

No. 626,233.

Patented June 6, 1899.

J. M. HOON.

METALLIC RAILWAY TIE.

(Application filed Apr. 9, 1898. Renewed Apr. 20, 1899.)

(No Model.)

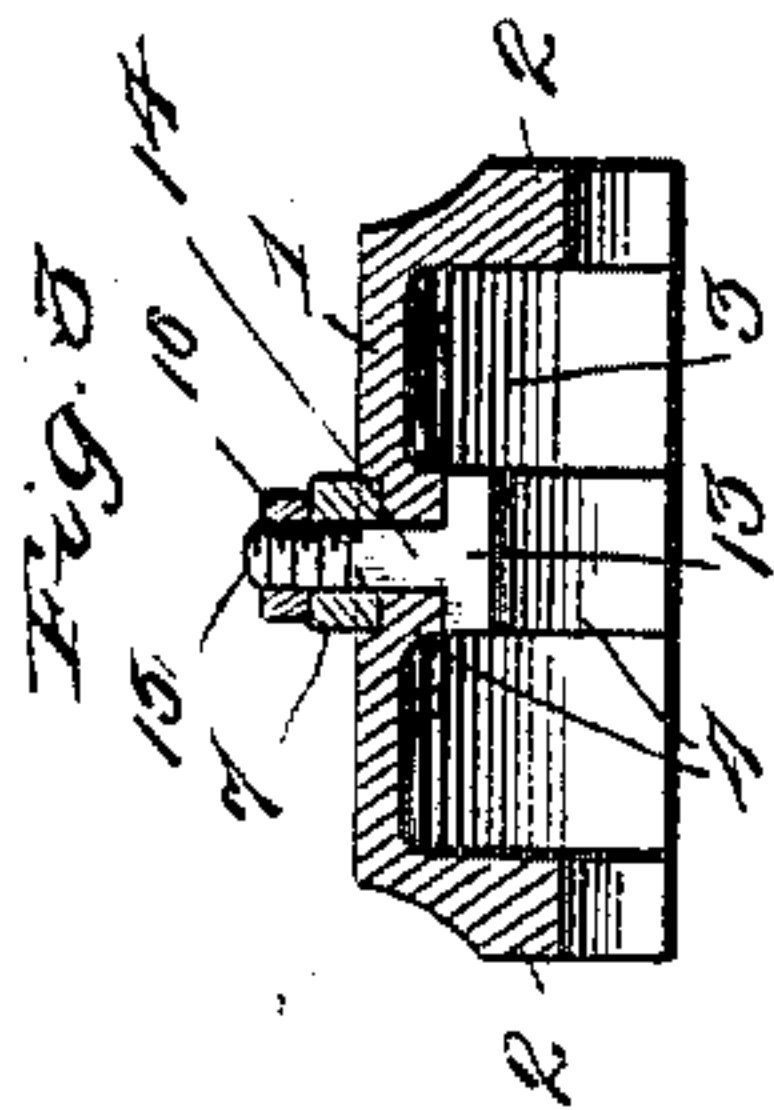


Fig. 1.

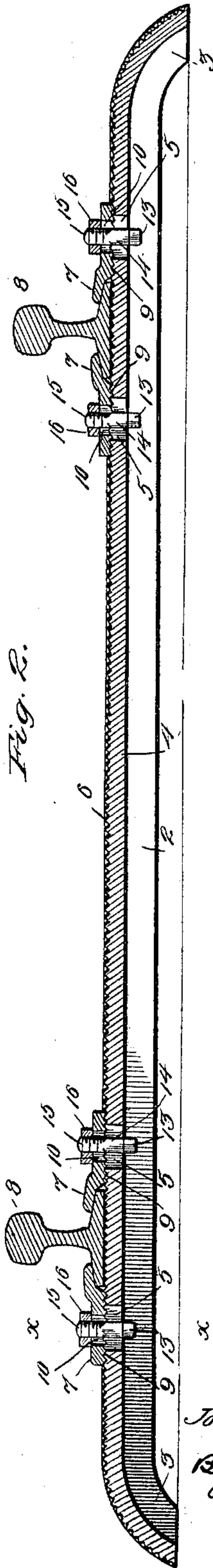
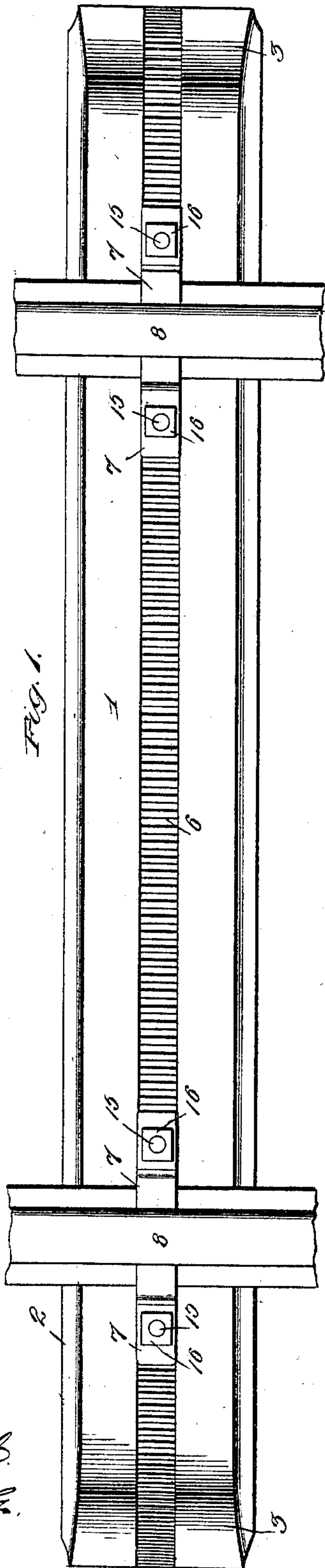


