

J. J. ROSS.

CROSS TIE.

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917,489.

Patented Apr. 6, 1909.

Fig. 1

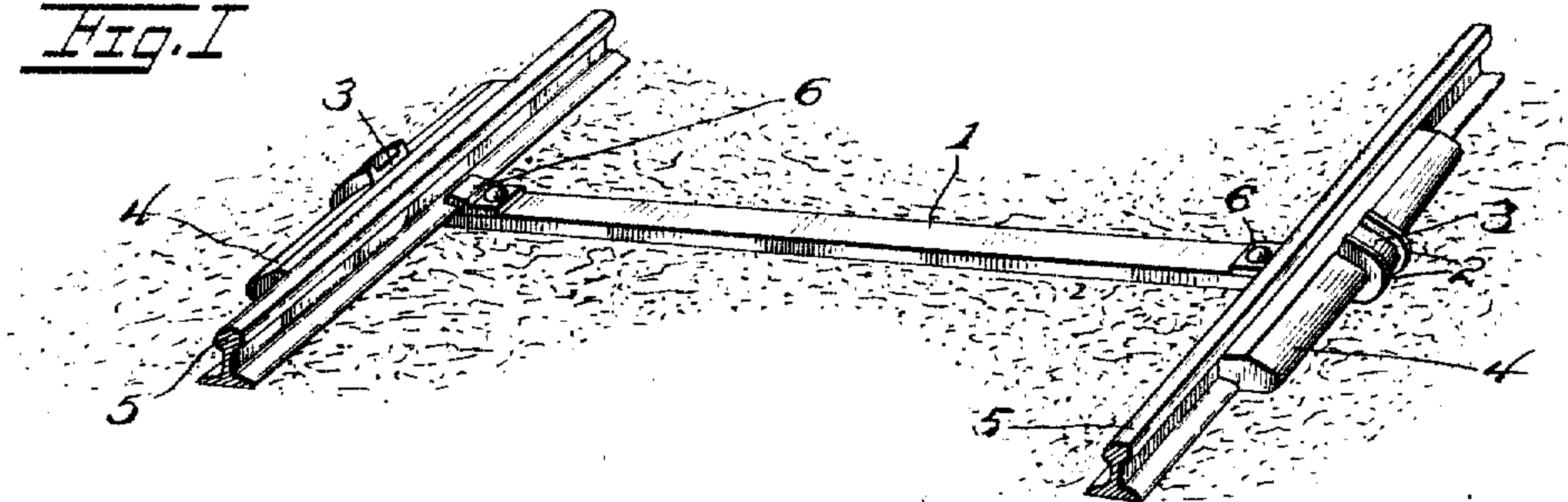


Fig. 2

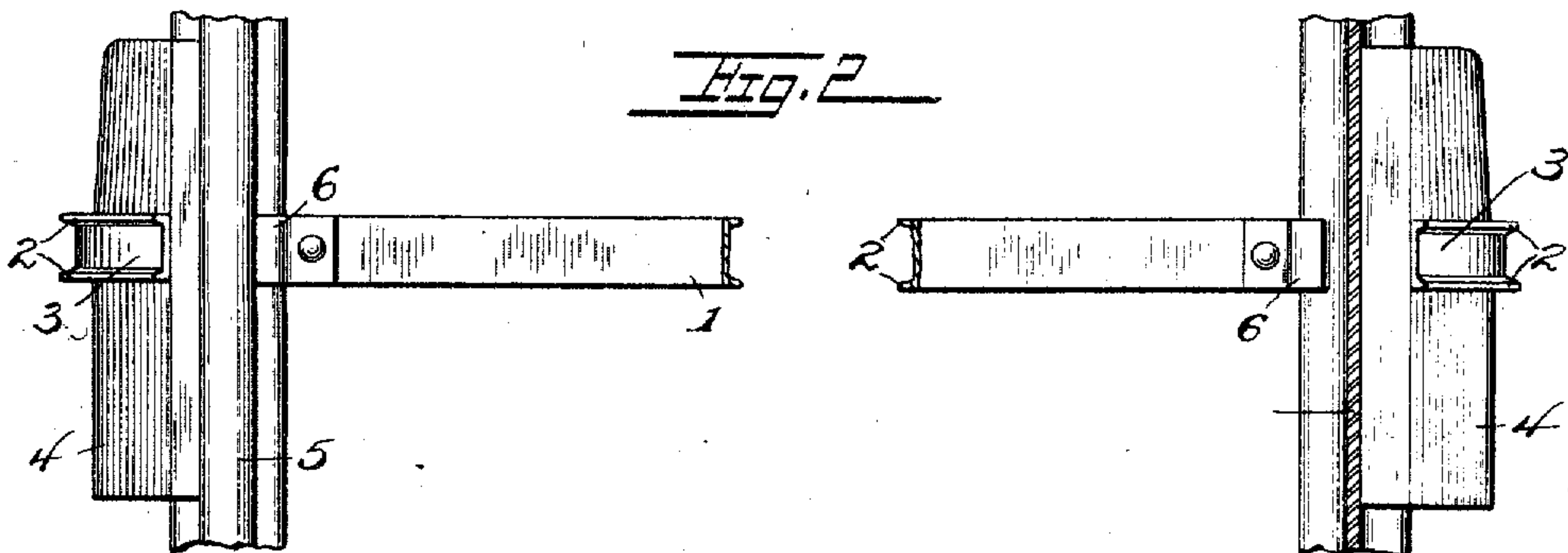


Fig. 3

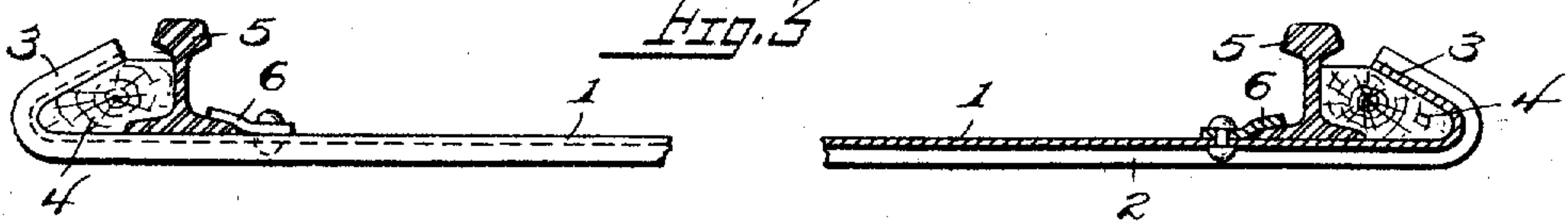


Fig. 4

