

L. E. BARTON, SR.
RAILROAD TIE AND RAIL FASTENER.
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905,276.

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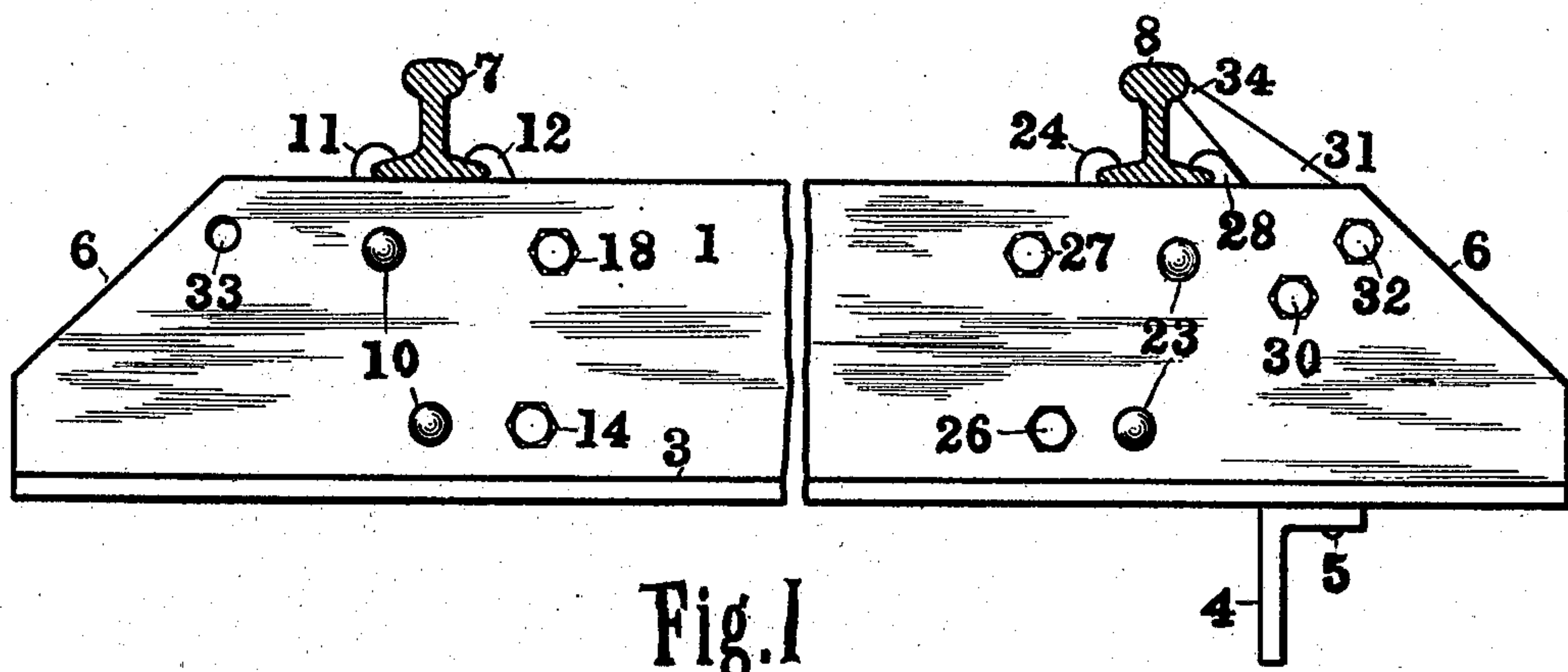


