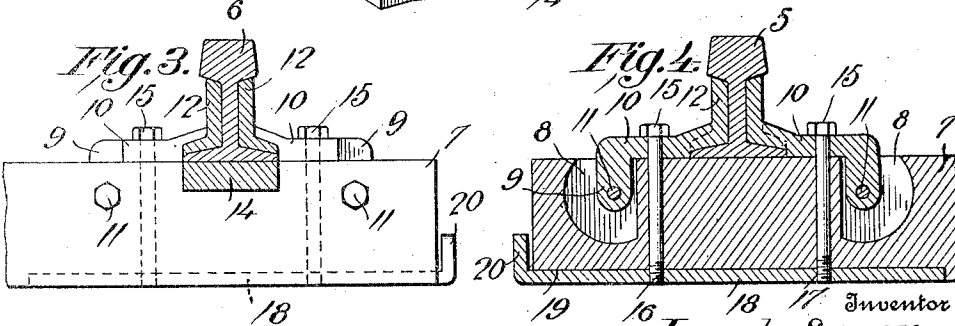
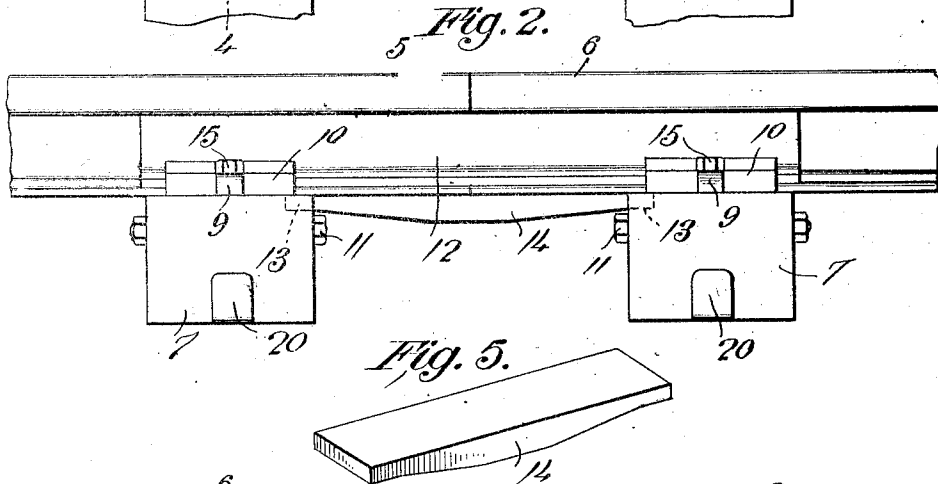
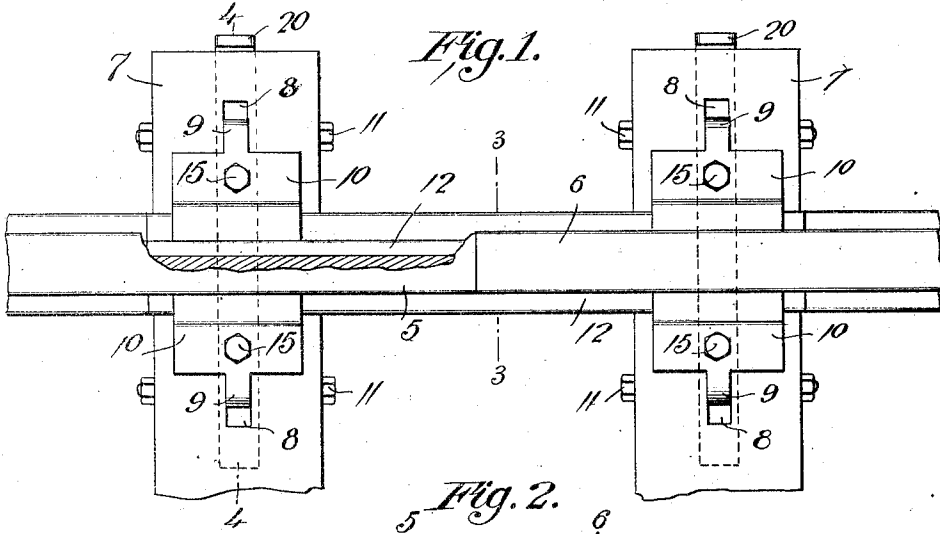


1,043,735.

Patented Nov. 5, 1912



Witnesses

Carroll Bailey
L. O. Parker,

Inventor
Joseph Sauer,
By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

JOSEPH SAUER, OF KERSEY, PENNSYLVANIA.

RAIL-JOINT.

1,043,735.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed May 4, 1912. Serial No. 695,081.

To all whom it may concern:

Be it known that I, JOSEPH SAUER, a citizen of the United States, residing at Kersey, in the county of Elk and State of Pennsylvania, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

The invention relates to rail joints, and more particularly to the class of rail clamps.

