

C. E. McLANE.  
METALLIC TIE AND RAIL FASTENER.  
APPLICATION FILED FEB. 9, 1911.

989,992.

Patented Apr. 18, 1911.

Fig. 1.

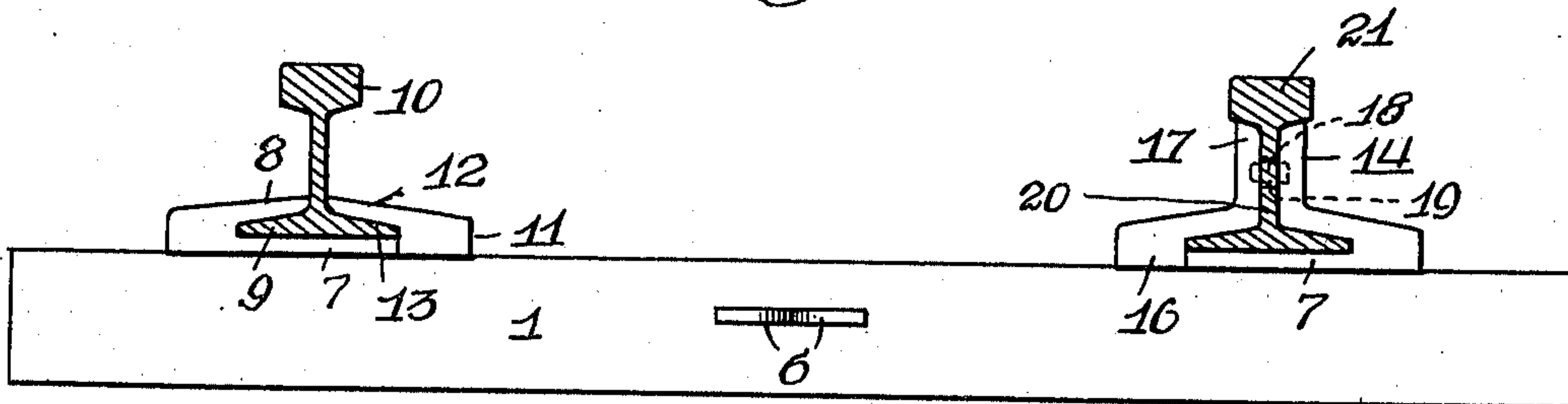


Fig. 2.

