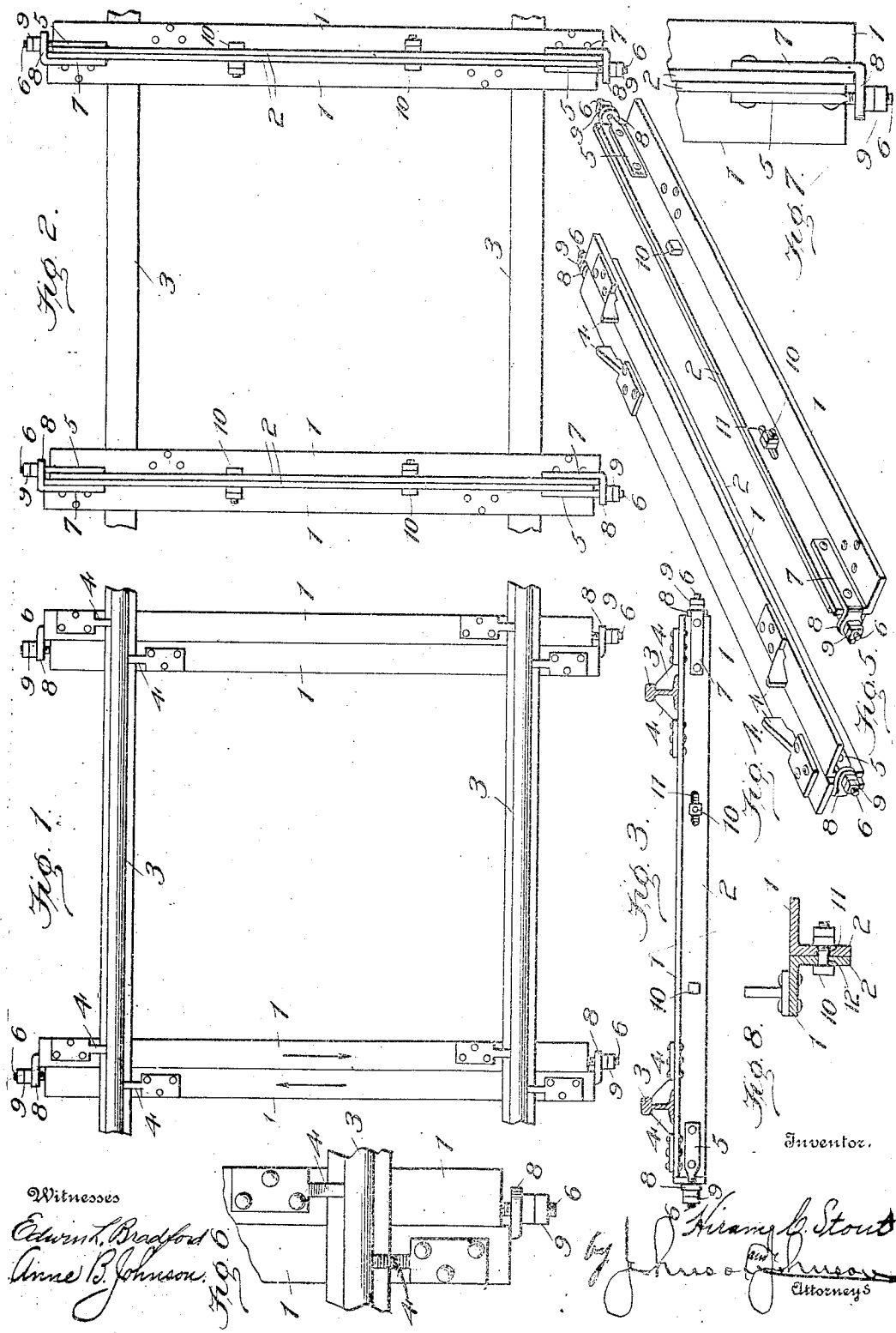
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H. C. STOUT.

STEEL RAILWAY TIE AND BRACE.

APPLICATION FILED JULY 23, 1904.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

HIRAM CLAYTON STOUT, OF ALLIANCE, OHIO.

