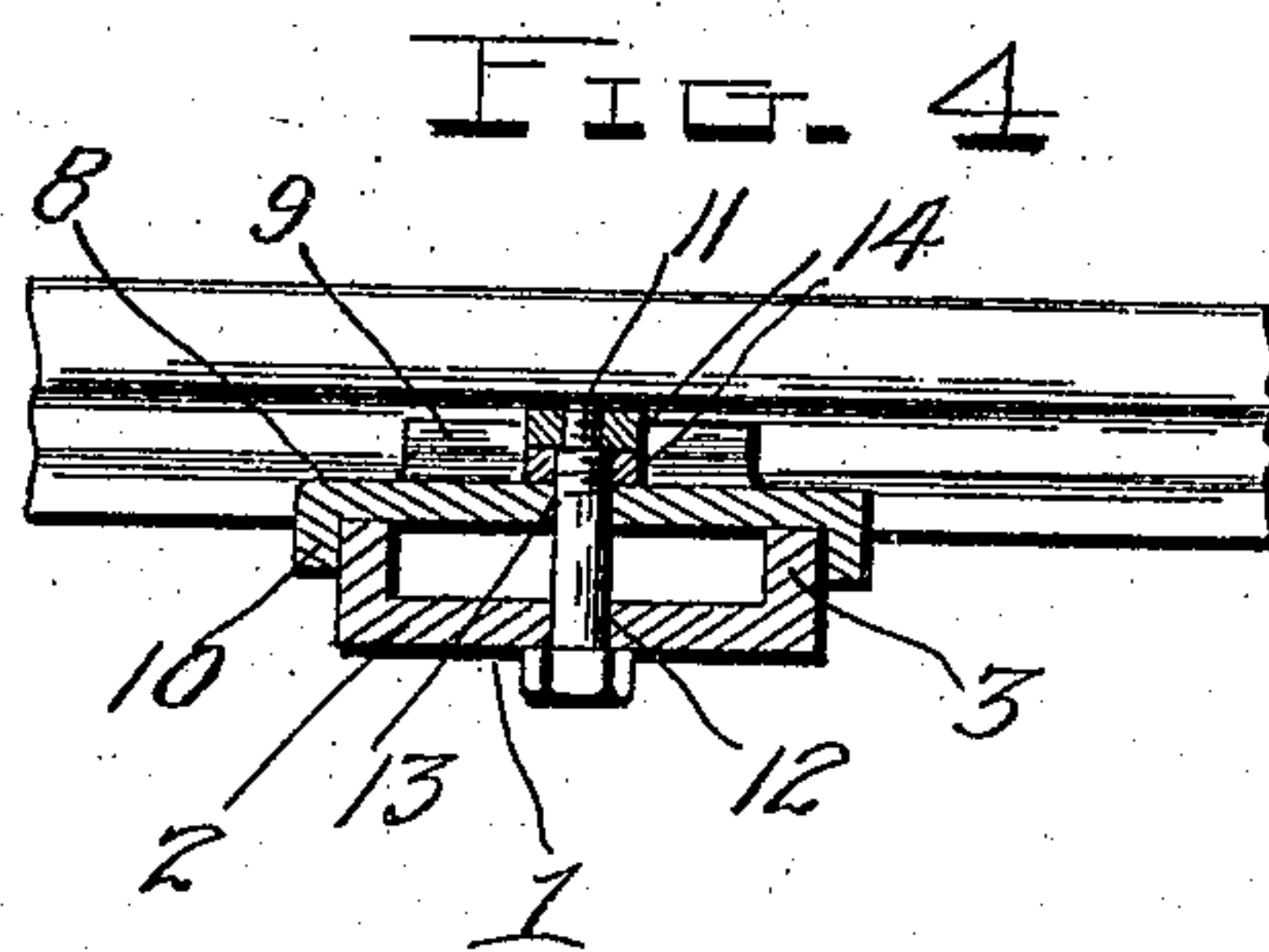