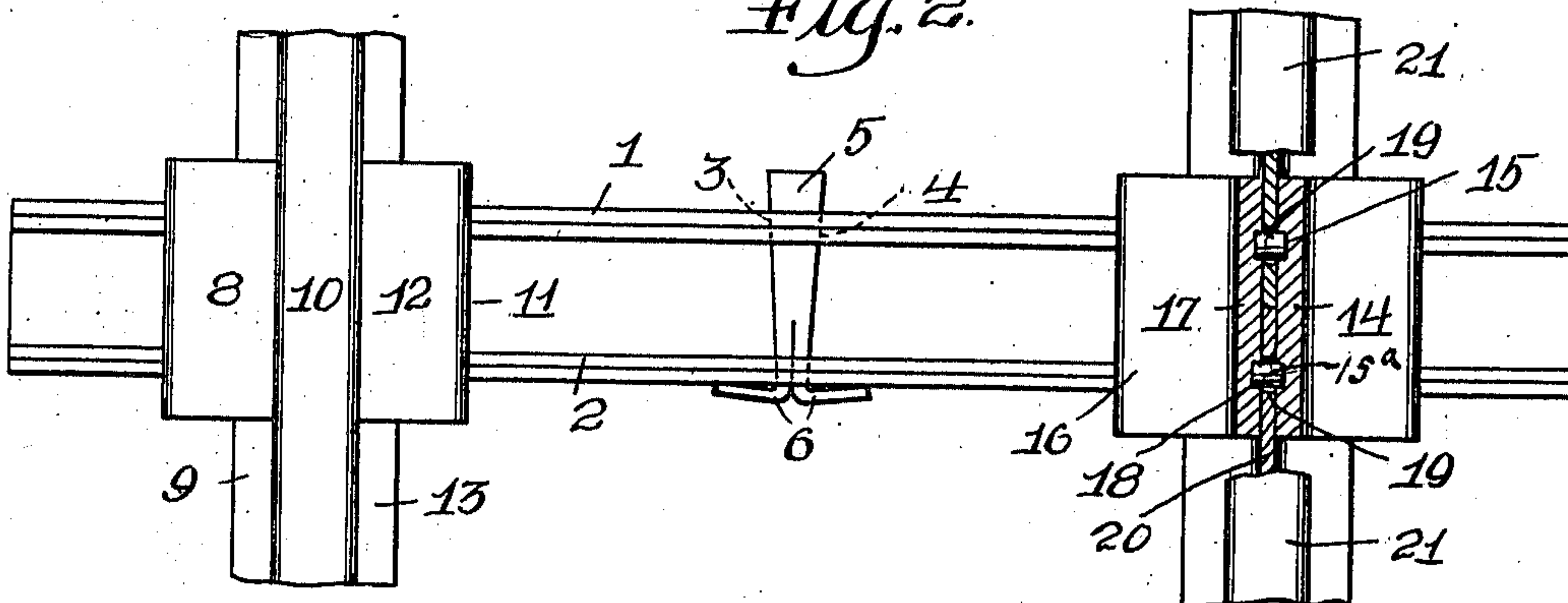


Fig. 3.

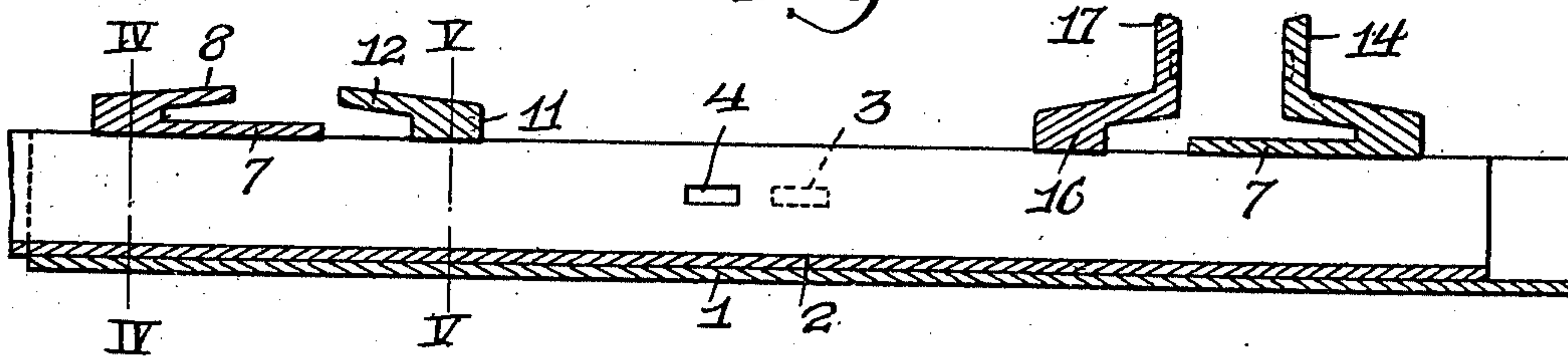


Fig. 4.