STEEL RAILWAY TIE AND BRACE.

SPECIFICATION forming part of Letters Patent No. 775,049, dated November 15, 1904.

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To all whom it may concern:

Be it known that I, HIRAM CLAYTON STOUT, a citizen of the United States, residing at 421 South Arch street, Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Steel Railway Ties and Braces; and I do hereby 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.

For the security of railway-rails I have produced an improved steel tie of separate adjustable twin members, as a clamp and brace, for maintaining the proper alinement, gage, security, and firm and safe connection for the rails, preventing their spreading or turning over either inward or outward.

The novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the concluding claims.

The following description read in connection with the accompanying drawings will enable any person skilled in the art to which my invention relates to understand its nature and to practice it in the form in which I prefer to employ it; but it will be understood that my invention is not limited to the precise form, construction, and arrangement of the separate clamping and adjustable twin tie members and their connection with the rails and with each other herein illustrated and described, as various modifications and changes may be made without exceeding the scope of the claims in which my invention is set out.

Referring to these drawings, Figure 1 shows in top view a portion of the rails of a railway-track, showing my improved steel ties of separate adjustable twin clamping members as applied to the rails. Fig. 2 is a bottom view of the same. Fig. 3 is a cross-section showing the steel rail-tie in side view. Fig. 4 shows the separate adjustable clamping members of the twin steel rail-tie in perspective looking at the top. Fig. 5 is a like view, looking at the bottom of the twin steel rail-tie, of adjustable members. Fig. 6 shows in top view, enlarged, a portion of a rail and a portion of the separate adjustable members of the twin steel tie secured to each other and to the rail. Fig. 7 shows the same in bottom view. Fig. 8 is a cross-section showing the separate twin members of the rail-tie and their jam-bolt.

Two separate adjustable members side by side of identical construction, each having means for independent adjustment and for connection or coupling with each other and for securing and bracing the rails, constitute my improved rail-tie. Each tie member 1 is of L cross-section, and the two are placed side by side with their vertical web parts 2 standing down and joining back to back, as in Figs. 2, 5, and 8. The rails 3 are supported upon the horizontal tie-flanges and secured and braced thereon by clamp-braces 4, riveted to one tie member so as to abut against the inner side of the web of one of the rails and against the outer side of the web of the other rail looking from either side of the track.

The clamp-braces of the one tie member are arranged to abut against the webs of the rails in opposition to the clamp-braces of the other tie member, as in Figs. 1, 3, and 4, and thus brace and secure and prevent the turning of the rails and allow each tie member, with its braces, to be adjusted in opposite directions with a firm clamping and securing action upon the base and web of the rails, each tie member clamping the rail with an opposite force, the one exerted against the other, as I shall now state.

At one end and on the web of each tie member a plate 5 is riveted on which a screw-stem 6 is formed projecting beyond the end of said member, while at the corresponding end of the other tie member is riveted an abutment-plate 7, having an eyed end 8, which is bent at right angles and projects across the ends of the webs of the tie members in opposite directions at each end of the twin tie, as in Fig. 2, so that the screw-stem of one member will be engaged with the angle end of the abutment-plate of the other member, and thus couple and secure the tie members together at each end by the same means by which they are separately adjusted one upon the other in their clamping and securing action upon the rails, each member in such adjustment being

moved by the action of a nut 9 on each screw-stem against the outer side of the angle abutment-plate in opposite directions. In this adjustment the braces of one tie member are clamped hard against the inner side of one rail and the outer side of the other rail, while the braces of the other tie member are clamped hard against the opposite sides of said rails in opposition to the other braces, and in this way the rails are firmly clamped and supported upon the ties. The coupling or locking of the tie members together not only keeps them solidly joined, but keeps the clamp-braces in their proper relation to the rails and the latter to their gage and alinement. The forcing of the members and their clamping-braces in opposite directions is effected by the driving action of the nut of the screw-stem of one member against the angle-abutment projecting from the other member and supporting the driving force against the ends of the twin tie members at the crossing of the abutment coupling end. By this construction each end of the twin rail-tie forms an abutment against which the adjusting force is exerted to effect the clamping of the braces of each tie member against the opposite sides of each rail.

