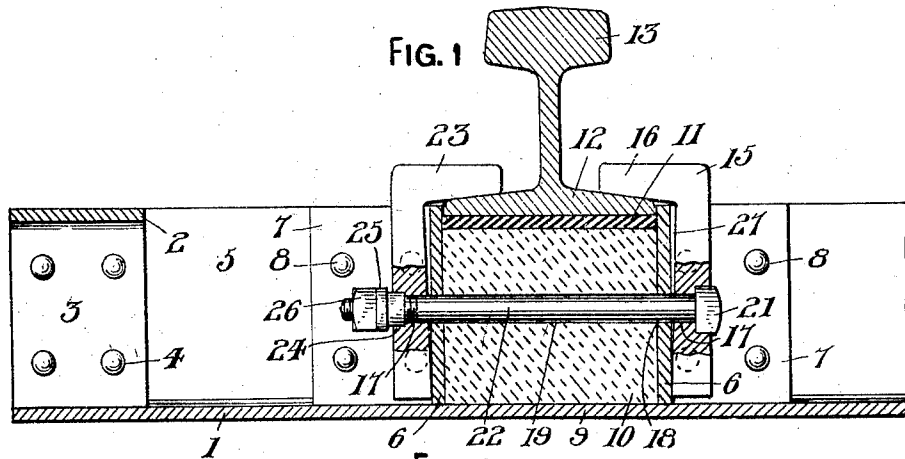
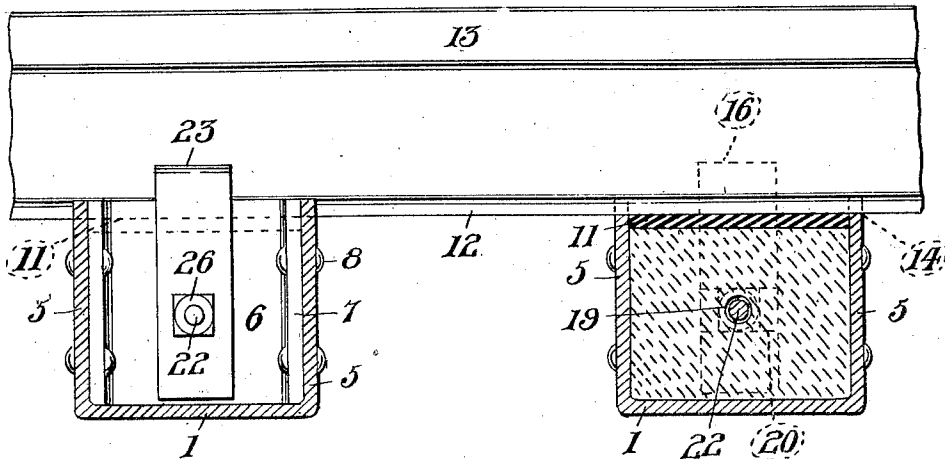
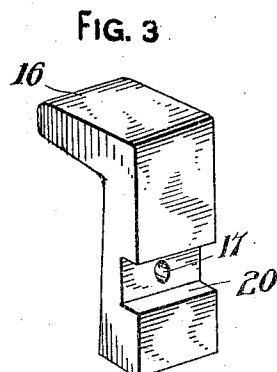


W. & L. BECK.
TIE AND RAIL FASTENER.
APPLICATION FILED NOV. 6, 1911.

1,025,672.

Patented May 7, 1912.



WITNESSES
J. P. Appleman,
Ralph C. Evert.

INVENTORS
W. Beck
L. Beck
BY *H. C. Evert & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM BECK AND LAVERGNE BECK, OF ETNA, PENNSYLVANIA.

TIE AND RAIL-FASTENER.

1,025,672.

Specification of Letters Patent.

Patented May 7, 1912.

Application filed November 6, 1911. Serial No. 658,700.

To all whom it may concern:

Be it known that we, WILLIAM BECK and LAVERGNE BECK, citizens of the United States of America, residing at Etna, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to ties and rail fasteners, and the objects of our invention are to provide an extremely light and durable tie that can be manufactured at a minimum cost, and to provide a metallic tie having the requisite amount of elasticity to prevent injury to rolling stock.