10 The primary object of the invention is the provision of a rail clamp in which the meeting ends of railway rails may be held fastened to the cross ties supporting the same and will permit the usual expansion
15 and contraction of the said rails, yet avoiding the possibility of lateral displacement thereof either inwardly or outwardly relative to the track bed, thus assuring a secure and smooth joint.

20 Another object of the invention is the provision of a rail clamp wherein the rail ends at the joints in the track will be permanently held against sagging with respect to each other, thereby obviating the pounding of car
25 wheels when passing over the joint, and which avoids the necessity of the use of bolt fasteners ordinarily used, thus maintaining maximum strength of the rails at the meeting ends thereof.

30 A further object of the invention is the provision of a rail clamp in which the meeting ends can be readily and conveniently placed therein for the joining of the same and easily removed when desired.

35 A still further object of the invention is the provision of a rail clamp which holds the rail ends and which will firmly grip the same when subjected to heavy loads, thus assuring a strong and positive union at the
40 joint without possibility of the same becoming jarred loose or being freed from the cross ties supporting them and also which avoids the use of spikes for the securing of the rails to the said ties.

45 With these and other objects in view the invention consists in the construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, and
50 pointed out in the claim hereunto appended.

In the drawing:—Figure 1 is a fragmentary top plan view of adjacent cross ties and rail ends, showing the same fastened by means of the clamp constructed in accordance with the invention, one pair of clamps
55 shown being partly broken away. Fig. 2 is

a side elevation. Fig. 3 is an end elevation. Fig. 4 is a sectional view on the line 4—4 of Fig. 1. Fig. 5 is a perspective view of one of the bridge bars.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawings by numerals, 5 and 6 designate the meeting ends respectively of ordinary railway rails, the same being superimposed upon spaced cross ties 7 resting in the ordinary manner upon the track bed. Formed in each cross tie spaced from the inner and outer sides of the rail supported thereby and opening through the top of the said tie, are recesses 8 in which are swingingly mounted the hinged ends 9 in the form of ears of vertical movable clamping members 10, the hinged ends 9 being journaled upon pivots 11 passed transversely through the tie 7 and intersecting the recesses 8 therein so that the said members 10 can be swung upwardly and outwardly or inwardly and downwardly toward and away from the rail for a purpose presently described. The clamping members 10 at opposite sides of the rail ends 5 and 6 are connected by means of angle bars 12 which are brought into close relation to the sides of the rail ends when the members 10 are swung inwardly and downwardly in the direction of the cross ties 7, thereby securely fastening the rail ends to the ties at the joint of the said rail ends.

Below the point of contact of the bases of the rail ends 5 and 6 with the ties 7 and formed in each of the latter is a notch 13 in which is engaged one end of a bridge bar 14, whereby the upper surface thereof will lie flush with the tops of the ties 7 and this bar 14 extends longitudinally in the direction of the rails, so that the rail ends will rest thereon between the cross ties and in this manner the said rail ends will be prevented from sagging with respect to each other at the joint.

Passed downwardly through the clamping members 10 when in position for the engagement of the angle bars 12 with the sides of the rail ends 5 and 6 and engaged in the ties 7 are locking bolts 15 which prevent the upward and outward swinging of the members 10 when in position for the secure fastening of the rail ends upon said ties. It will be apparent that the employment of bolt fasteners for connecting the angle bars to the

webs of the rail ends is unnecessary so that maximum strength of the rail end is attained at the joint.

From the foregoing description, taken in connection with the accompanying drawing, it is thought that the construction and operation of the invention will be clearly understood, and therefore, a more extended explanation has been omitted.

10 The bolt members 15 at their lower ends are provided with screw threads 16 which are adapted to engage in threaded apertures 17 formed in each bar 18, the latter being held within a channel or groove 19, formed in the under side of the tie 7, and disposed longitudinally thereof for a distance of the same, the outer end of the groove or channel 19 being open so that the said bar 18 can be conveniently placed therein. The bar 18
20 is formed with an upturned ear 20 at its outer end which enables the pulling of the same out of the groove or channel 19 when

the bolt members 15 have been disengaged therefrom, but when the bolt members are engaged with the said bar they will be securely held, thus it being seen that the use of nuts is avoided. 25

What is claimed is:—

A rail clamp comprising a cross tie, swinging members pivoted to the tie, angle bars 30 connected to the swinging members and adapted to engage a rail at opposite sides thereof on swinging the said members inwardly and downwardly toward the tie, and bolt members passed through the said first 35 named members and engaged in the tie for locking the said first named members in clamping relation to the tie.

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

JOSEPH SAUER.

Witnesses:

M. B. SPANGLER,
C. W. NAGLEY.