H. H. WIGGINS.

TIE AND RAIL FASTENER.

APPLICATION FILED JUNE 15, 1911.

1,002,103. Patented Aug. 29, 1911.

FIG. 1.

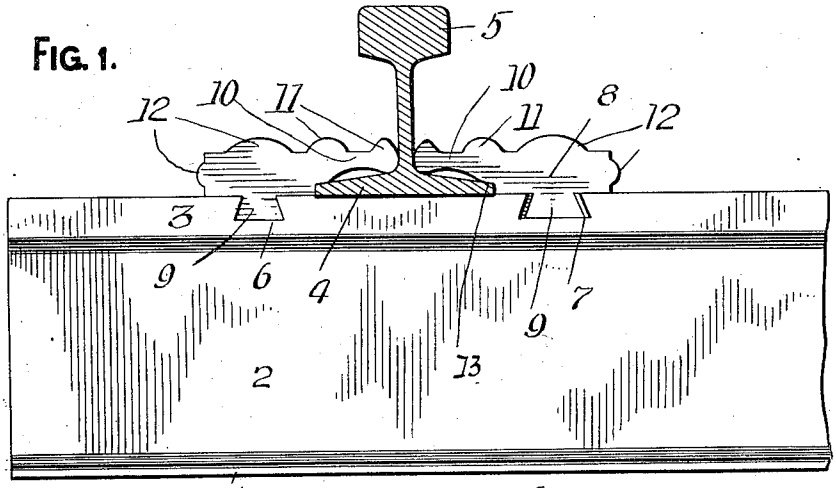


FIG. 2.

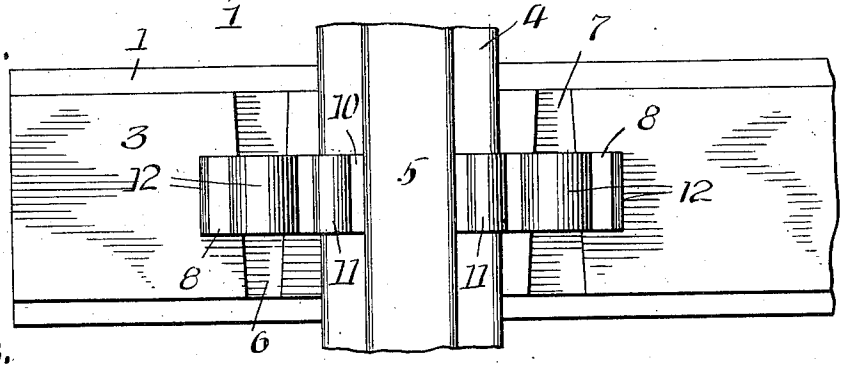


FIG. 3.

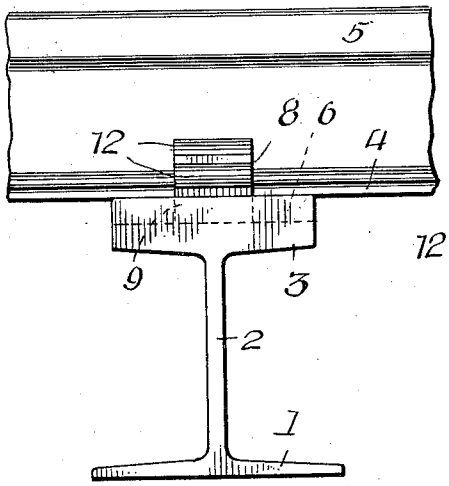
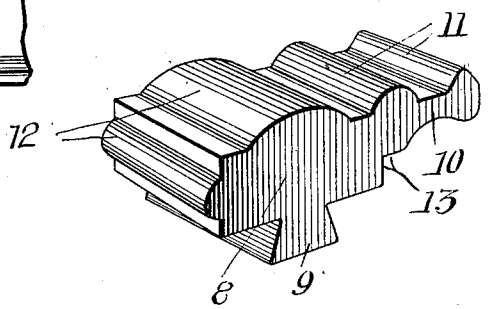


FIG. 4.



