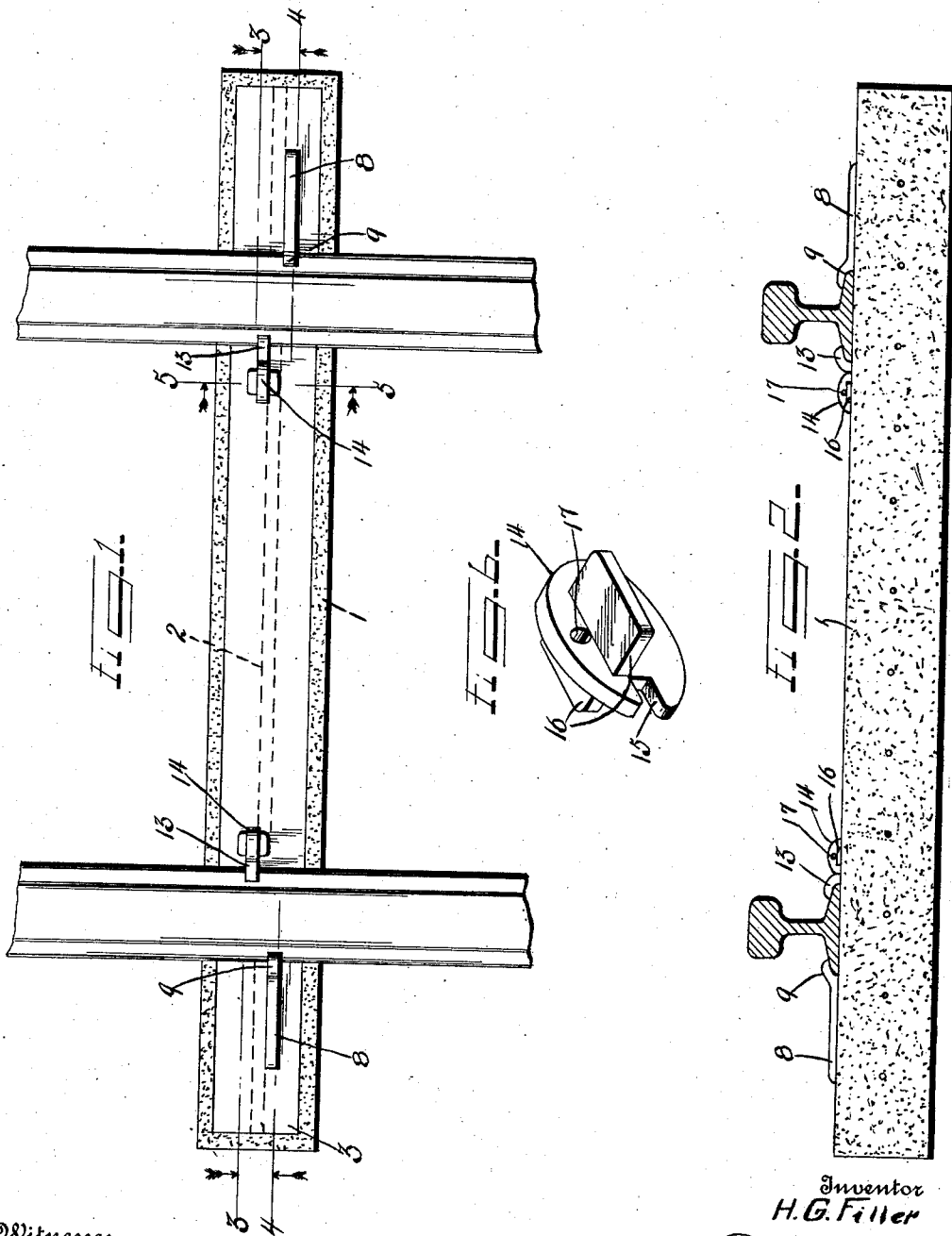


H. G. FILLER.
RAILWAY TIE.
APPLICATION FILED AUG. 10, 1911.

1,025,867.

Patented May 7, 1912.