Further objects of our invention are to provide a tie made of standard materials that are easily and quickly assembled, and to furnish a tie with rail fasteners that may be repeatedly adjusted to compensate for wear.

Further objects of our invention are to provide rail fasteners that will preserve the alinement of rails and prevent lateral and vertical displacement, and to provide a rail fastener that is durable, and inexpensive to manufacture.

With the above and other objects in view the invention resides in the 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 longitudinal sectional view of a portion of the tie provided with rail fasteners. Fig. 2 is a cross sectional view of ties in accordance with this invention, and Fig. 3 is a perspective view of a detached fastener.

A tie in accordance with this invention comprises a channel bar 1 and arranged in the ends of said bar are inverted channel shaped braces 2 having the side walls 3 thereof riveted or otherwise connected, as at 4 to the side walls 5 of the bar 1.

The bar 1, adjacent to each end thereof, is provided with transverse partitions 6 having side flanges 7 riveted or otherwise connected, as at 8 to the side walls 5 of the bar 1. The partitions 6 form a rectangular compartment 9 in which is placed concrete 10. The partitions 6 correspond in height to the side walls 5 and the concrete 10 ex-

tends in proximity to the upper edges of said partitions. Located upon the concrete 10 is a cushion 11, made of fiber, felt or any other flexible material. The cushion 11 supports the base flanges 12 of a rail 13 and the side walls 5 of the bar 1 are cut away, as at 14 to provide clearance for the base flanges 12.

The rail fasteners consist of two inverted L-shaped members 15 and 23 arranged against the outer sides of the partitions 6 and having the upper angular ends 16 thereof extending onto the base flanges 12. The fasteners 15 have openings 17 registering with openings 18 in the partitions 6 and an opening 19 in the concrete 10. The outer side of the inner fastener 15 is provided with a transverse groove 20, and the outer side of the outer fastener 23 is provided with a socket 24 in communication with the opening of the fastener. Engaging in the groove 20 of the inner fastener 15 is a rectangular head of a tie rod or bolt 22, the threaded end of said bolt extending through the opening 17 and the socket 24 of the outer fastener. Screwed upon the threaded end of the bolt is a nut 25 that engages in the socket 24, also a lock nut 26 that engages the nut 25.

The inner and outer fasteners are so shaped that they are disposed at a slight angle to the partitions 6, thereby providing a small space 27 between the upper ends of the fasteners and the upper ends of the partitions. It is this small space that permits of the fasteners being drawn into closer proximity to the partitions, thereby increasing the grip or contact of the upper ends 16 of the fasteners upon the base flanges 12 of the rail.

What we claim is:—

1. In a tie and rail fastener, the combination with rails, of a tie of the channel bar construction, inverted channel braces mounted in the ends of said tie, transverse partitions mounted in said tie adjacent to the ends thereof and providing compartments, concrete arranged in the compartments of said tie, cushions arranged upon said concrete and adapted to support said rails, inverted L-shaped fastener members arranged against the outer sides of said partitions and engaging the base flanges of said rails, and means arranged longitudinally of said concrete for holding said fasteners in engagement with said rails.

2. In a tie and rail fastener, the combination with rails, of a tie of the channel bar construction, inverted channel braces mounted in the ends of said tie, transverse
5 partitions mounted in said tie adjacent to the ends thereof and providing compartments, concrete arranged in the compartments of said tie, cushions arranged upon said
10 concrete and adapted to support said rails, inverted L-shaped fastener members arranged against the outer sides of said partitions and engaging the base flanges of said rails, and means arranged longitudinally of said

concrete for holding said fasteners in engagement with said rails, said means including tie rods having heads thereof anchored in the inner fasteners and the opposite ends thereof held in engagement with the outer fasteners. 15

In testimony whereof we affix our signatures in the presence of two witnesses. 20

WILLIAM BECK.
LAVERGNE BECK.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.