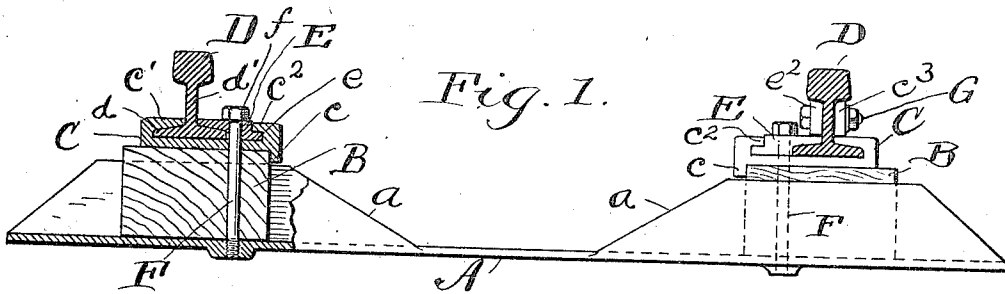


W. H. KIRKBRIDE.
 MEANS OF SECURING AND SUPPORTING RAILWAY RAILS.
 APPLICATION FILED NOV. 30, 1910.

1,004,277.

Patented Sept. 26, 1911.



Witnesses.
 E. B. Gilchrist
 H. B. Sullivan

Inventor.
 William H. Kirkbride
 by Thurston & Kwois
 Attorney

UNITED STATES PATENT OFFICE.

WILLIAM H. KIRKBRIDE, OF CLEVELAND, OHIO.

MEANS OF SECURING AND SUPPORTING RAILWAY-RAILS.

1,004,277.

Specification of Letters Patent.

Patented Sept. 26, 1911.

Application filed November 30, 1910. Serial No. 594,838.

To all whom it may concern:

Be it known that I, WILLIAM H. KIRKBRIDE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Means of Securing and Supporting Railway-Rails, of which the following is a full, clear, and exact description.

10 This invention is intended to take the place of the ordinary wood ties, metal tie plates, and spikes which are commonly employed to support and hold railway rails in proper relation, and to accomplish, in a
15 more satisfactory degree and at less expense, the results for which these parts are used.

The invention in its entirety includes a metal tie having near its end up-
20 turned sides, wood cushioning blocks fitted between said upturned sides, rail supporting metal plates which rest upon said blocks and are each provided at its inner end with a down-turned flange which en-
25 gages with the end of the associated wood block,—each plate having also a rail retaining member which overhangs the outer rail foot, and a clamping plate which interlocks with the supporting plate and
30 overhangs the other rail foot,—all of said parts being held in working relation by a screw which passes through this clamping block and through the metal plate, and through the wood block, and which screws
35 into the metal tie. The various combinations of these parts and the specific forms thereof, as set forth in the claims, constitute the invention covered by this patent.

In the drawing, Figure 1 is a vertical section taken transversely of the two rails, and on one side going centrally through the tie and the parts thereby supported. Fig. 2 is a plan view of two ties, and rails supported thereby, the rail on one side having its ball
45 broken away adjacent to one tie, and the rail being entirely broken away at the other end of the tie, so as to show the rail supporting devices from which the clamping plate has been omitted. Fig. 3 is a per-
50 spective view of the rail supporting plate and the clamping plate when extended lengthwise of the rail so as to serve the additional purpose for which fish plates are commonly used, namely, to connect the
55 meeting ends of rails and prevent their dis-

alignment. This same construction is shown at the right side of Fig. 1.

Referring to the parts by letters, A represents a metallic tie which is provided adjacent to each end with vertical side
60 flanges *a*.

