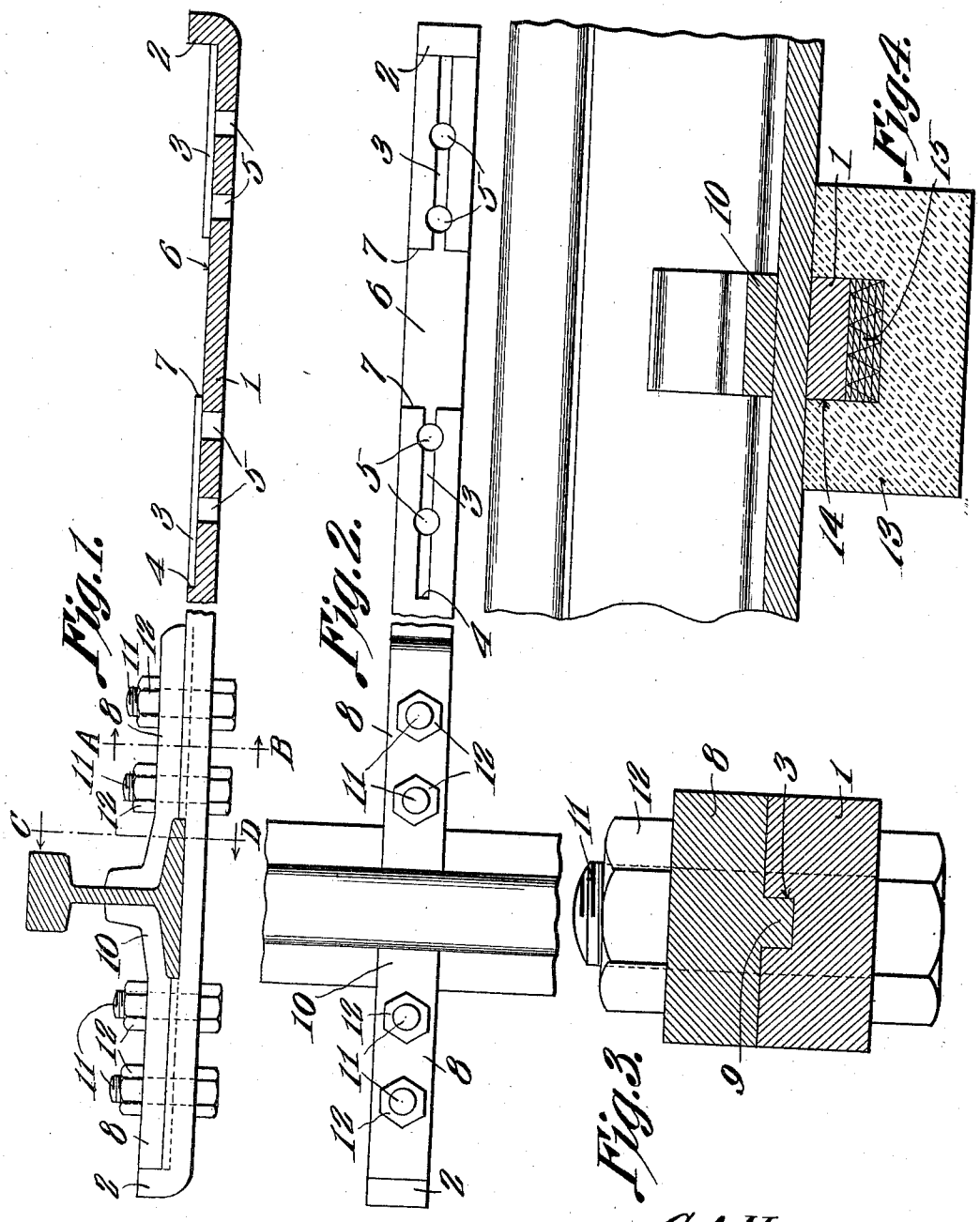
G. A. HUMASON.

RAIL TIE AND FASTENER.

APPLICATION FILED JULY 26, 1911.

1,037,008.

Patented Aug. 27, 1912.



Witnesses

J. P. Tonnin

L. H. Wilson.

G. A. Humason,
Inventor

by C. A. Snow & Co.
Attorneys

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GRANVILLE A. HUMASON, OF SHREVEPORT, LOUISIANA, ASSIGNOR OF TWENTY-FIVE ONE-HUNDREDTHS TO JOHN L. KIMBELL, OF SHREVEPORT, LOUISIANA.

RAIL-TIE AND FASTENER.

1,037,008. Specification of Letters Patent. Patented Aug. 27, 1912.

Application filed July 26, 1911. Serial No. 640,679.

To all whom it may concern:

Be it known that I, GRANVILLE A. HUMASON, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented a new and useful Rail-Tie and Fastener, of which the following is a specification.

This invention relates to rail ties and fasteners and more particularly to means primarily designed for use in connection with a concrete body, whereby rails may be securely fastened to the tie and will, at the same time, be held positively against spreading.

