

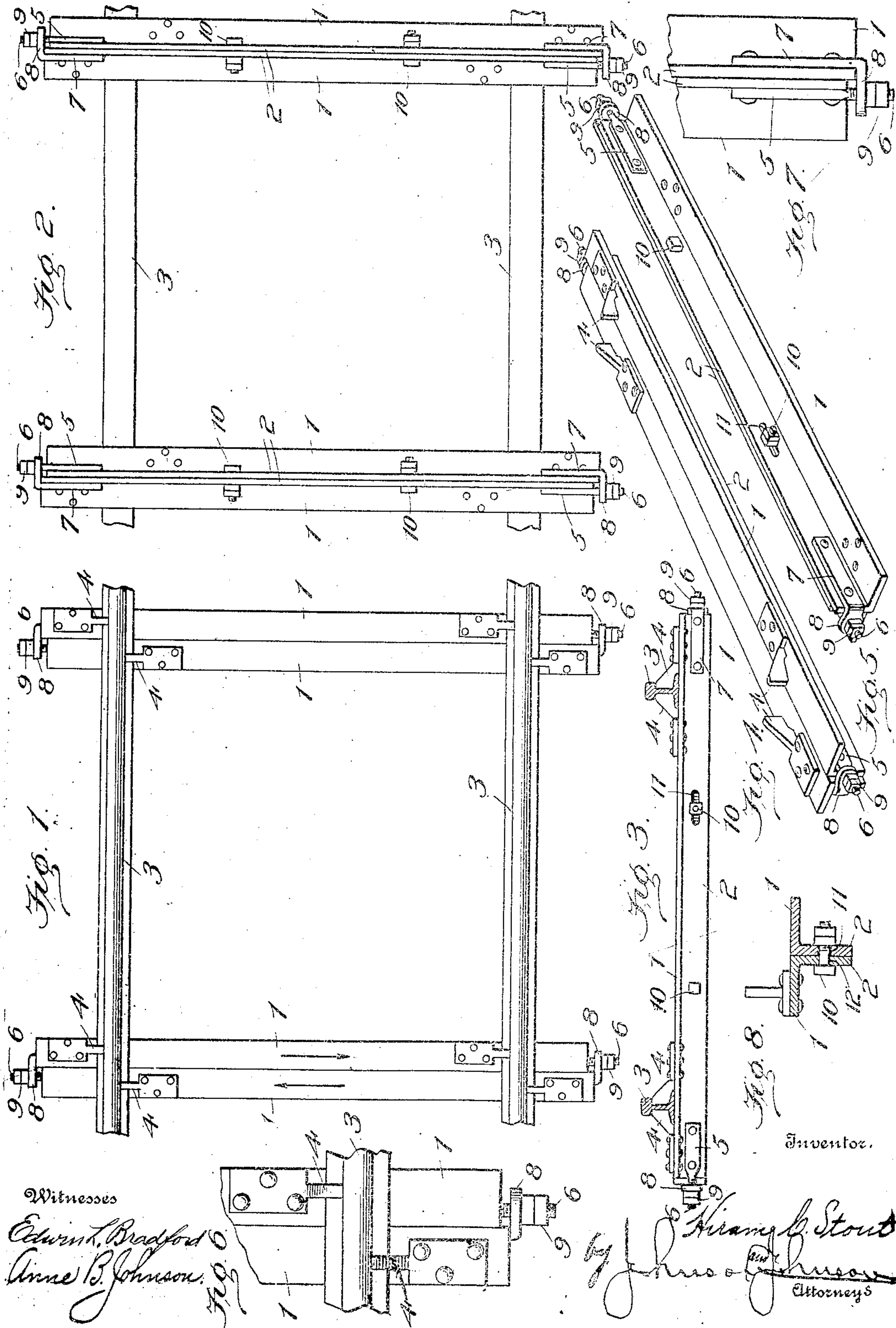
No. 775,049.

PATENTED NOV. 15, 1904.

H. C. STOUT.
STEEL RAILWAY TIE AND BRACE.

APPLICATION FILED JULY 23, 1904.

NO MODEL.



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.

Application filed July 23, 1904. Serial No. 217,819. (No model.)

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 alignment, 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 is of L cross-section, and the two are placed side by side with their vertical web parts standing down and joining back to back, as in Figs. 2, 5, and 8. The rails 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

moved by the action of a nut 9 on each screw-
 stem against the outer side of the angle abut-
 ment-plate in opposite directions. In this ad-
 justment the braces of one tie member are
 5 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
 10 way the rails are firmly clamped and sup-
 ported upon the ties. The coupling or lock-
 ing of the tie members together not only keeps
 them solidly joined, but keeps the clamp-
 braces in their proper relation to the rails
 15 and the latter to their gage and alinement.
 The forcing of the members and their clamp-
 ing-braces in opposite directions is effected
 by the driving action of the nut of the screw-
 stem of one member against the angle-abut-
 20 ment 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 abut-
 25 ment against which the adjusting force is ex-
 erted 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
 30 carry the clamp-braces in pairs and means at
 their ends for coupling and for separately ad-
 justing the tie members side by side in their
 coupled relation to clamp and secure the rails.
 Nut-locks may be provided for maintaining
 35 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.

40 It will be understood that the angle-abut-
 ments 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 pro-
 45 jects 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
 50 are driven in, thereby causing both tie mem-
 bers 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 mem-
 bers are adjusted and clamped, they are fur-
 55 ther secured in such adjustment by jam-bolts
 10 passing through slots 11 in the vertical
 flange of one tie member and through a cor-
 responding hole 12 in the vertical flange of
 the other tie member, as in Fig. 5, the bolts
 60 and slots thus arranged allowing the tie mem-
 bers 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
 65 of using the tie members when coupled to-

gether 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, 70
 and the ties will be properly founded and se-
 cured, 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 75
 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 80
 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 85
 the left tie member, so that in adjusting these
 coupled tie members they must move in op-
 posite directions and correspondingly move
 their clamps and braces against the

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
5 the tie members at their ends, means for ad-
justing each tie member lengthwise in oppo-
site directions forcing their clamp-braces
against and upon the opposite sides of said
rails securing them, and jam-bolts securing
10 the tie members together.

6. A rail-tie comprising counterpart mem-
bers 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 15
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 20
to this specification in the presence of two sub-
scribing witnesses.

HIRAM CLAYTON STOUT.

Witnesses:

A. E. H. JOHNSON,
GUY H. JOHNSON.