B, B, represent cushioning wood blocks which rest upon the bottom member of the tie and fit more or less tightly between the two side flanges *a*. 65

C represents a rail supporting plate; and one of these rests upon each wood block. Each plate C has a down-turned flange *c* along its inside edge, so that when the plate rests upon the block B this down-turned
70 edge engages with the end of the block and acts to prevent any outward movement of said plate independently of the block. Near its outer edge each plate is formed with an overhanging flange *c'*, so formed that when
75 the rail rests upon the plate C the outer rail foot *d* will pass under this overhanging flange and fit the space beneath the same; and the end of said flange will preferably engage with the rail web *d'*. Near its inner
80 edge the plate C has an undercut groove *c''*. E represents a clamping plate having along its outer edge a rib *e* adapted to enter said undercut groove, and thereby to interlock with said rail supporting plate. 85
This plate is so shaped that it will overhang the inner foot *d* of the rail, and, when clamped down, bear upon this foot *d* and also preferably bear against the rail web *d'*.

F represents a holding screw which passes
90 down through a hole in the clamping plate E and through a hole in the said supporting plate C, and through another hole in the block B, and it screws into the lower member of the tie, thereby securely fas-
95 tening all the parts together, and securely holding the rail in the position shown. It is evident that there can be no outward movement of the plate C and the rail thereon independent of the block
100 B, and that there can be no movement of the block B upon the tie,—the bolt F being quite sufficient in practice to prevent this outward movement. The hole in the rail supporting plate C is so placed that
105 the shank of the screw F in passing down through said hole will be very close to the edge of the rail foot, and the head *f* of said screw while bearing on plate E will never-
theless overhang the rail foot. This con-

struction contributes not a little to the rigidity of the connection between the described parts.

The described construction with some additions will serve the purpose for which fish plate are commonly used. Fig. 3 shows the construction so modified. The flange c' is formed with a longitudinally extended plate c^2 , which is formed to fit against the web of the rail. The clamping plate E is likewise formed with a longitudinally extended plate e^2 which lies against the opposite side of the rail web. Bolts G which go through holes in these plates and in rail hold the parts in the described relation.

Having described my invention, I claim:

1. A railway track supporting device comprising a metallic tie having near its ends up-turned side members, wood blocks resting upon said tie and fitted between said side members, a rail supporting plate resting upon each block and having a down-turned flange along its inner edge for engagement with the inner end of the associated wood block, and having an integral rail restraining flange adapted to overhang and engage with the outer foot of a rail resting upon said plate, a clamping plate which interlocks along its inner edge with the rail supporting plate and overhangs and engages the inner foot of the rail, and a screw passing through each clamping plate and rail supporting plate and wood block and screwing into the bottom member of the tie.

2. A rail supporting device comprising a metallic tie having near its ends up-turned side members, wood blocks resting upon said tie and fitted between said side members, a rail supporting plate resting upon each block and having a down-turned flange along its inner edge for engagement with the inner end of the associated wood block and having near said inner end an upwardly extending flange which is undercut, a clamping plate whose inner edge passes beneath

the undercut edge of said flange and which overhangs and engages the inner foot of the rail, and a screw which passes through each clamping plate and rail supporting plate and wood block, and screws in the lower member of the tie.

3. A rail supporting device, comprising a metallic tie having near its ends up-turned side members, wood blocks resting upon said tie and fitted between said side members, a rail supporting plate having a down-turned flange for engagement with the inner end of the wood block and having a retaining member adapted to overhang and engage with the outer foot of a rail resting upon said plate, said rail supporting plate having also near its inner edge an undercut groove, and a clamping plate adapted at its outer edge to pass into this groove, and at its outer edge to overhang and rest upon the inner foot of the rail, and a holding screw passing through this clamping plate, rail supporting plate and block, and screwing into the bottom member of the tie.

4. In a railway track supporting device, a rail supporting plate having a down-turned flange along its inner edge and having an integral rail restraining flange near its other edge adapted to overhang and engage with the outer foot of a rail resting on said plate, said flange having a longitudinally prolonged substantially vertical plate adapted to engage the face of the rail web, combined with a clamping plate which interlocks along its inner edge with the rail supporting plate and which overhangs and engages the inner foot of the rail and which is provided with a substantially vertical and longitudinally prolonged plate adapted to engage the inner face of the rail web.

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

WILLIAM H. KIRKBRIDE.

Witnesses:

H. R. SULLIVAN,

E. L. THURSTON.