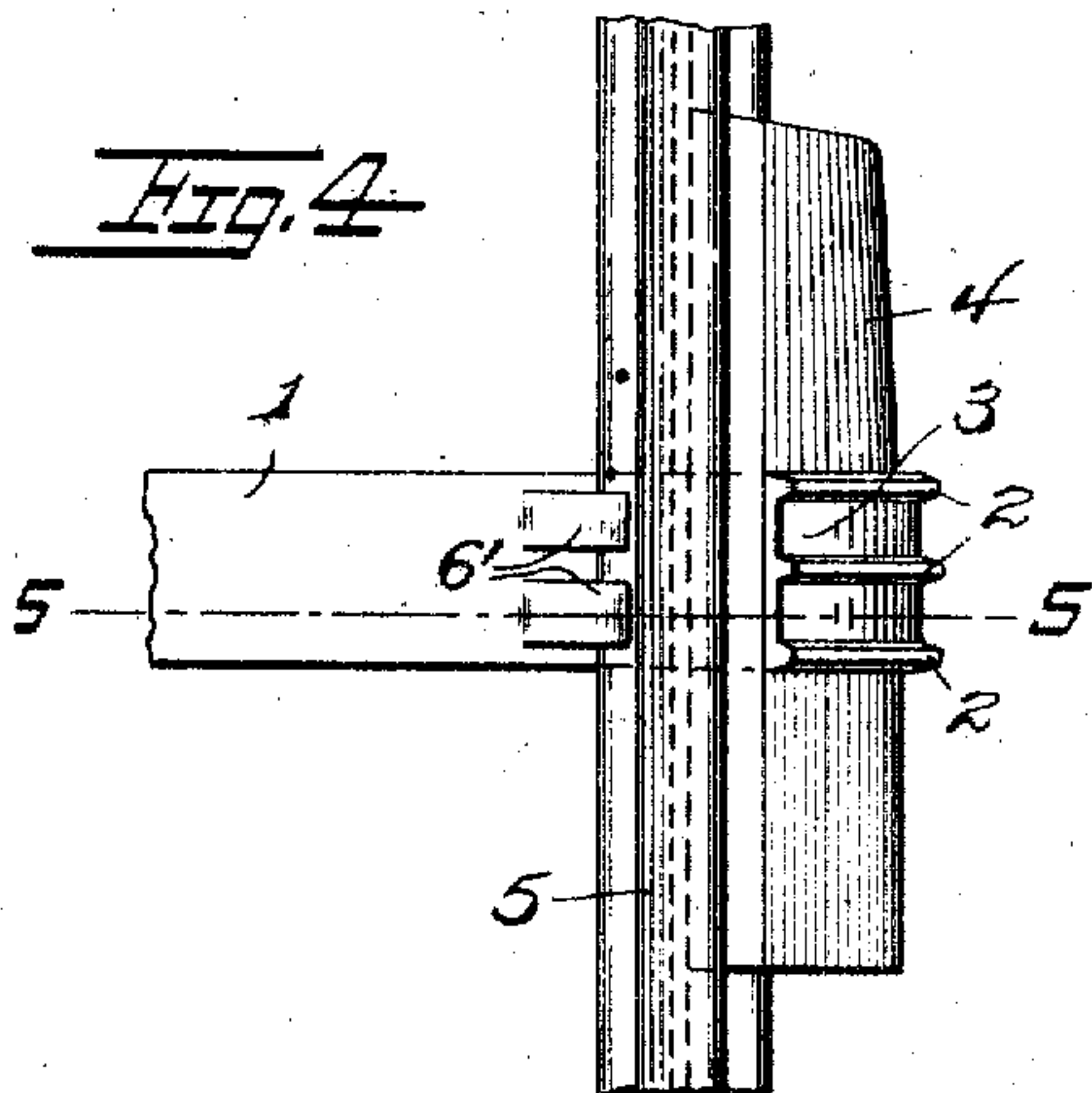


Fig. 5

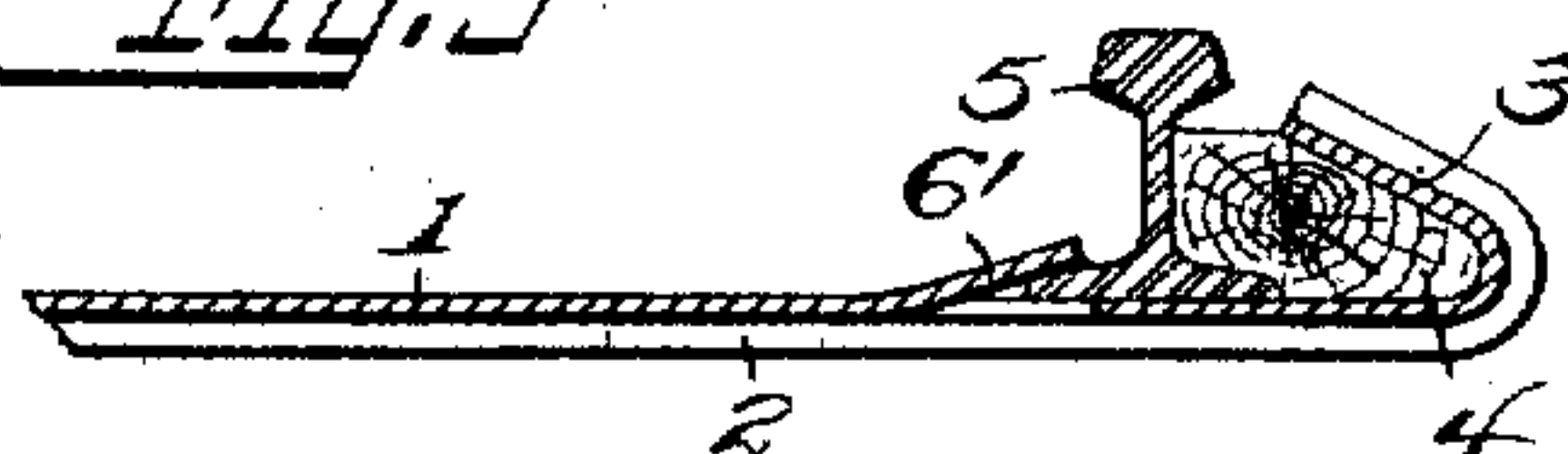
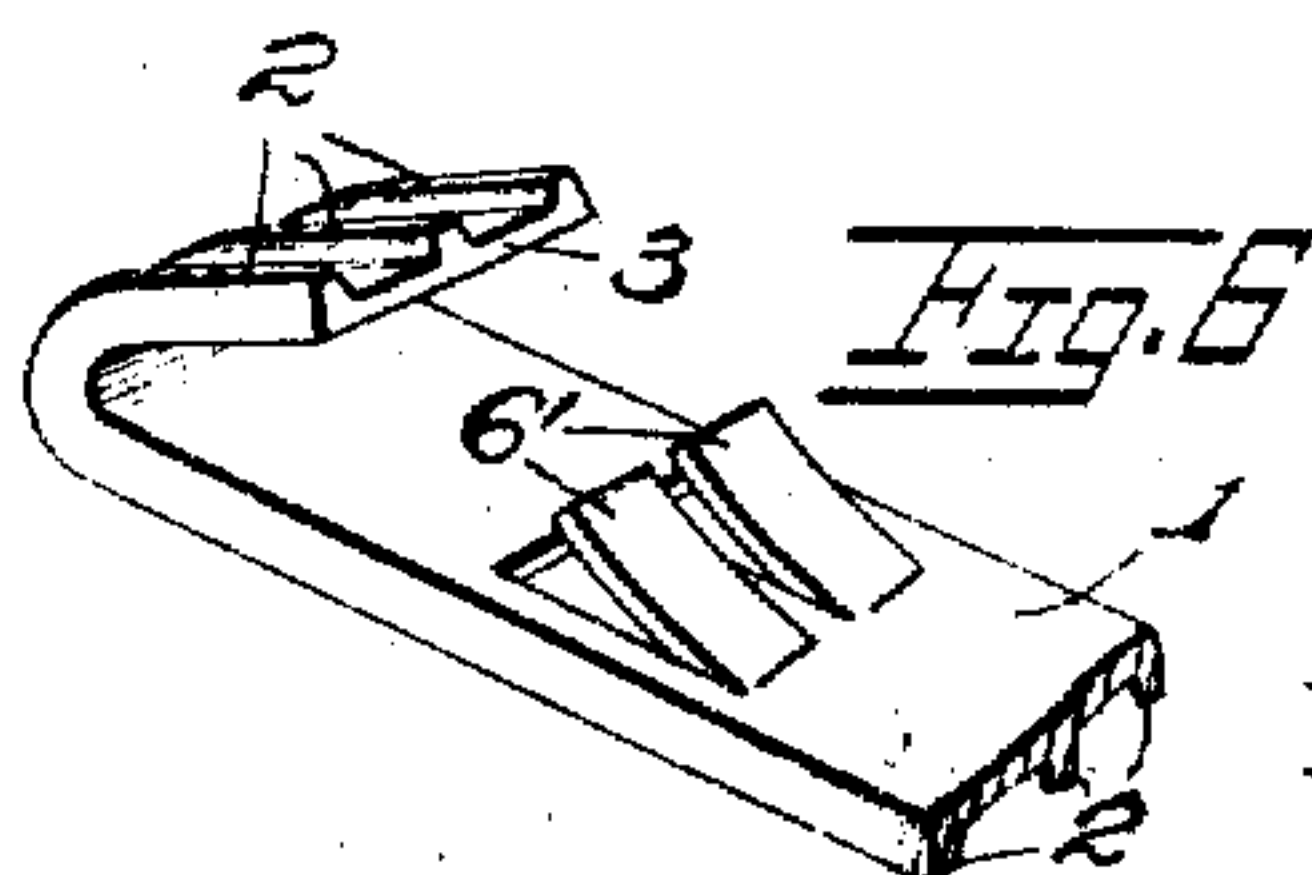


Fig. 6



WITNESSES:

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CROSS-TIE.

No. 917,488

Specification of Letters Patent.