Fig. 1

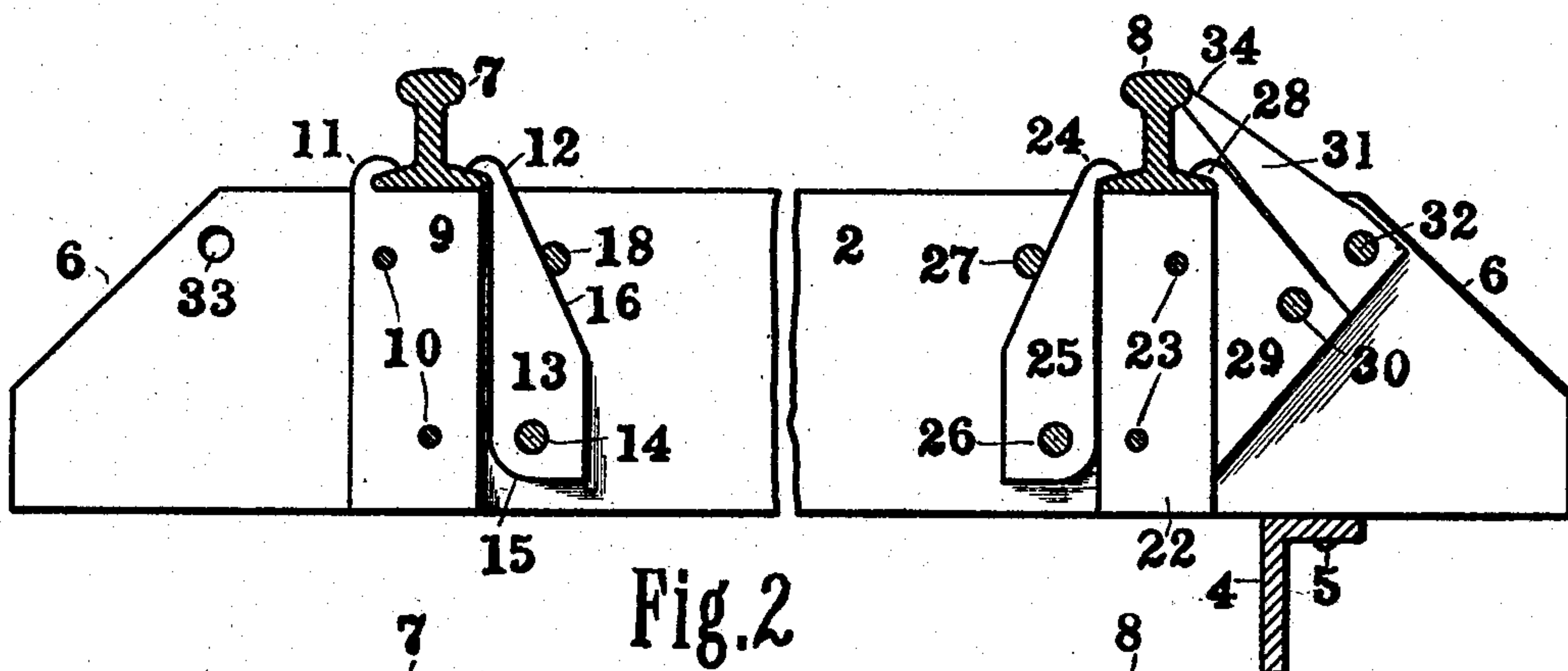


Fig. 2

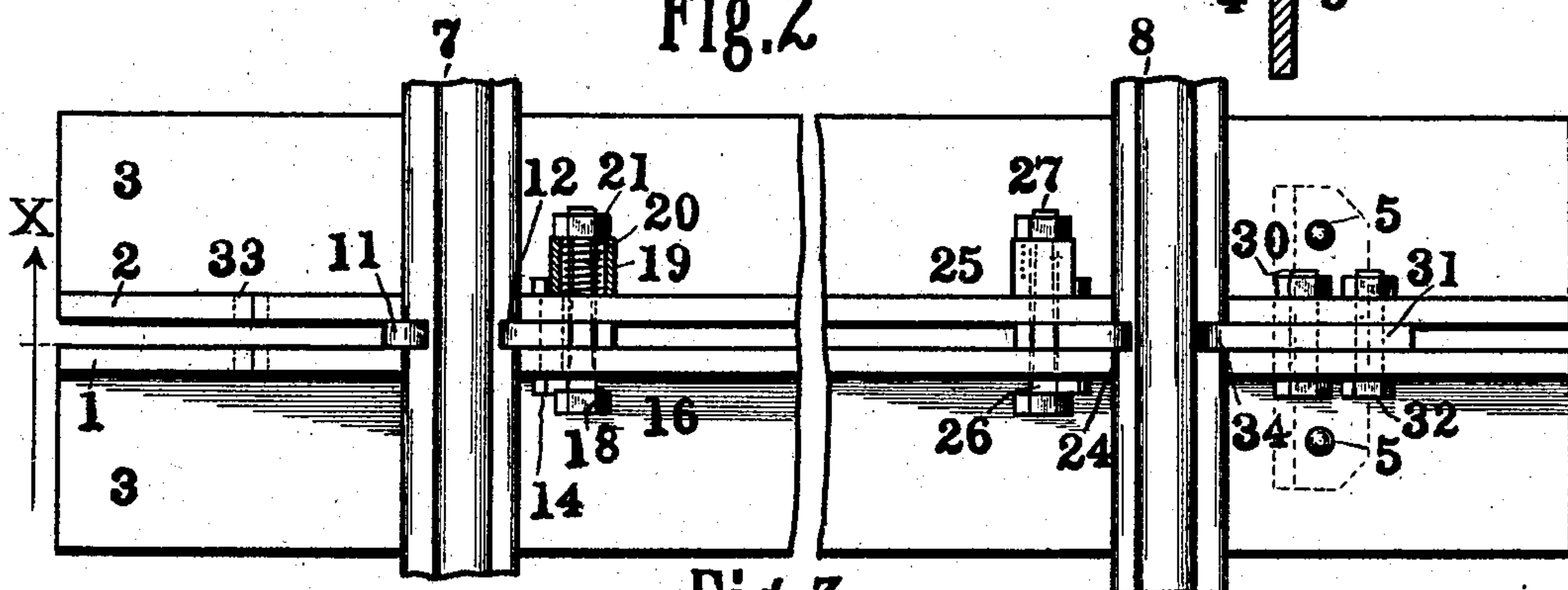


Fig. 3

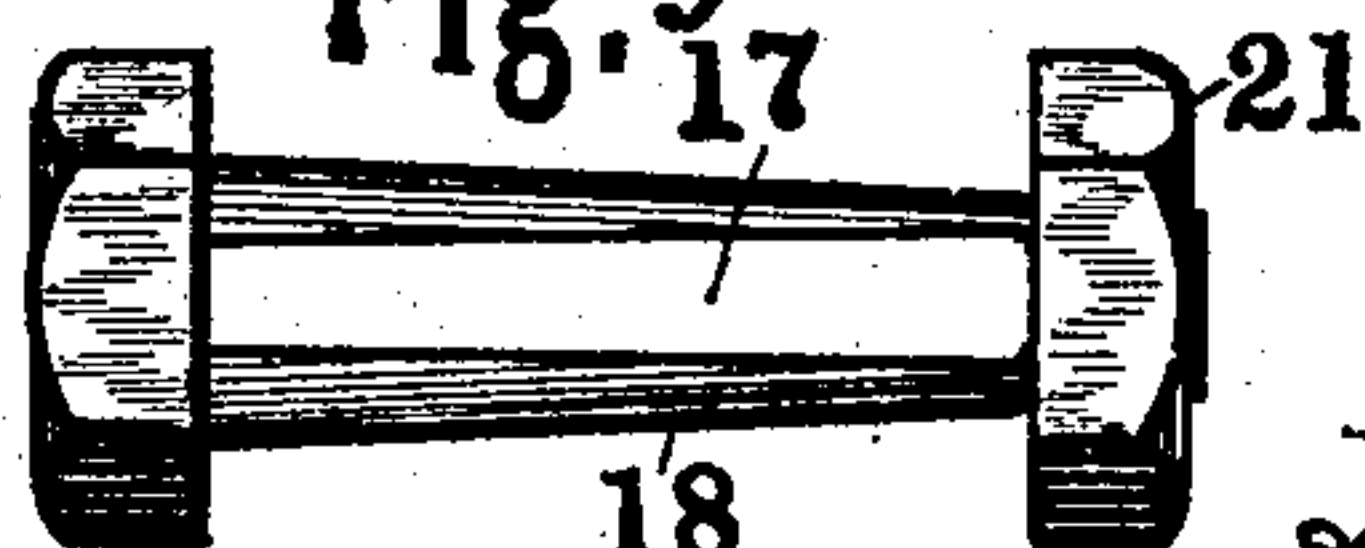


Fig. 4

WITNESSES

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LEWIS E. BARTON, SR., OF RAVENNA, OHIO.

RAILROAD-TIE AND RAIL-FASTENER.

No. 905,276.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed March 9, 1908. Serial No. 419,965.

To all whom it may concern:

Be it known that I, LEWIS E. BARTON, Sr., a citizen of the United States, residing at Ravenna, in the county of Portage and State of Ohio, have invented new and useful Improvements in Railroad-Ties and Rail-Fasteners, of which the following is a specification.

This invention relates to railroad ties provided with means for holding rails securely thereon.