2 SHEETS—SHEET 1.



Witnesses
J. C. Woodman
H. G. Filler

By

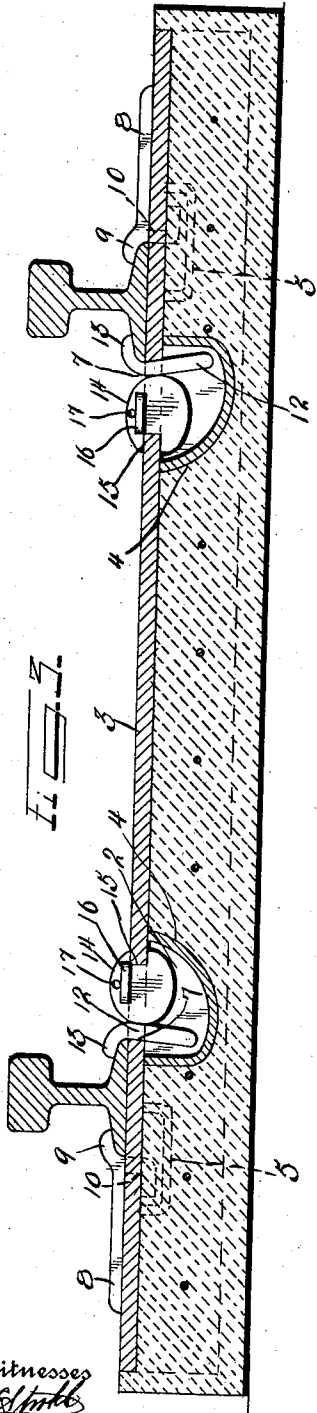
Charles Chandler

Attorneys

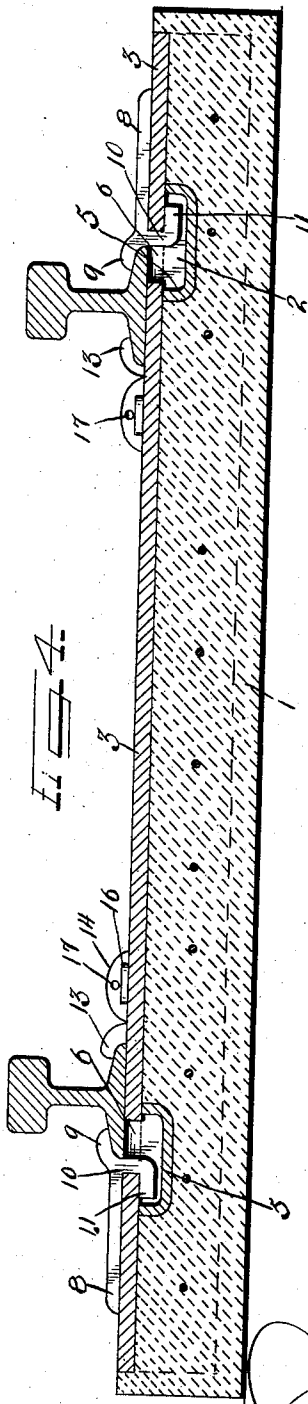
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Witnesses
[Signature]
H. F. Woodman.



By

[Signature]
Attorneys

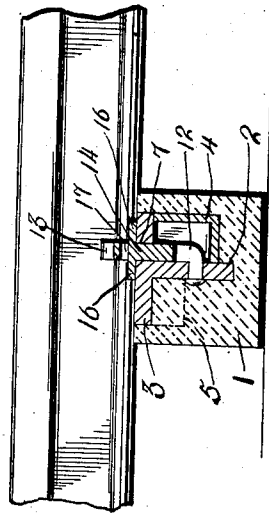


Fig. 3.

UNITED STATES PATENT OFFICE.

HENRY G. FILLER, OF OSHAWA TOWNSHIP, NICOLLET COUNTY, MINNESOTA.

RAILWAY-TIE.

1,025,867.

Specification of Letters Patent.

Patented May 7, 1912.

Application filed August 10, 1911. Serial No. 643,388.

To all whom it may concern:

Be it known that I, HENRY G. FILLER, a citizen of the United States, residing at Oshawa township, in the county of Nicollet, State of Minnesota, have invented certain new and useful Improvements in Railway-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to new and useful improvements in railway ties and fasteners therefor and more especially to reinforced concrete ties and the object of my invention is to improve the construction and increase the efficiency of ties of the above described character.

A further object of my invention is to provide means for securing the rail to my improved tie without the use of bolts or other customary securing means thereby greatly decreasing the expense of laying the track.

With these and other objects in view, my invention will be more fully described, illustrated in the drawings which show a preferred embodiment of my tie and then specifically pointed out in the claim which is attached to and forms a part of this application.

In the accompanying drawings, Figure 1 is a top plan view of my improved tie showing the rails secured thereto. Fig. 2 is a side elevation of the tie the rails being shown in section. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a section on the line 4—4 of Fig. 1. Fig. 5 is a section on the line 5—5 of Fig. 1. Fig. 6 is a detail perspective of the cam lock used in securing one of the rail fasteners in place.

