J. L. AUSTIN.

CROSS TIE AND RAIL FASTENER.

APPLICATION FILED JUNE 23, 1909.

950,984.

Patented Mar. 1, 1910.

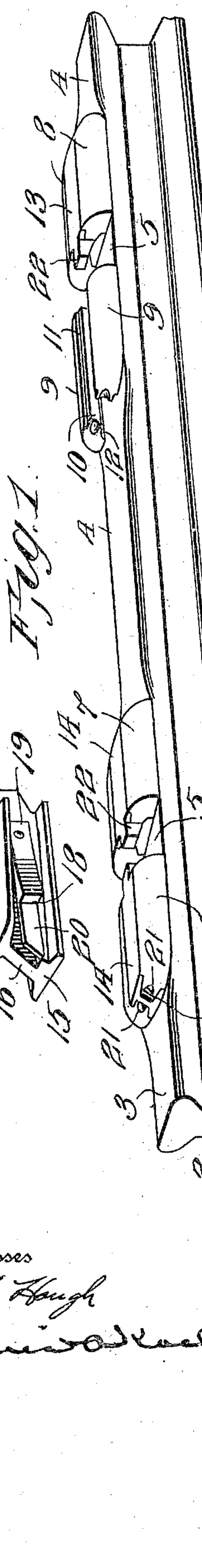

Fig. 1.

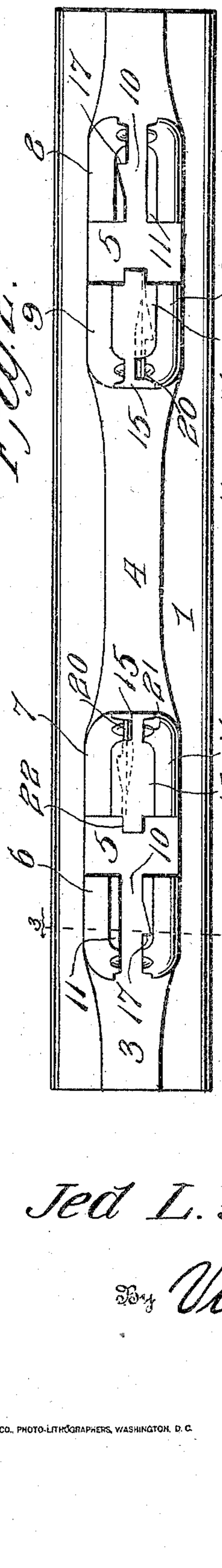

Fig. 2.

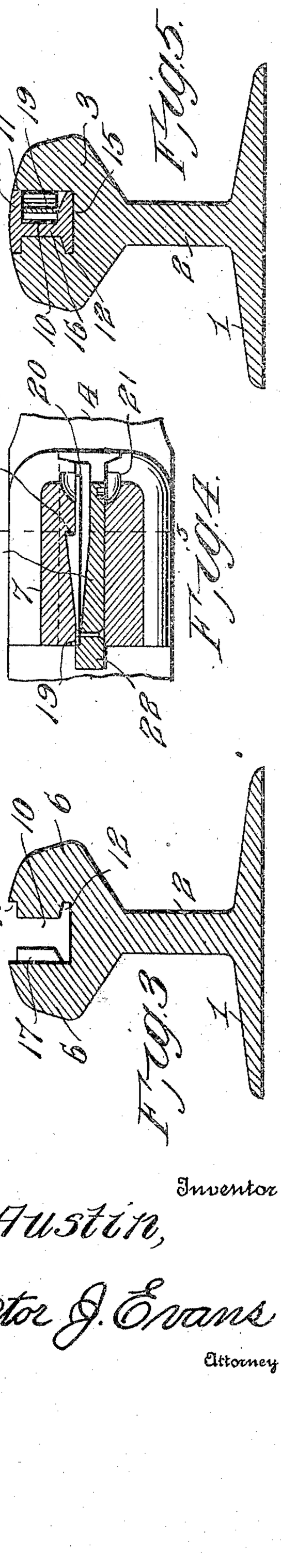

Fig. 3.

Fig. 4.

Fig. 6.

Fig. 5.

Fig. 7.

Witnesses

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CROSS-TIE AND RAIL-FASTENER.

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To all whom it may concern:

Be it known that I, JED L. AUSTIN, a citizen of the United States, residing at Conneaut, in the county of Ashtabula and State of Ohio, have invented new and useful Improvements in Cross-Ties and Rail-Fasteners, of which the following is a specification.

This invention relates to a combined cross tie and rail fastener, and has for an object to provide a device of this character wherein simple, novel and extremely effective means will be employed for engaging the rails and holding them to the ties so that they will be held against spreading or creeping toward or away from each other.