The objects of this invention are to provide an improved railroad tie which is cheap, simple, durable, strong, readily set up and efficient in use having means for securely but detachably holding a railroad rail in position thereon.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts hereinafter specifically described and illustrated in the accompanying drawings which form a part of this specification in which is shown the preferred embodiment of the invention, but it is to be understood that changes, variations, and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings, in which similar reference numerals indicate like parts in the different figures: Figure 1 is a view in side elevation of my improved railroad tie and fastening device in operative relation with a common type of rail. Fig. 2 is a sectional view on line X of Fig. 3. Fig. 3 is a plan, and, Fig. 4 is a view in side elevation of a bolt used in connection with said tie.

Referring to the drawings in detail, the tie comprises companion beams or members 1, 2, arranged in parallelism and spaced apart a given distance. Each of the members 1, 2, is provided at its lower edge with an outwardly-extending flange 3 for strength as well as to secure anchorage in the roadway. Secured to the under face of the flange 3 by holdfast devices 5 is a transverse dependent member 4 preferably composed of an angle iron to assist in preventing movement of the tie in its seat. The members 1 and 2 are preferably beveled as at 6. Extending across the upper face of the members 1 and 2 are rails 7 and 8 which may be of any desired or preferred construction, but

the form shown in the drawings is that now in common use on railroads.

Between the members 1 and 2 and preferably immediately below the rail is a spacing member 9 held in position by means of holdfast devices 10, 10, extending through the upright portions of the members 1 and 2. The upper portion of the member 9 is provided with an overhanging clip 11 which overlaps the flange of the rail 7 and constitutes means for holding the same in position. The means for engaging and holding the other flange of the rail 7 consists of a clip 12 with a dependent portion 13 pivoted on a cross bolt 14 extending through the members 1 and 2. The lower, inner portion of the member 13 is rounded as at 15 to permit it to be swung on its pivot 14 to allow the clip 12 to be swung away from the flange of the rail without encountering the spacing member 9. The upper outer portion of the member 13 has an inclined face 16 which is adapted to be engaged by the flat portion 17 of a conically-formed bolt 18 extending through suitable apertures in the members 1 and 2 for that purpose. The bolt 18 is of sufficient length to project considerably beyond the members 1 and 2 and is preferably surrounded by a collar 19 in which is a coiled spring 20 adapted to be compressed by a nut 21 on the bolt 18 when the latter is screwed down on the collar 19. The function of the spring 20 is to constantly keep the bolt 18 in engagement with the inclined face of the member 13 if the nut 21 becomes loose.

In securing the rail on a tie it is first positioned by forcing one of the flanges thereof under the fixed clip 11. The pivoted member 13 is then sprung into position to cause the clip 12 to engage the opposite flange of the rails and the bolt 18 passed through the apertures in the members 1 and 2 and the nut 21 drawn up snugly against the collar 19 forcing the inclined flat face 17 of the bolt against the face 16 of the member 13 and the clip 12 is thus moved by the wedging action of the bolt 18 into snug engagement with the flange of the rail.

The rail 8 is held by means of fastening devices which are a slight modification of those shown with respect to the rail 7. Below the rail 8 is a spacing member 22 securely positioned between the members 1

and 2 by means of holdfast devices 23. Adapted to engage one flange of the rail 8 is a clip 24 formed on the upper end of a pendent member 25 pivoted on a bolt 26 and forced against the flange of the rail by means of a conically formed bolt 27 similar in all respects to the bolt 18. The opposite flange of the rail is engaged by a clip 28 formed on the upper end of a triangularly-shaped pendent member 29 pivoted on a bolt 30 extending between the members 1 and 2. The member 29 is prevented from swinging on its pivot by having one of its faces in contacting engagement with one side edge of the spacing member 22.

In securing rail 8 in position it is first positioned by forcing one of its flanges under the clip 28 after which the member 25 is swung into position to bring the clip 24 in engaging relation with the opposite flange, after which it is forced inwardly by the wedging action of the bolt 27.

In order to support the head or upper portion of a rail especially when used on curves or other places where there is unusual strain a member 31 is employed which consists of an elongated piece of suitable material pivotally hinged on a transversely-extending bolt 32 mounted in suitable apertures 33 in the members 1 and 2. This member 31 is of such a length that when in proper position its upper or free end 34 will engage the head or upper portion of the rail for keeping the same in operative position against twisting or lateral strain. The balance of the member is so shaped that when the head portion 34 is in engagement with the rail one of its side edges will be in contacting engagement with one of the side edges of the member 29 for preventing movement of the former on its pivot thereby maintaining the free end 34 in position against the rail.