Referring more specifically to the drawings in which similar reference numerals designate corresponding parts throughout, my improved tie is seen to consist of a rectangular shaped block of concrete designated by the numeral 1, this block forming the body member proper of the tie, being reinforced by a T-shaped beam of metal extending longitudinally throughout its length with its vertical web extending downwardly and centrally of the block and with its horizontal web flush with the upper face thereof to form seats for the rail. For the sake of convenience in description the vertical web of this reinforcing member will be

designated by the numeral 2 and the horizontal web by the numeral 3. This tie may be further reinforced by means of wires extending through holes in the beam if desired.

Secured to the vertical web adjacent either end thereof are casings 4 the upper portions of which are open and bear against the lower face of the horizontal web, while upon the other side of the vertical web adjacent either end are the casings 5. In constructing the tie the concrete is run into suitable molds in which is positioned the reinforcing beam with its casings in place and as will be understood these casings will serve to form recesses in the tie adjacent the lower face of the horizontal web for a purpose which will be hereinafter explained. It will be understood however that these casings 4 and 5 may be omitted and the recesses may be formed in the tie by removing a portion of the concrete while the latter is still in a semi-plastic state, if desired, without in any way departing from the spirit of my invention. These recesses are so positioned as to lie directly beneath the flanges of the rails when the latter are in position and the horizontal web of the reinforcing member is provided with longitudinally extending rectangular slots 6 communicating with the recesses formed by the casings 5, while similar slots 7 are formed communicating with the recesses formed by the casings 4.

As a means for securing either rail to the tie is identical to the means for securing the other the description of one will suffice for both. As a means for securing the outer rail flange I have provided a clamping plate 8, which as shown rests upon the upper face of the horizontal web and is provided at its inner end with the upwardly and inwardly extending rail flange engaging member 9. Extending downwardly from the lower portion of this plate 8 adjacent the member 9 is an extension 10 which passes through the slot 6 of the web and is provided with a laterally directed terminal 11 which extends in parallel spaced relation to the body member 8 and is adapted to engage with the web to maintain the same in place. The slot 6 is of sufficient length to permit the ready passage of this terminal 11 whereby the clamping plate may be readily attached to or detached from the tie. In use this plate is positioned as shown in Fig. 4 of the

drawings and a rail is positioned with its outer flange beneath the flange engaging member 9 by which means the outer flange of the rail is securely held against outward movement.

As a means for securing the inner rail flange I have provided a hook 12, which as shown, is pivoted to the vertical web 2 at a point within the casing 4 by one end, and a free end of this hook member extends upwardly through the slot 7 of the web 3 and terminates in a rail flange engaging member 13. By this means when the rail is positioned with its outer flange engaged by the plate 8 the hook 12 may be swung upwardly and outwardly until the member 15 engages with the inner flange of the rail. As a means for securing this hook member in its engagement with the rail flange I have provided a substantially elliptical shaped plate 14 provided at one end with a notch 15 adapted to engage with the innermost edge of the slot 7 and with laterally extending lugs or shoulders 16 positioned upon either side to prevent the plate from passing too far into the slot 7. As will be readily seen by referring to Fig. 3 of the drawings this elliptical plate when in position securely locks the hook 12 in its engagement with the rail flange, the lugs 16 resting upon the upper face of the web 3 and thus preventing the falling of the plate into the casing. In order to provide means for readily removing this plate I have provided the same with an aperture 17 adapted to receive the end of a suitable hook or other tool by

means of which the plate may be readily lifted from its seat to release the hook.

From the foregoing description the operation of my improved tie and rail fastener will be readily understood and it will be apparent that I have provided an extremely simple and efficient securing means. The web 3 forms a firm and even support for the rail thus avoiding all necessity of using chairs and so greatly simplifying the laying of the track.

What I claim is:—

A concrete tie having a metallic reinforcing member extending longitudinally there- through, said member having a centrally located web and a horizontal web flush with the top of the tie and forming rail seats, said latter web being provided with apertures, means co-acting with said tie for securing the outer flanges of the rails there- to, and means for securing the inner rail flanges to the tie, said latter means consist- ing of hooks pivoted to the vertical web and extending upwardly through said apertures and outwardly to engage said rail flanges, plates adapted to be seated in said aperture to hold said hooks in place, and lugs formed integrally with said plates to position the same.

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

HENRY G. FILLER.

Witnesses:

M. E. STONE,
FRANK MAGNER.