

M. BARTLEY.
TIE PLATE.
APPLICATION FILED MAY 5, 1908.

921,062.

Patented May 11, 1909.
2 SHEETS—SHEET 1.

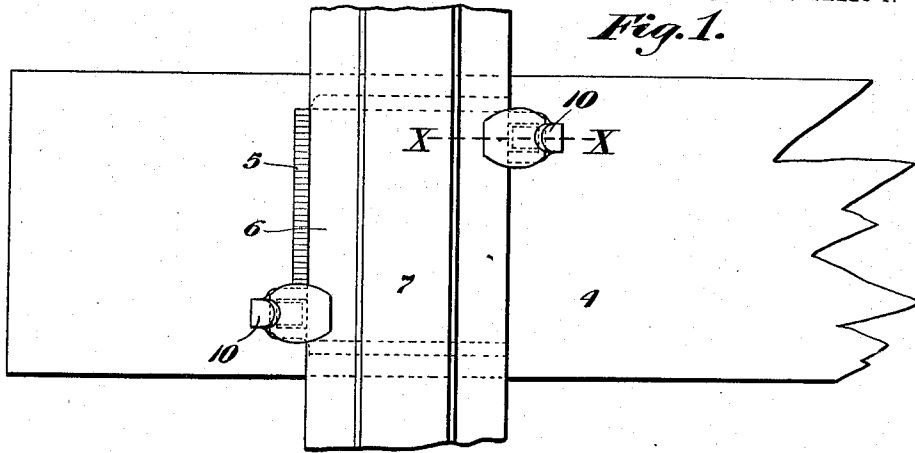


Fig. 1.

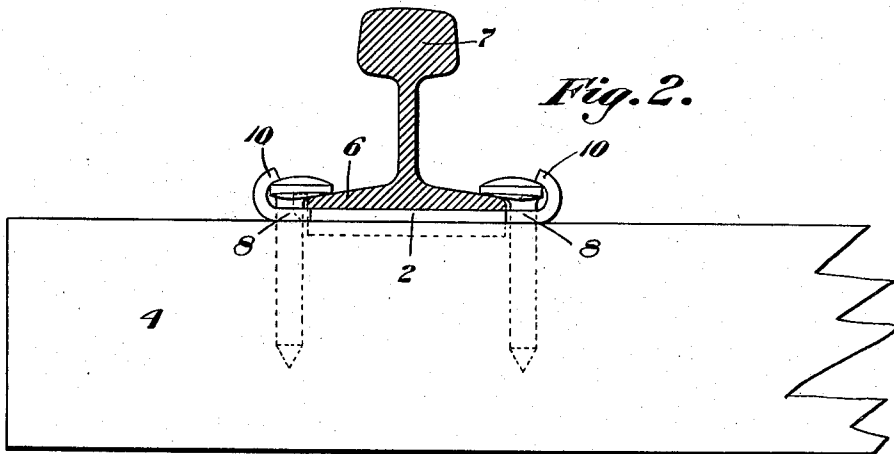


Fig. 2.