A still further object of my invention is to provide means whereby the rails can be held to the tie without the use of spikes or similar fastening devices, the said means being adapted for interlocking engagement with the tie and being mounted thereupon whereby it can be removed at the will of the operator or workman.

Another object of the invention is to provide a tie which may be made from a single piece of light metal which will be formed at opposite points with relatively broad rail-receiving and sustaining surfaces.

The above mentioned and other objects are attained by the construction, combinations and arrangements of parts, as disclosed on the drawing, set forth in this specification, and particularly pointed out in the appended claims.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a detail perspective view of the combined cross tie and rail fastener. Fig. 2 is a top plan view of the same. Fig. 3 is a detail transverse section taken on the line 3—3 of Fig. 2, looking in the direction of the arrow. Fig. 4 is a detail horizontal section through a portion of the tie and the rail fastening means. Fig. 5 is a detail vertical section taken on the line 5—5 of Fig. 4. Fig. 6 is a detail perspective view of one of the rail fastening devices.

Upon reference particularly to the drawing it will be seen that my improved device consists of a tie which is preferably formed from a single piece of metal, the same being of substantially I-form in cross section and is provided with a main base portion 1, a vertically extending web 2 which extends the entire length of the base portion and is located centrally with respect thereto. The web portion has formed integrally therewith a flange or head 3 which is provided with intermediate and end reduced portions 4 and with relatively broad rail supporting surfaces or portions 5. Pairs of spaced vertical lugs 6 extend from one of the portions 5, and as shown the inner faces of these lugs are spaced from the inner faces of corresponding lugs 7. The other portion 5 of the head or flange 3 is provided with a pair of spaced lugs 8 whose inner faces are disposed in spaced relation to the inner faces of lugs 9. The lugs just described are arranged in pairs, and as illustrated each pair forms a longitudinally extending guideway 10. The walls of the lugs are formed with rabbeted upper edge portions 11 and with grooved lower portions 12.

Rail fastening devices 13 are provided, and as shown, these devices each consist of a member which is preferably formed from a single piece of metal which is of I-form in cross section and is provided with a flanged upper portion 14 and a flanged lower portion 15. The portions 14 and 15 are connected to each other by a web portion 16, and as illustrated the web portions are adapted for sliding movement in the guideways formed between the hereinbefore described lugs while the flanges 14 and 15 are adapted for engagement in the rabbeted and grooved portions 11 and 12 respectively. One boss of each pair is provided with a shoulder 17 which is adapted to receive a coöperating shoulder 18 upon a leaf spring 19. The springs 19 are secured in any suitable manner to the web portions of the fastening devices and are each provided with a finger manipulating portion 20. The lugs are recessed as shown at 21 upon their inner faces and are disposed when the rail fastening devices are in their operative positions in such manner that the portions 20 of the springs can be conveniently manipulated whereby their shoulders 18 can be effectively moved out of engagement with their coöperating shoulders upon the lugs.

The rail fastening devices are each provided with a rail base flange engaging member or projection 22. The members or projections 22 which are carried by the rail fastening devices are operatively connected with the lugs in such manner that when the rails are mounted upon the portions 5 of the head or flange 3 the webs of the rails

will be positioned immediately between the projections 22 which coöperate with each other for the purpose described.

The construction of a combined cross tie and rail fastener is extremely simple, the device may be found effective and durable, and the novel and simple rail fastening devices are such that they may be conveniently attached to or detached from the tie at the will of the operator or workman.

The longitudinal edge portions of the head or flange 3 are rounded preferably as shown on the drawing so as to prevent coupling pins or the like which usually hang from rolling stock from becoming entangled with the tie as is obvious.

I claim:

1. A cross tie having spaced upper and lower flanges, a web connecting the said flanges, a plurality of pairs of lugs adjacent to each end of the said upper flange, the lugs of each pair being spaced from each other to form a longitudinally extending guideway, the said upper flange being provided with a rail supporting surface at a point between each plurality of pairs of lugs, rail fastening devices removably mounted in the said guideways, and means upon the said rail fastening devices adapted to be engaged with the said lugs to hold the rail fastening devices against movement.

2. A cross tie having spaced upper and lower flanges, a web connecting the said flanges, a plurality of pairs of lugs adjacent to each end of the said upper flange, the lugs of each pair being spaced from each other to form a longitudinally extending guideway, the said upper flange being provided with a rail supporting surface at a point between each plurality of pairs of lugs, rail fastening devices removably mounted in the said guideways, one lug of each pair having a shoulder formed thereon, and a locking spring upon each of the said locking devices adapted to be engaged with the said shoulders to hold the rail fastening devices against movement, the said springs being provided with manipulating portions whereby the springs can be disengaged from the said shoulders.

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

JED L. AUSTIN.

Witnesses:

JOHN L. FLETCHER,

JAMES A. KOEHL.