WITNESSES:

Samuel Payne

R. F. C. Fuller

INVENTOR.

H. H. Wiggins.

BY

H. C. Evert & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY HARRY WIGGINS, OF PITTSBURG, PENNSYLVANIA.

TIE AND RAIL-FASTENER.

1,002,103. Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed June 15, 1911. Serial No. 633,239.

To all whom it may concern:

Be it known that I, HENRY HARRY WIGGINS, a citizen of the United States of America, residing at Pittsburg, county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in Ties and Rail-Fasteners, of which the following is the specification, reference being had therein to the accompanying drawing.

This invention relates to ties and rail fasteners, and the objects of my invention are to provide a tie of the I beam construction having a bearing surface possessing the necessary superficial area for the adequate support of rails, and to provide a tie that is extremely light and durable.

Other objects of my invention are to provide a tie having the requisite amount of elasticity to prevent injury to rolling stock, and to furnish the tie with a fastener that can be repeatedly adjusted to compensate for wear.

Other objects of my invention are to provide a rail fastener for metallic ties that will preserve the alinement of rails and prevent lateral and vertical displacement, and to accomplish the above results by a mechanical construction that is inexpensive to manufacture and easy to install.

With the above and other objects in view the invention resides in a novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a side elevation of a portion of the tie and fastener in accordance with this invention, Fig. 2 is a plan of the same, Fig. 3 is an end view of the tie and fastener, and Fig. 4 is a perspective view of the detached fastener.

A tie in accordance with this invention comprises an I beam having lateral base flanges 1, a web 2 and a head 3, said head being of a greater thickness than the lateral base flange 1. The head 3 adjacent to the ends of the tie is adapted to support the base flanges 4 of a rail 5, and said head is provided with transverse tapering dove-tailed grooves 6 and 7 corresponding in length to the width of the head 3, said grooves having open ends and the groove 6 tapering in an opposite direction from the groove 7, whereby the small end of the groove 6 will be at the opposite edge of the head 3 from that of the small end of the groove 7.

Each fastener comprises a body 8 of a less width than the head 3, said body having a depending dove-tailed tapering tongue 9 adapted to engage in one of the grooves 6 or 7, the tongue 9 being tapered whereby a fastener can be driven to a point approximately intermediate the ends of the groove. The body of each fastener has an inwardly overhanging flange 10 adapted to engage the upper surface of the base flanges 4 of the rail 5 and the lower edges of the web of said rail, said flange having transverse ribs 11 adapted to reinforce the flange and add rigidity to the same. The top of the body and the outer edge thereof are also provided with transverse ribs or enlargements 12 for the same purpose, while the inner edge of the body has a shoulder 13 adapted to engage the edge of the base flange 4 of the rail 5, said shoulder coöperating with the flange in preventing lateral and vertical displacement of the rail.

The fasteners of the tie are inter-changeable and as said fasteners are wedged in opposite directions, the fasteners are bound and frictionally held against the base flanges of a rail.

From the foregoing it will be observed that I obviate the necessity of using spikes and similar fastening devices, and that the fasteners can be easily and quickly installed without the use of skilled labor.

What I claim is:—

In a tie and rail fastener, a tie of the I beam construction having a head of a greater thickness than the base flanges of the I beam, said head having tapering dove-tailed grooves formed therein, of a length corresponding to the width of the head and with one of said grooves tapering in an opposite direction from the other of said grooves, fasteners detachably mounted upon the head of the tie and adapted to retain a rail thereon, each fastener comprising a body of less width than the head of the tie, said body having an inwardly projecting flange adapted to over-hang the base flanges

of the rail mounted upon said tie, and a depending dove-tailed tapering tongue carried by the body and adapted to engage in one of the grooves of the head of said tie, said body and flanges of said fastener having transverse ribs adding rigidity to the fastener.

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

HENRY HARRY WIGGINS.

Witnesses:
MAX H. SROLOVITZ,
CHRISTINA T. HOOD.