Patented April 8, 1909

Application filed October 26, 1908. Serial No. 459,517.

To all whom it may concern:

Be it known that I, JUSTUS J. ROSS, a citizen of the United States of America, and resident of Fairmont, county of Marion, and State of West Virginia, have invented certain new and useful Improvements in Cross-Ties, of which the following is a specification.

This invention relates to improvements in cross-ties for mine-car tracks, and more particularly to a combined cross-tie and rail-clamp.

The chief object of the invention is to provide a simple and inexpensive metallic cross-tie especially adapted for use in mines and other places where light-weight track-rails are employed.

A further object is to provide a metallic cross-tie which, while light in weight, possesses the requisite strength, having rail-holding means associated therewith whereby the rails of the track are rigidly held in place, thus dispensing with the necessity for the use of spikes or bolts.

With these and other objects in view, the invention finally consists in the particular construction, arrangement and combination of parts which will hereinafter be fully described, reference being herein had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a perspective view of the invention, showing track-rails mounted thereon; Fig. 2 is an enlarged top plan view of the same; Fig. 3 is a view of the same, partially in side elevation and partially in longitudinal section; Fig. 4 is an enlarged top plan view, illustrating a slight modification; Fig. 5 is a section of the same on the line 5—5, Fig. 4; and—Fig. 6 is a perspective view of the end of a cross-tie embodying the modified construction.

Referring to said drawing in which like reference-numerals designate like parts throughout the several views—1 indicates the body of the cross-tie which has a flat upper face and has on its under face a plurality of longitudinally directed integral ribs 2, the latter being adapted not only to lend additional strength to the tie, but also to support the body of the tie slightly above, or out of contact with, the floor of the mine upon which it lies, minimizing corrosion. The ends of the tie are bent or turned upward and inward, forming inclined hook-like terminals 3.

A tapered wedge 4, preferably of wood, is

adapted to be driven into the angle formed by the bend to exert inwardly-directed pressure against the web of a rail 5 mounted in position on the tie, and to bind upon the top of the rail-base. The opposite, or inner, side of the rail-base is engaged by a clamping member 6 bolted or riveted upon the top of the tie, as shown in Figs. 1, 2 and 3; or, by inclined outwardly-directed clamping members 6' struck up from the body of the tie between the ribs 2, as shown in Figs. 4, 5 and 6. The wedge 4, is preferably undercut so that it fits snugly over the base of the rail, as shown.

When the rails are placed upon the ties, they are forced inward with their inner base portions beneath the fixed clamping members, after which the point of a tapered wedge is inserted between the rail and the intumed hook-like end of each tie and said wedge is driven forward to exert a firm lateral pressure upon said rail, said wedge co-acting with the clamping member for rigidly holding the rail in position.

Manifestly, the tie may be made of relatively light weight, since it is provided with the ribs 2 which afford the requisite strength.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a metallic cross-tie for mines, a longitudinal body portion adapted for resting upon a mine-floor, fixed members carried by said body portion and adapted for clamping engagement with the inner base portions of rails, hook-like terminals formed by bending the ends of said tie upward and inward, tapered wedges adapted for insertion between the terminals and the rails whereby coöperation between said terminals and said members is secured for rigidly holding rails in position on the tie, and integral ribs formed on the under face of said body portion whereby the latter is supported above said floor.

2. In a metallic cross-tie for mines, a body portion having a plurality of longitudinal integral ribs on its under face whereby the latter is supported above a mine-floor, hook-like terminals formed by bending the ends of said tie upward and inward, clamping members carried by said tie adjacent to its hook-like ends, and tapered wedges adapted for insertion between the terminals and rails mounted on said tie whereby coöperation is had between said terminals and said clamping members for rigidly holding the rails in place.

3. In rail-holding means, a metallic cross-tie having a plurality of longitudinal integral ribs on its under face, hook-like terminals formed by bending the ends of said tie upward and inward, clamping members formed by striking up the metal of the tie between said ribs, said members being located adjacent to said hook-like terminals and adapted for engagement with the inner base portions of rails mounted on the tie, and

tapered wooden wedges adapted for insertion between the terminals and the outer faces of the webs of the rails.

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

JUSTUS J. ROSS.

Witnesses:

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C. K. GLOVER.