The members of the twin tie when joined carry the clamp-braces in pairs and means at their ends for coupling and for separately adjusting the tie members side by side in their coupled relation to clamp and secure the rails. Nut-locks may be provided for maintaining the adjustment.

Looking at Fig. 3, the braces are seen as fitting by shoulders the edges of the rail-base and against the web beneath the head of the rail, firmly supporting it.

It will be understood that the angle-abutments at the outer sides of the rails are riveted or secured to the left tie member all along the track looking from either side of the track and that the screw-stem is secured to and projects from the corresponding end of the right tie member all along the track looking from either side of the track and that to tighten the clamping of the tie members upon the rails the nuts of one or both of the tie members are driven in, thereby causing both tie members to clamp the rails. This clamping may be effected by the driving action of the nut of one of the tie members. When the tie members are adjusted and clamped, they are further secured in such adjustment by jam-bolts 10 passing through slots 11 in the vertical flange of one tie member and through a corresponding hole 12 in the vertical flange of the other tie member, as in Fig. 5, the bolts and slots thus arranged allowing the tie members to be moved one upon the other by the end nutted screw-stems and the abutments.

It is important to note that the construction of the twin tie members gives the advantage of using the tie members when coupled together as a single tie in securing the rails upon them, and the ties being all alike can be used with either end on either side of the track. The screw-stems and the jam-bolts of the tie members may be secured by nut-locks, and the ties will be properly founded and secured, the flange jam-bolts and the end stem-nuts coacting to lock the tie members together and to the rails.

A novel feature of the construction is that each tie member has an angle-abutment at one end and a screw-stem at its other end, and when coupled together the angle-abutment of one tie member will overlap the ends of the joining webs of both members to the right and engage the screw-stem of the right tie member all along one side of the track, while looking at the other side of the track the angle-abutment will overlap the ends of the joined webs to the left and engage the screw-stem of the left tie member, so that in adjusting these coupled tie members they must move in opposite directions and correspondingly move their clamps and braces against the rails to fasten and support them. The inner braces may serve as clamps only for the rails.

I claim—

1. A railway tie and fastening comprising twin members each having clamping-braces for the rails, means connected to each for coupling the twin members together at their ends, and means connected to each member for independently adjusting said members for securing their clamp-braces against the rails.

2. A railway tie and fastening comprising twin members each having clamping-braces for the rails, each member having at one end an angle-abutment and a screw-stem at its other end, said angle-abutments engaging said screw-stems, coupling the tie members together, and nuts on the screw-stems engaging said abutments for adjusting the tie members independently of each other.

3. A metallic railroad-tie comprising two members each having a clamp-brace for each rail, the clamps of one member engaging the outer side of one rail and the inner side of the other rail, the clamps of the other member engaging the rails on opposite sides to the first-stated clamps whereby the members are adapted for independent clamping function upon the rails, means for connecting the members at their ends, means engaging such connections for adjusting said members longitudinally in opposite directions, and means for clamping the tie members together laterally.

4. A railway tie and fastening comprising twin members each having clamp-braces for the rails, means for coupling the twin members together at their ends, means for independently adjusting said tie members for securing their clamp-braces upon the rails, and jam-bolts securing the tie members together when adjusted.

5. The combination with the railway-rails,

of a tie of twin members, each having a clamp-brace at each end arranged to clamp one rail on the inner side thereof, and the other rail on the outer side thereof, means for coupling the tie members at their ends, means for adjusting each tie member lengthwise in opposite directions forcing their clamp-braces against and upon the opposite sides of said rails securing them, and jam-bolts securing the tie members together.

6. A rail-tie comprising counterpart members each having a top flange and a downward-standing web, each member having an angle-abutment at one end and a screw-stem at the other, the screw-stem of one member passing through a hole in the angle-abutment of the other member and nutted on the outer side of said angle-abutment, and means for clamping the webs of said members together.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HIRAM CLAYTON STOUT.

Witnesses:

A. E. H. JOHNSON,

GUY H. JOHNSON.