A further object is to provide a structure of this character including seats for the reception of the bases of the rails, there being rail engaging devices combined with the structure and overhanging the seats so as to hold the rails securely within the seats, the walls of said seats receiving the side thrusts of the rails and thus reducing, to the minimum, danger of the rail fastening devices being wedged or pried off of the structure to which they are attached.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings, the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a view partly in elevation and partly in longitudinal section of the improvements constituting the present invention, the middle portion of the structure being removed. Fig. 2 is a plan view of the parts shown in Fig. 1. Fig. 3 is an enlarged section on line A—B Fig. 1. Fig. 4 is an enlarged section on line C—D Fig. 1, the concrete tie body being shown in position under the tie bar and the cushion interposed between the bar and the tie body being shown in section.

Referring to the figures by characters of reference 1 designates a metallic tie bar having upturned ends forming shoulders or abutments 2 and formed within the upper face of the bar adjacent the ends thereof are longitudinal grooves or channels 3. One of these grooves or channels is located adjacent each end of the bar and the two channels aline, the abutments 2 constituting continuations of the outer end walls of the channels 3 while the inner end walls of the channels form stop shoulders or abutments 4. Bolt holes 5 are formed in the bar and open into the channels 3 and the walls of the channels are cut away, adjacent their centers, so as to form rail seats 6, each seat being of the same width as the base of the rail to be fastened and the walls of the seats extending perpendicularly from the bar 1 so as to constitute abutments for the rails, as indicated at 7.

Each of the channels 3 is adapted to receive two oppositely disposed rail fastening devices. Each of these devices includes a block 8 having a central longitudinal rib 9 so proportioned as to fit snugly within the channel, the block 8 being of the same width as the bar 1 and adapted to lie flush thereon. One end of the block bears against one of the abutments 2 or 4 while the other end thereof has a rail engaging jaw 10 so shaped as to fit snugly upon one of the base flanges of a rail and to fit against one side of the web of the rail. Openings are formed within the blocks 8 and are adapted to receive bolts 11 which may be held in place by means of nuts 12 or the like. The tie bar and the rail fasteners herein described are adapted to be used in connection with tie bodies of any preferred type but preferably in connection with concrete tie bodies. For example, and as shown in Fig. 4, the concrete tie body 13 may be formed with a channel 14 in which the bar 1 is seated, there being a cushion under this bar and within the channel 13. Said cushion, as shown in Fig. 4, is made up of strips 15 which are V-shaped in cross section and are assembled closely together, each strip being disposed oppositely to the next adjoining strips. It is preferred to form one strip of cotton fiber, the next adjoining strip of cork and the next strip of rubber. These cushioning strips completely fill the space between the bottom of the channel 14 and the lower face of the tie bar 1. When the tie bar is used in connection with a tie body such as indicated at 13, the bolts 11 are preferably extended entirely through the tie body instead of projecting solely through the tie bar and the rail fasteners.

It will be apparent that when rails are mounted in the seats 6, the walls 7 of these seats will constitute abutments for the sides of the bases of the rails and will thus receive the side thrusts and hold the rails positively against lateral movement. The fastening devices likewise constitute efficient means for holding the rails against spreading because the outer blocks abut against the upturned ends 2. Both blocks bear against the sides of the rail base therebetween and the ribs of the inner blocks abut against the end walls 4 so as to positively hold the inner blocks against longitudinal displacement. In view of the fact that the ribs as well as the walls 7 bear against the sides of the base flanges, it will be seen that there is no danger of these base flanges wedging between the tie bar 1 and the blocks 8 and thrusting upwardly upon the nuts 12 or bolts 11, thus tending to break them. Moreover as the rail fastening blocks are positively held against longitudinal movement by the abutment of the ribs against the base flanges of the rails and against the abutments 2 and 4, it will be seen that the bolts 11 are subjected to no strain due to the side thrusts of the rails.

What is claimed is:—

1. A device of the class described including a tie bar having a rail seat in the upper face thereof and alining longitudinally extending channels extending in opposite directions from the seat, there being an upstanding abutment at the outer end of one of the channels, rail fastening devices upon the tie bar and overhanging the seat, said fasteners having longitudinal ribs removably seated within the channels and abutting against the end walls thereof, and adapted to abut against the sides of the base flanges of a rail on the seat, and means extending through the bar and ribs for detachably securing the rail fastening devices upon the bar.

2. A device of the class described including a tie bar having upturned terminals and longitudinally extending channels, there being rail seats within the upper face of the bar and intersecting the channels, rail fastening blocks extended throughout the width of the bar and bearing outwardly against the terminals, rail fastening blocks mounted upon the bar and between the seats, rail engaging jaws extending from the blocks and overhanging the seats, longitudinal ribs upon the blocks and mounted within the channels, and means extending through the bar and blocks for detachably securing the blocks upon the bar.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GRANVILLE A. HUMASON.

Witnesses:
F. B. OCHSENREITER,
JOHN L. KIMBELL.