When it is desired to remove either of the rails 7 or 8 the appropriate bolt 18 or 27 is removed by loosening the nuts thereof and withdrawing the same which permits the upper clamping end 12 or 24 to be swung downwardly into the space between the members 1 and 2 thereby permitting the rail to be moved across the upper face of the tie.

From the foregoing it will be understood that the tie involves a simple construction which is of such a nature as to permit of being constructed either of rolled or cast metal.

The members 9 and 22 interposed between the upright portions 1 and 2 while primarily serving to space the beams apart the required distance to permit movement of the rail fastening means also serve to constitute additional bearing surface for the bottom or flange portions of the rails themselves. The ballast of the road bed resting upon the laterally-extending flanges 3, 3,

serves in a measure to retain the tie in place and this is further aided by the pendent member 4 which also serves in securing the members 1 and 2 together and strengthens the union between them.

What I claim and desire to secure by Letters Patent, is:—

1. A railroad tie comprising spaced members, means for spacing said members apart, said means provided with a fixed clip for engagement with one flange of a rail, a movable clip apertured to receive pivoting means extending through said spaced members and wedging means for forcing said movable clip into engaging relation with the opposite flange of said rail.

2. A railroad tie comprising spaced members, a spacing member interposed between them, a movable clip mounted on pivoting means extending through said spaced members and means having a wedge-shaped portion extending transversely through said spaced members engaging said movable clip for forcing said clip into engaging relation with one of the flanges of a rail.

3. A railroad tie comprising spaced members, a spacing member interposed between them, a clip provided with means for engaging one of the flanges of a rail and having a dependent portion pivoted between said members, said clip cooperating with said spacing member for preventing movement thereof, a movable clip pivoted between said spaced members and a member capable of wedging action extending through said spaced members for forcing said movable clip into engaging relation with the opposite flange of said rail.

4. A railroad tie comprising spaced members, a spacing member interposed between them, a clip pivoted between said spaced members and prevented from movement by said spacing member, a movable clip pivoted between said spacing members, a member having a wedge-shaped portion adapted to engage said movable clip for forcing said clip into engaging relation with the flange of a rail and a brace mounted between said spaced members extending outwardly to the head portion of the rail for preventing lateral movement thereof.

5. A railroad tie comprising spaced members, a spacing member interposed between them provided with a fixed clip engaging one flange of a rail, a movable clip pivoted between said spaced members, a member having a wedging action extending through said spaced members for forcing said movable clip into clamping engagement with the opposite flange of a rail and a brace for preventing lateral distortion of said rail mounted between said spaced members and extending to and engaging the head portion of said rail.

6. A railroad tie comprising oppositely-

disposed members spaced apart and provided with outwardly-extending flanges at the lower edges thereof, a spacing member interposed between them, a clip mounted between said spaced members, a movable clip pivoted between said spaced members, means extending through said spaced members provided with an inclined portion and a conical bolt extending through said spaced members positioned to engage the inclined portion of said clip for forcing the latter into engaging relation with one flange of a rail.

7. A railroad tie comprising spaced members, a spacing member interposed between them, a fixed clip, a movable clip and an adjusting and securing member consisting of a conically - formed bolt extending through said spaced members for forcing said movable clip into engaging relation with one of the flanges of a rail.

8. A railroad tie comprising spaced members, a spacing member interposed between them, a pivoted clip mounted between said spaced members provided with means for engaging one of the flanges of a rail, a conical bolt extending through said pivoted clip

positioned in suitable apertures in said spaced members, a collar surrounding said bolt, a nut on said bolt and a resilient element within said collar for constantly maintaining engaging relation between said bolt and clip whereby the latter is forced into clamping relation with the flange of said rail.

9. The combination in a railroad tie, of spaced companion members, a spacing member interposed between them, a fixed clip engaging one flange of a rail mounted on said spaced members, a movable clip positioned between said spaced members, a member mounted in suitable apertures in said spaced members and having a wedge portion engaging said movable clip to force the latter into engaging relation with the opposite flange of said rail.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEWIS E. BARTON, SR.

Witnesses:

C. E. HUMPHREY,
GLENARA FOX.