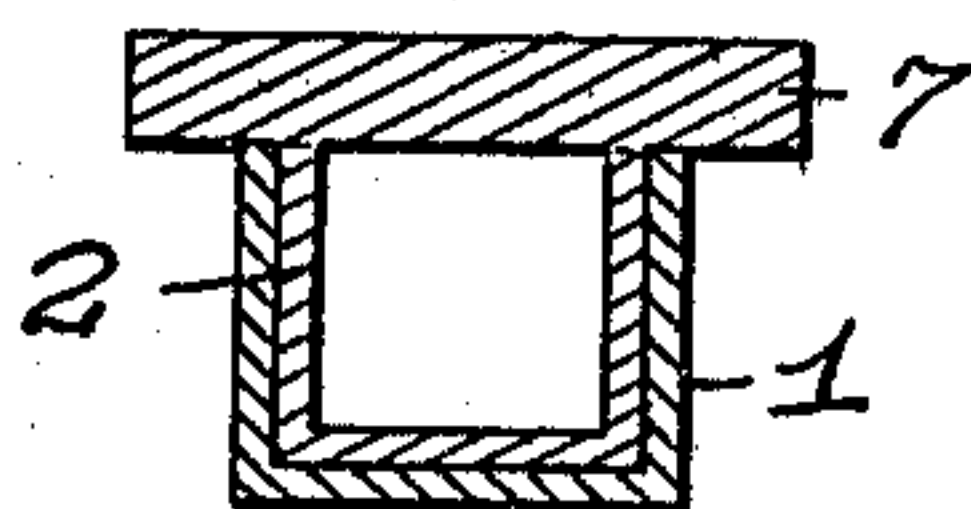
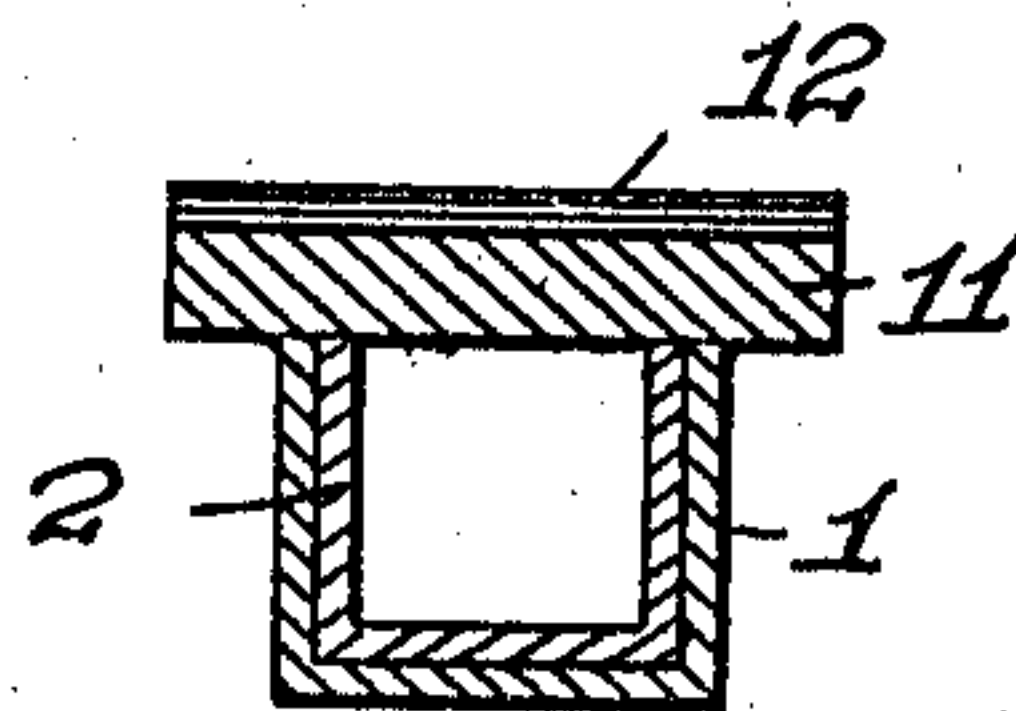


Fig. 5.



WITNESSES

Samuel Payne  
K. H. Butler

INVENTOR

C. E. McLane.  
H. C. Everett & Co.  
Attorneys



# UNITED STATES PATENT OFFICE.

CYRUS EBEN MCLANE, OF LISBON, OHIO.

METALLIC TIE AND RAIL-FASTENER.

989,992.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed February 9, 1911. Serial No. 607,521.

*To all whom it may concern:*

Be it known that I, CYRUS EBEN MCLANE, a citizen of the United States of America, residing at Lisbon, in the county of Colum-  
biana and State of Ohio, have invented cer-  
tain new and useful Improvements in Metal-  
lic Ties and Rail-Fasteners, of which the fol-  
lowing is a specification, reference being had  
therein to the accompanying drawing.

This invention relates to metallic ties and  
rail fasteners and joints, and the objects of  
the invention are to provide a novel metallic  
tie for supporting the confronting ends of  
the rails constituting a track, and to furnish  
a tie with means in a manner as will be here-  
inafter set forth whereby a rail can be se-  
cured to the tie or the confronting ends of  
two rails.

Other objects of the invention are to pro-  
vide a metallic tie that can be easily and  
quickly installed in a roadbed and properly  
tamped by unskilled labor, and to obviate  
the necessity of using bolts and nuts as a  
fastening means for the confronting ends of  
rails, also spikes for securing rails to a tie.

Further objects of the invention are to  
provide a metallic tie and rail fastener con-  
sisting of comparatively few parts easily and  
quickly assembled, and to accomplish the  
above results by a tie that is simple in con-  
struction, durable and highly efficient for  
the purposes for which it is intended.

With these and such other objects in view  
as may hereinafter appear, the invention  
consists of the novel construction, combina-  
tion and arrangement of parts to be pres-  
ently described in detail and then claimed.