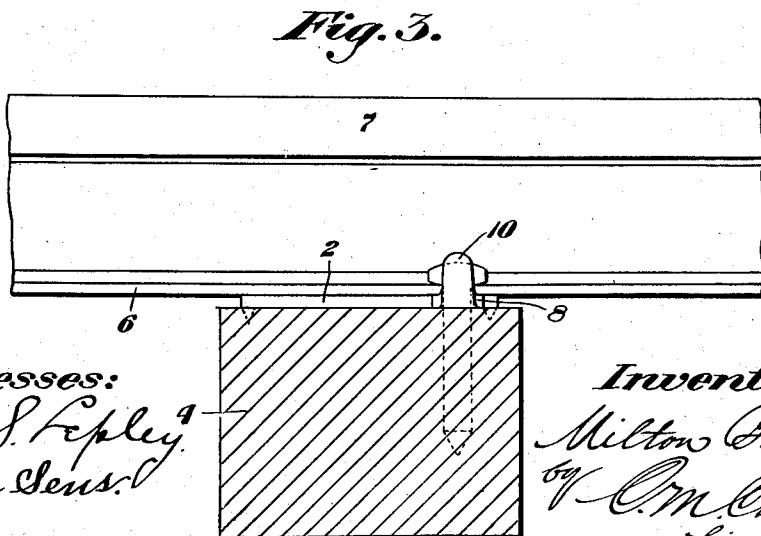
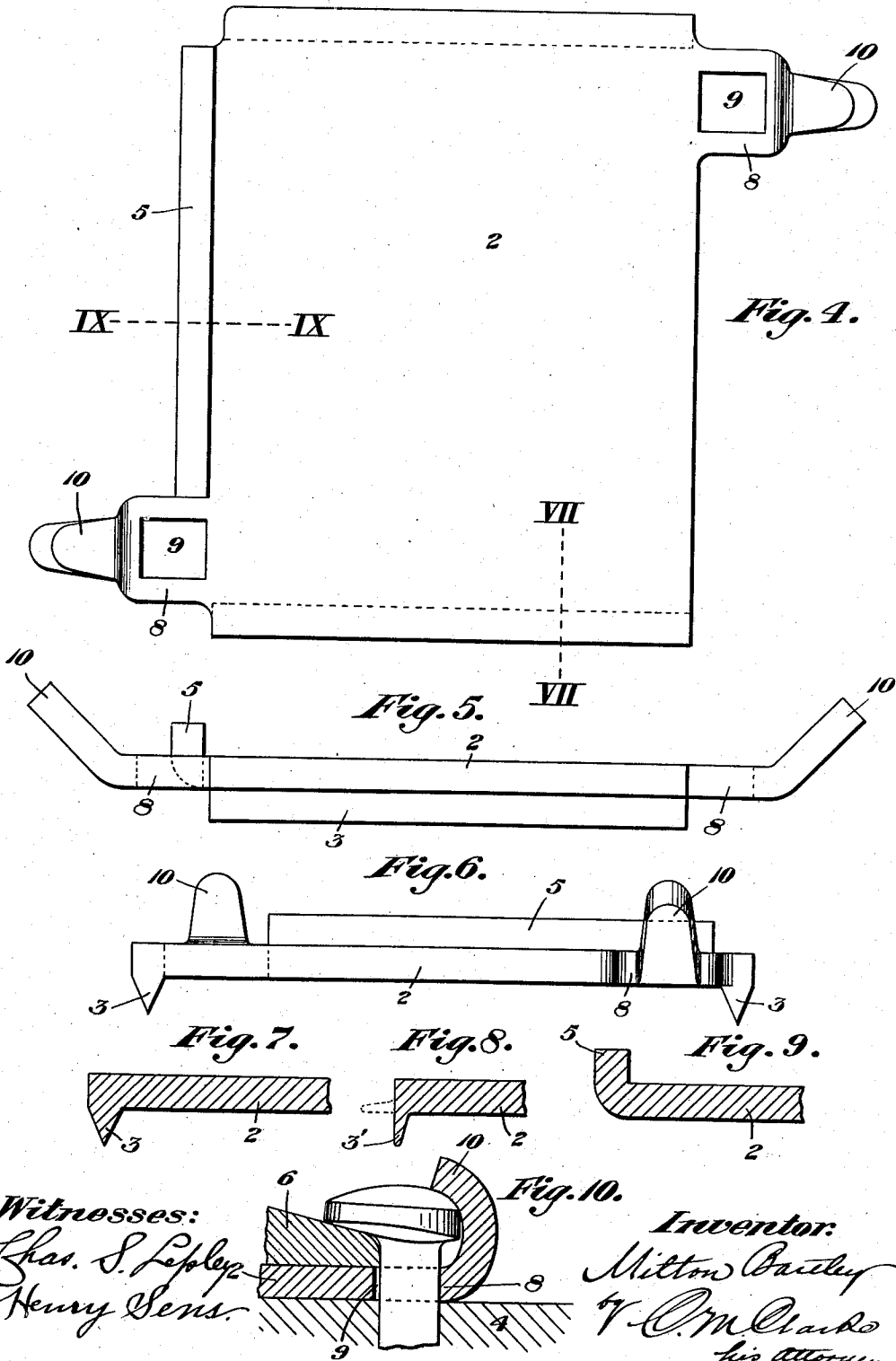


Fig. 3.

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UNITED STATES PATENT OFFICE.

MILTON BARTLEY, OF PITTSBURG, PENNSYLVANIA.

TIE-PLATE.

No. 921,062.

Specification of Letters Patent.

Patented May 11, 1909.

Application filed May 5, 1908. Serial No. 430,992.

To all whom it may concern:

Be it known that I, MILTON BARTLEY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Tie-Plates, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention refers to an improved tie plate and spike holder for rails, and is designed to provide a device adapted to be fixedly set on the tie, provided with means for engaging the edge of the outer rail flange, and having securing spike openings and means for positively holding the spike in place against accidental removal or loosening under the strains and vibrations of continued use.