Fig. 2.

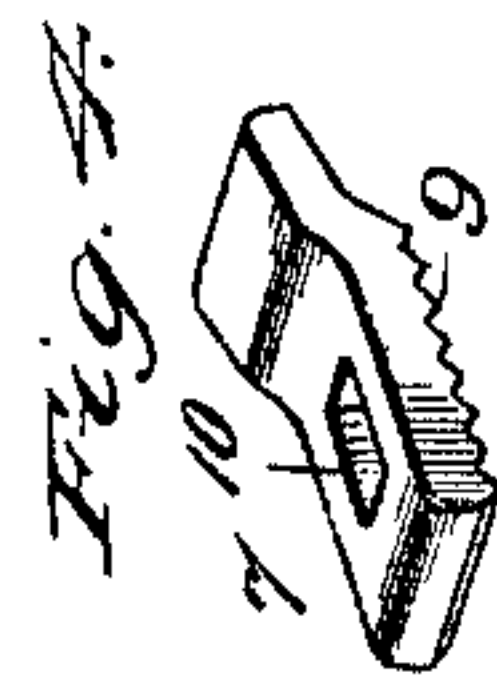
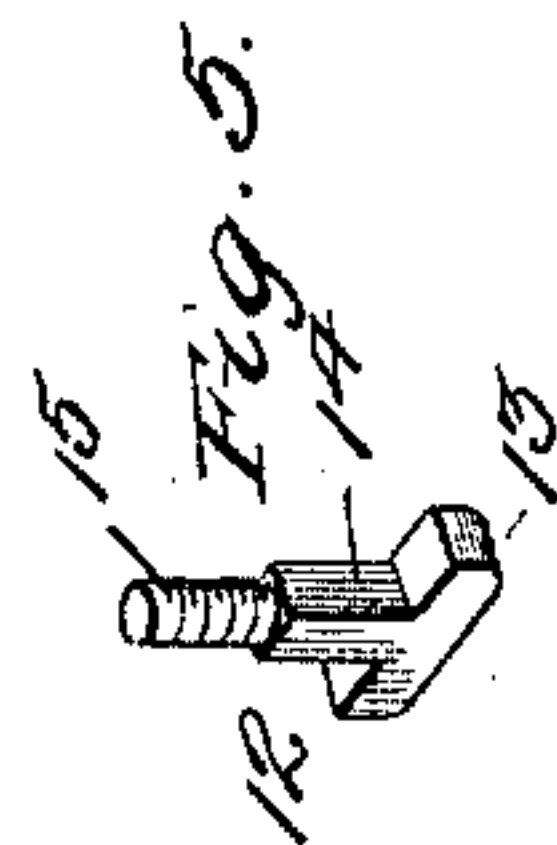


Fig. 5.

Fig. 4.

Witnesses  
*W. H. Roeth*  
*H. F. Ogilvie*

Inventor  
*John M. Hoon*  
*R. A. Deane* Son  
his Attorney



# UNITED STATES PATENT OFFICE.

JOHN M. HOON, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE FORT DEARBORN  
IRON COMPANY, OF SAME PLACE.

## METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 626,233, dated June 6, 1899.

Application filed April 9, 1898. Renewed April 20, 1899. Serial No. 713,757. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN M. HOON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Metallic Railway-Ties, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to metallic railway-ties and the clips secured thereto, by which the rails are held to the ties.

The principal object of the invention is to provide a tie which can be readily made from a single piece of metal formed on its under  
15 side with a central longitudinal strengthening or reinforcing rib and in its upper side with a series of indentations or serrations in line with said rib, with which corresponding indentations or serrations on the clips engage  
20 and said clips held in place by headed T-bolts passing through slots in the tie-clip and provided with nuts.

The invention consists, essentially, in the novel construction and combination of parts  
25 hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a railway-tie constructed in accordance with my invention, showing two railway-rails secured thereto. Fig. 2 is a longitudinal section of the same. Fig. 3 is a detail perspective view. Fig. 4 is a view of the clip detached. Fig. 5 is a view of the T-bolt detached.