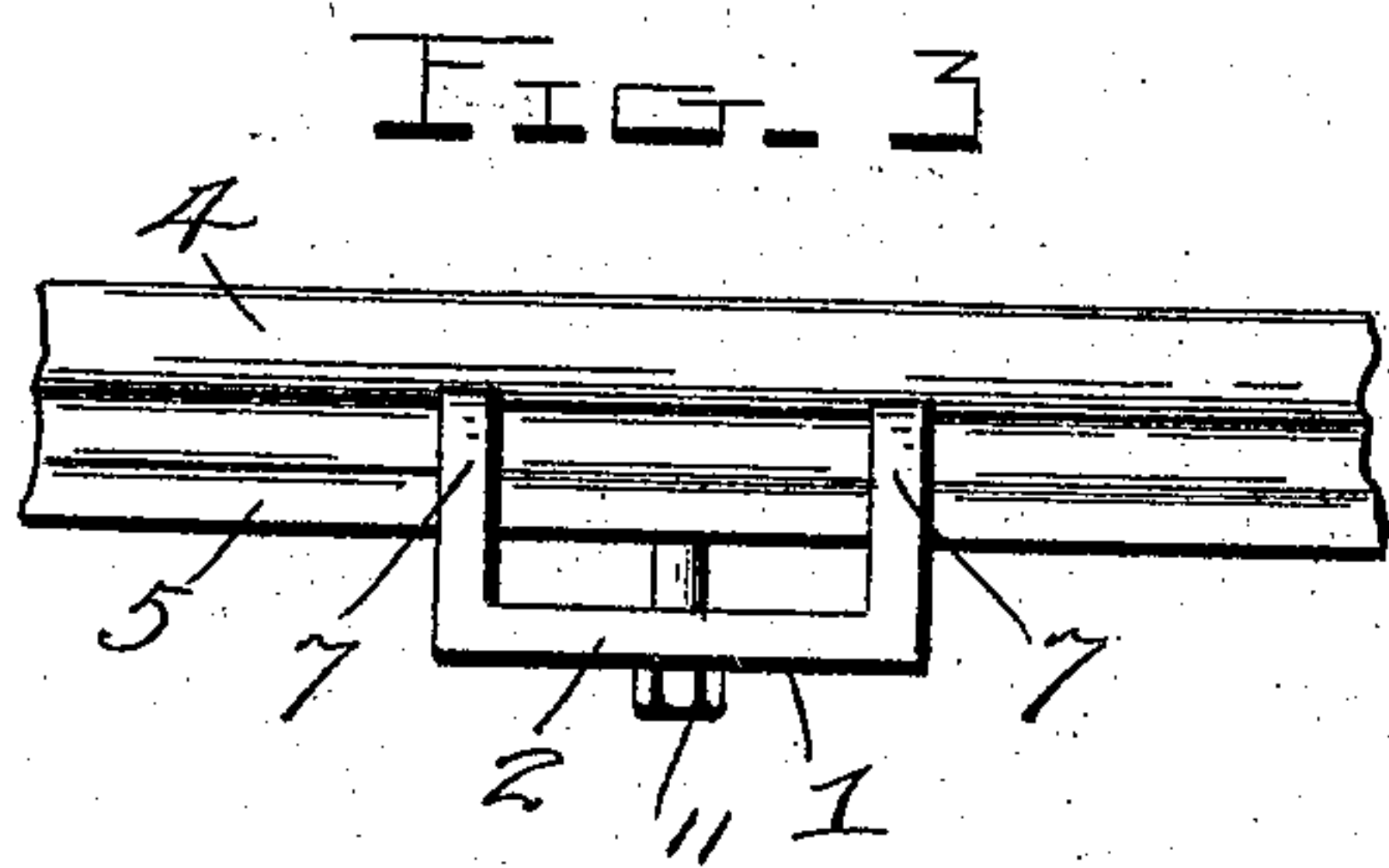
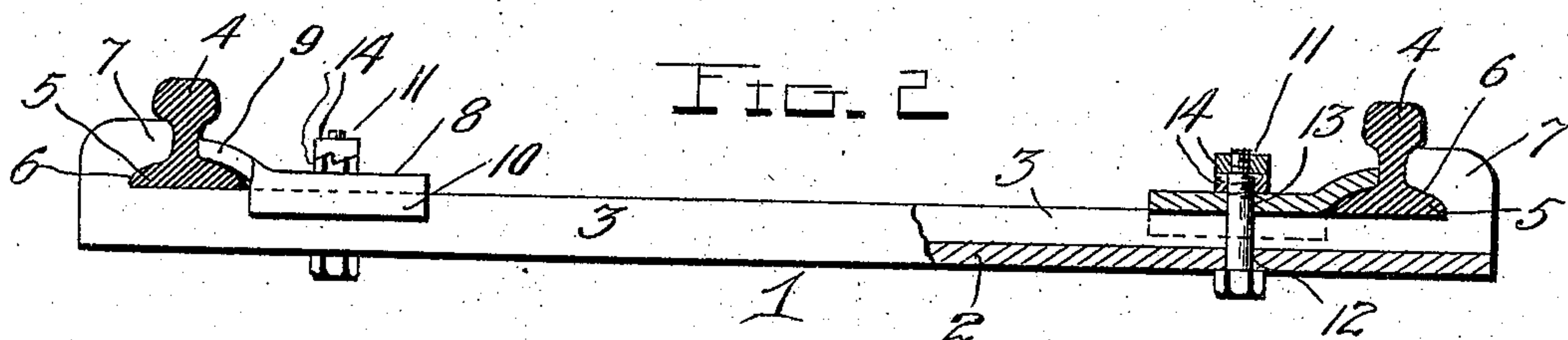