The invention consists of a plate, preferably of rolled metal, having along one or both lower edges downwardly extending securing projections adapted to be driven into the tie, an upwardly extending lateral flange-retaining abutment, oppositely arranged spike receiving openings and laterally extending tongues adapted to be bent over to engage the spike heads after insertion to retain them in position.

In the drawings illustrating the invention:—Figure 1 is a plan view of a portion of a tie and rail showing my improved plate in position. Fig. 2 is a sectional elevation of Fig. 1. Fig. 3 is a similar view at right angles to Fig. 2. Fig. 4 is an enlarged plan view of the plate. Fig. 5 is an edge view of Fig. 4. Fig. 6 is a similar view at right angles to Fig. 5. Fig. 7 is a sectional detail view on the line VII. VII. of Fig. 4. Fig. 8 is a similar view showing a modified construction. Fig. 9 is a sectional view on the line IX. IX. of Fig. 4. Fig. 10 is an enlarged sectional view on the line X. X. of Fig. 1.

2 is the main body of the plate, rectangular in form, having along its opposite lower edges downwardly projecting tapering ridges or blades 3 adapted to be driven into the tie lengthwise of its grain, and along one or both of its upper transverse edges a longitudinal abutment 5 for retaining engagement of the flange 6 of rail 7.

Extending laterally of the plate, preferably at diagonally opposite corners, are spike housings 8 having spike openings 9, preferably rectangular in form to receive the shank of the spike, and provided with terminal lugs

or tongues 10. These tongues are preferably bent upwardly at any suitable angle as indicated in Fig. 5 to facilitate final turning over into engagement with the spike head, and these parts may be sheared or punched from the blank and angularly bent as described in one operation by suitable dies.

After the plate is located in position on the tie and the rail is set in place and the spikes driven in, the tongues 10 are finally bent over into embracing engagement, as shown in Figs. 2 and 10, thereby positively and effectively retaining the spike against removal except by force. The tongues 10 are preferably narrowed or tapered as shown to admit of the insertion of a claw bar or withdrawing tool under the sides of the spike head, and by originally turning the tongues 10 partially up in the manufacture of the plate, they may be more readily turned completely over upon the spike heads by a hammer in the final operation. When thus secured, the spikes are positively retained in position against removal by jarring or in any manner otherwise than by first forcibly turning back the retaining tongues 10, which may be readily done by the workman, after which the spikes may be taken out if desired. In service, the plate is held solidly down upon the tie, not only by the spikes and the retaining projections entering the wood, but also by the weight of the rail; and the device as a whole will be found to effectually prevent the common well known trouble of loosening of the spikes.

In Fig. 8 I have shown a modified arrangement of the tie-anchoring projections or blades 3' made by rolling them continuously along the edges of the blank, of thinner tapering cross section, as indicated in dotted lines, and then turning them down at right angles in the same operation of shearing and bending the other parts. These blades may also be originally rolled in their right angle arrangement with equal facility.

In manufacture, the device is preferably made from continuous rolled blanks sheared off, punched and bent to produce the construction described, at a minimum cost, resulting in a device of great efficiency, durability and simplicity.

It will be understood that the number or arrangement of the spike recesses and tongues may be varied, as well as other proportions, features or details, by the skilled mechanic; but all such changes are to be con-

sidered as within the scope of the following claims.

What I claim is:

1. A tie plate consisting of a rectangular integral metallic body portion having its opposite edges turned downwardly and tapered for driving into a tie and its intervening transverse edge portion bent upwardly to provide a rail retaining abutment, said plate having at its diagonally opposite corner portions outwardly extending apertured spike receiving portions having spike holding extensions extending upwardly and outwardly therefrom and adapted to be bent over upon the head of the spike when in position, substantially as set forth.

2. In a tie plate, the combination with a rectangular flat base of rolled metal, of downwardly extending tapering securing portions arranged underneath the opposite edges of the plate adapted to be driven into the tie lengthwise of its grain, an upwardly extend-

ing flange retaining rib extending transversely along one of the sides of the plate at right angles to said portions, an outwardly extending apertured spike receiving portion located at one end of said rib and with the rear edge of its aperture in alinement with the inner edge of the rib, said spike receiving portion having a narrow spike holding extension extending upwardly and outwardly from its outer portion and adapted to be bent over the head of the spike when in position, and a similar spike holding extension located at the opposite diagonal portion of the plate provided with a similar terminal member, substantially as set forth.

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

MILTON BARTLEY.

Witnesses:

C. M. CLARKE,
CHAS. S. LEPLEY.