Reference will now be had to the drawing,  
wherein there is illustrated a preferred em-  
bodiment of the invention, but it is to be  
understood that the structural elements  
thereof are susceptible to such changes as  
fall within the scope of the appended claim.

In the drawing:—Figure 1 is a side eleva-  
tion of a tie in accordance with this inven-  
tion, Fig. 2 is a plan of the same showing  
the rail joint in horizontal section, Fig. 3 is  
a longitudinal sectional view of the tie  
partly broken away, Fig. 4 is a cross sec-  
tional view taken on the line IV—IV of Fig.  
3, and Fig. 5 is a similar view taken on the  
line V—V of Fig. 3.

A metallic tie in accordance with this in-  
vention comprises a channel-shaped outer  
section 1 and a channel-shaped inner section  
2, these sections corresponding to the length

of an ordinary tie and the section 2 being of  
a cross sectional area that it will snugly fit  
and slide in the outer section 1. The outer  
section 1 has the side walls thereof, interme-  
diate the ends, provided with slots or open-  
ings 3, and adapted to register with these  
slots or openings are similar slots or open-  
ings 4 in the side walls of the inner section,  
2. When these slots or openings register, a  
tapering split key 5 is adapted to be driven  
into said slots or openings and the split end  
of the key spread or clenched, as at 6 where-  
by the sections will be locked together.

In order that the use of the metallic tie in  
connection with a rail fastener and a rail  
joint can be fully understood, I have illus-  
trated one end of the tie as designed as an  
ordinary rail fastener, and the opposite end  
thereof for a rail joint, it being a well known  
fact that in railway construction it is not  
conducive to perfect safety to locate two rail  
joints upon one tie, the joints of one rail  
generally being staggered with relation to  
the joints of the other rail.

The inner tie section 2 adjacent to the end  
thereof has the upper edges supporting a  
rail plate 7, and this rail plate has the outer  
longitudinal edges thereof provided with an  
overhanging flange 8 adapted to engage the  
outer base flange 9 of a rail 10. The rail  
plate 7 can be brazed or otherwise connected  
to the upper edges of the inner tie sections 2.

The outer tie section 1 adjacent to the end  
thereof is provided with an inner fastener 11  
having an overhanging flange 12 adapted to  
engage the inner base flange 13 of the rail 10,  
and this inner fastener can be secured to the  
upper edges of the tie section 1 similar to  
the rail plate or outer fastener 7.

It is obvious that when the section 2 is  
shifted within the section 1 that the inner  
and outer fasteners will grip and brace the  
base flanges 9 and 13 of the rail 10, and when  
the key 5 is driven in position, said sections  
and the fasteners thereof are firmly held.

Reference will now be had to the opposite  
end of the tie where there is shown an outer  
fastener 7 having a vertical flange or splice  
bar 14 provided with sockets 15. The inner  
section 2 of the tie has an inner fastener 16  
having a vertical flange or splice bar 17 pro-  
vided with sockets 18, said sockets being ar-  
ranged adjacent to the ends of the splice  
bars 17 and confronting the sockets 15. In  
these sockets are placed pins 15<sup>a</sup> adapted to  
extend through openings 19 provided there-



for in the webs 20 of confronting rails 21 held by the inner and outer fasteners 7 and 16.

It will be noted that when the section 1 is moved relatively to the section 2 that the inner fastener 11 and the outer rail joint fastener 7 are moved with said outer section, and that the outer fastener 7 and the inner rail joint fastener 16 are moved with the inner tie section 2. It is this movement of the tie sections that permits of rails being easily and quickly positioned and clamped to the tie, whereby the rails cannot become longitudinally or vertically displaced.

The metallic structure can be made of durable metal and of such sizes to accommodate the present type of rails.

What I claim is:—

In a metallic tie, rail and rail joint, an outer channel-shaped section, an inner channel-shaped section slidably mounted in said outer section, an outer fastener carried by

the upper edges of said inner section adjacent to one end thereof, an inner fastener carried by said section adjacent to the opposite end thereof and provided with a vertical flange having sockets, an inner fastener carried by said outer section and adapted to cooperate with the first mentioned outer section in retaining a rail upon one end of said tie, an outer fastener carried by said outer section and provided with a vertical flange having sockets, pins adapted to engage in the sockets of said fasteners to retain the confronting ends of rails upon said tie, and means including a key adapted to lock said sections together.

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

CYRUS EBEN MCLANE.

Witnesses.

MAX H. SROLOVITZ,  
MARY B. CUNNINGHAM.

---

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

---