In the said drawings the reference-numeral  
35 1 designates a metallic tie having its side edges bent downwardly, forming flanges 2, and the ends bent downwardly, forming curved portions 3. By this construction the tie will be held securely to the road-bed without liability of being displaced or sliding  
40 either endwise or sidewise.

Formed on the underside of the tie is a longitudinal reinforcing or strengthening rib 4, extending from end to end thereof and formed  
45 near each end with two elongated rectangular holes or slots 5 for the passage of the bolts for securing the clips to the tie. Upon the upper side and in line with the said rib are a number of indentations or serrations 6, with  
50 which engage corresponding indentations or serrations on the clips.

The reference-numeral 7 designates the clips, the inner portions of which are bent so as to engage with the base of a rail 8, while the other portions are formed with indenta-  
55 tions or serrations 9, which engage with the indentations or serrations 6. These clips are formed with elongated rectangular holes or slots 10, corresponding with the holes 5 in the tie, and through these holes pass bolts 12, hav-  
60 ing correspondingly-shaped heads at the inner or lower ends, forming T-bolts. Said bolts are formed with elongated rectangular heads 13, square shoulders 14, and screw-threaded  
65 shanks 15.

The numeral 16 designates the nuts for securing the bolts in place.

In practice the ties are placed on the road-bed and the elongated heads of the bolts passed through to the threaded portion of the  
70 bolt-heads and then given a quarter-turn, so as to extend transversely across the bolt-holes and the shoulders engaging with said holes. The rails are then placed on the ties between the bolts and the clips engaged therewith by  
75 means of the bolts and nuts, the indentations or serrations of the clips and tie engaging with each other to hold the rails securely and positively in place.

A tie such as above described can be rolled  
80 by suitable machinery, so that the same may be quickly and economically produced.

By forming a continuous row of corrugations extending from end to end of the tie I am enabled to materially cheapen the cost of  
85 manufacture, as the ties may be rolled and corrugated at a single operation, and the article produced by reason of the continuous corrugations is applicable for roads of any  
90 gage.

The advantage of corrugating the tie across the rail-seat is that upon removing a rail having a broad base and replacing it with one having a narrower base corrugations will be  
95 exposed on either side of the rail, thus permitting the adjustment of the clips closely against the edges of the narrower rail. The converse of this statement is also obviously true—that is to say, that upon replacing a  
100 narrow rail by a wide one the clips can be adjusted outwardly, the edges of the wider base covering a portion of the corrugations.



Having thus fully described my invention, what I claim is—

1. A rolled metallic railway-tie formed on its upper surface with a longitudinal row of indentations extending from end to end of the tie.

2. A metallic railway-tie provided on its upper surface with transverse serrations disposed longitudinally of the tie across and on either side of the rail-seat, and provided on its under side with a continuous central longitudinal reinforcing-rib.

3. A metallic railway-tie provided on its upper surface with transverse serrations disposed longitudinally of the tie across, and on either side of the rail-seat, in combination with clips serrated transversely on their under surfaces, and adapted to be secured adj-  
justably upon the serrated surfaces of the tie.

4. As an improved article, a metallic railway-tie having its sides turned downwardly, forming flanges and the ends turned downwardly forming curved portions, and said tie provided on its under side with a central integral longitudinal strengthening-rib and on its upper side with a series of indentations or serrations in line with said rib, said indentations or serrations being continuous throughout their length, and extending transversely of the tie a distance substantially equal to the width of their reinforcing-rib, substantially as described.

5. The combination with a metallic railway-tie formed with a central integral longitudinal reinforcing-rib on its under side and with a series of indentations or serrations alined therewith on its upper side, of the clips having indentations or serrations engaging with

the indentations or serrations of the tie and the headed screw-bolts passing through holes in the tie and clips, said indentations or serrations extending transversely of the tie a distance equal to the width of the clips and reinforcing-rib, substantially as described.

6. As an improved article, a metallic railway-tie having its sides turned downwardly, forming flanges and the ends turned downwardly forming curved portions, and said tie provided on its under side with a central longitudinal strengthening-rib and on its upper side with a series of indentations or serrations in line with said rib, said indentations or serrations being continuous throughout their length, and extending transversely of the tie a distance substantially equal to the width of their reinforcing-rib, substantially as described.

7. The combination with a metallic railway-tie formed with a central longitudinal reinforcing-rib on its under side and with a series of indentations or serrations alined therewith on its upper side, of the clips having indentations or serrations engaging with the indentations or serrations of the tie and the headed screw-bolts passing through holes in the tie and clips, said indentations or serrations extending transversely of the tie a distance equal to the width of the clips and reinforcing-rib, substantially as described.

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

JOHN M. HOON.

Witnesses:

GEO. M. COPENHAVER,  
WM. H. DE LACY.