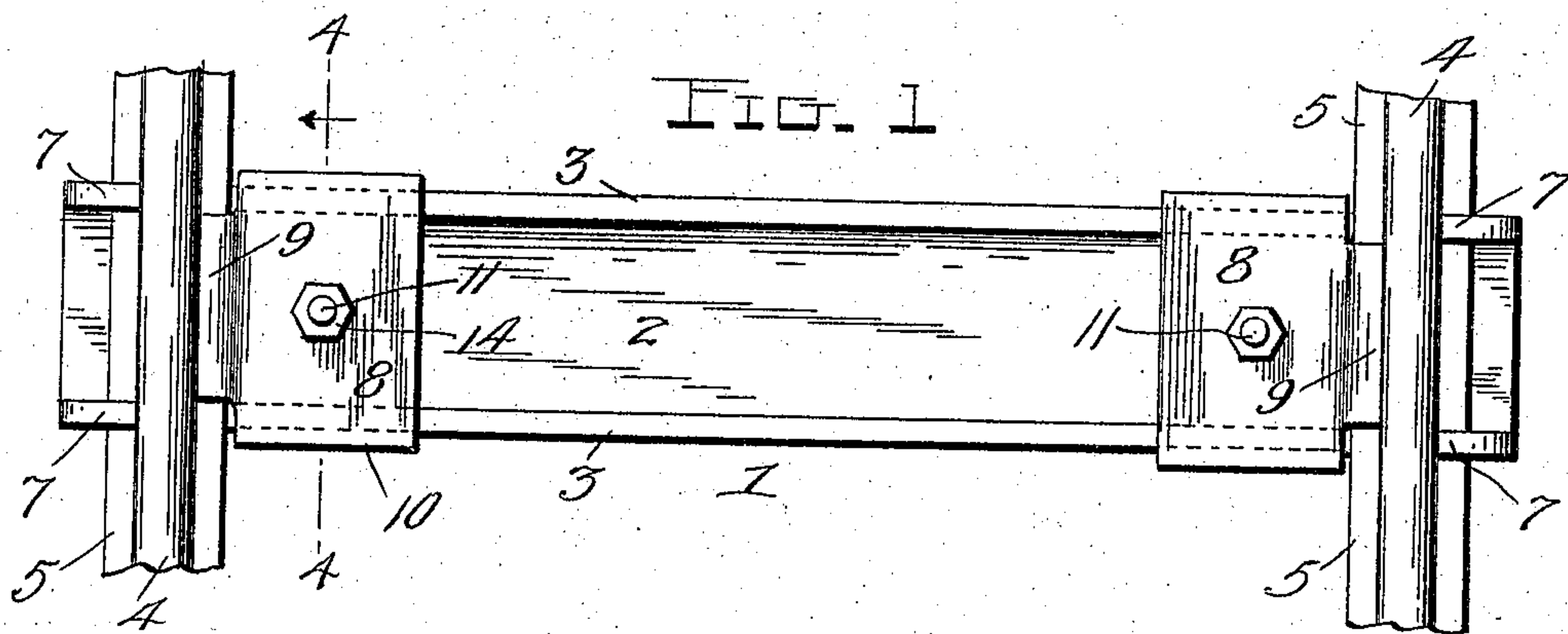


No. 814,978.

PATENTED MAR. 13, 1906.

C. L. MUELLER.
METALLIC RAILWAY TIE.
APPLICATION FILED JUNE 12, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

CARL L. MUELLER, OF WAPAKONETA, OHIO.

METALLIC RAILWAY-TIE.

No. 814,978.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed June 12, 1905. Serial No. 264,861.

To all whom it may concern:

Be it known that I, CARL LUDWIG MUELLER, a citizen of the United States, residing at Wapakoneta, in the county of Auglaize and State of Ohio, have invented certain new and useful Improvements in Metallic Railway-Ties; and I do 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.

My invention relates to improvements in metallic railway-ties; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

The object of the invention is to improve and simplify the construction of devices of this character, and thereby render the same more durable and efficient in use and less expensive to manufacture.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of portions of two track-rails secured by my improved metallic tie. Fig. 2 is a side elevation of the tie with parts in longitudinal section. Fig. 3 is an end elevation of the tie, and Fig. 4 is a vertical transverse sectional view taken on the line 4 4 in Fig. 1.

Referring to the drawings by numerals, 1 denotes my improved railway-tie, which is constructed from a metallic plate of suitable size and thickness by stamping or cutting the same and bending it as shown. The tie comprises a substantially rectangular body portion 2 and longitudinally-extending side portions or flanges 3, which are bent upwardly from the body portion. The track-rails 4 are adapted to seat upon the upper edges of the parallel flanges 3 and are prevented from spreading apart by the engagement of their outer base-flanges 5 with undercut or recessed portions 6 of enlargements 7, formed at the ends of the flanges 3. These upwardly-projecting enlargements or portions 7 of the flanges are shaped to fit the web and under side of the head of the rail, as clearly shown in Fig. 2 of the drawings. The rails are prevented from moving inwardly and are securely fastened to the tie by clamps 8, which are in the form of metallic plates bent to form curved portions 9, which engage the inner

base-flange of the rail, and downturned side flanges 10, which engage the outer faces 3 of the tie. The clamping-plates 8 may be secured upon the top of the tie in any desired manner; but I preferably provide screw-bolts 11, which are passed upwardly through aligning openings 12 and 13, formed, respectively, in the body portion 2 of the tie and in the clamping-plates 8. The bolts 11 are preferably formed with right and left hand screw-threaded portions of different diameters to receive similarly-threaded nuts 14, which have upon their opposing faces coacting ratchet-teeth to prevent the outer or uppermost nut from unscrewing after it has been screwed down into position.

The construction and advantages of the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that a tie constructed in this manner will be less rigid than a solid iron tie, but it will hold the rails firmly and securely in their proper position, so as to render spreading impossible. It will also be seen that owing to the simple construction the tie may be manufactured and used at comparatively small cost.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. The combination of a metallic railway-tie comprising a body portion formed with apertures, parallel flanges bent up from the sides of said body, and enlargements at the ends of said flanges formed with undercut portions to receive the outer base-flanges of the track-rails, rail-clamps upon the top of said tie having portions engaging the inner base-flanges of track-rails and downturned side flanges engaged with the outer faces of the flanges of said tie, and means for securing said clamps to said tie, substantially as described.

2. The combination of a metallic railway-tie comprising a body portion formed with apertures, parallel flanges bent up from the sides of said body, and enlargements at the ends of said flanges formed with undercut portions to receive the outer base-flanges of the track-rails, rail-clamps upon the top of

said tie having portions engaging the inner base-flanges of track-rails and downturned side flanges engaged with the outer faces of the flanges of said tie, screw - bolts passed
5 through alining openings in said clamps and said tie, and locked nuts upon said bolts, substantially as described.

3. The combination with a track-rail, of a metallic tie comprising a plate having its
10 sides bent up to form flanges upon which said rail is adapted to seat, enlargements at the ends of said flanges formed with undercut portions to engage one of the base-flanges of said rail, and a clamping-plate having a por-

tion to engage the opposite base-flange of 15 said rail and downturned side flanges to engage the outer sides of the flanges of said tie, and a fastening device passed through alining openings formed in said tie and in said clamping-plate, substantially as described. 20

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

CARL L. MUELLER.

Witnesses:

ROY E. LAYTON,
HETTIE M. STEPHENSON.