

No. 776,342.

PATENTED NOV. 29, 1904.

T. E. McCORMICK.

RAILROAD TIE.

APPLICATION FILED APR. 6, 1904.

NO MODEL.

Fig. 1.

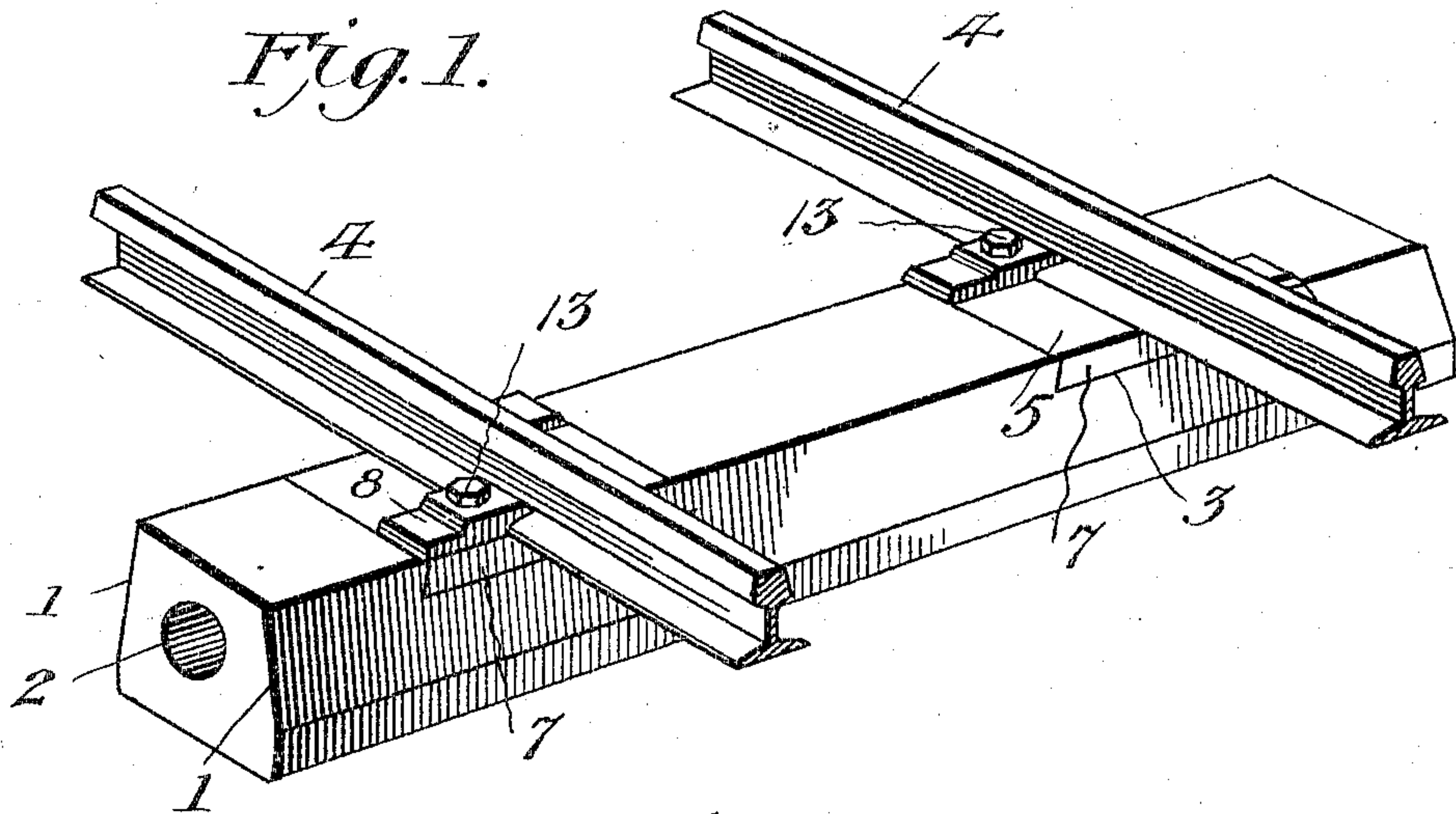


Fig. 2.

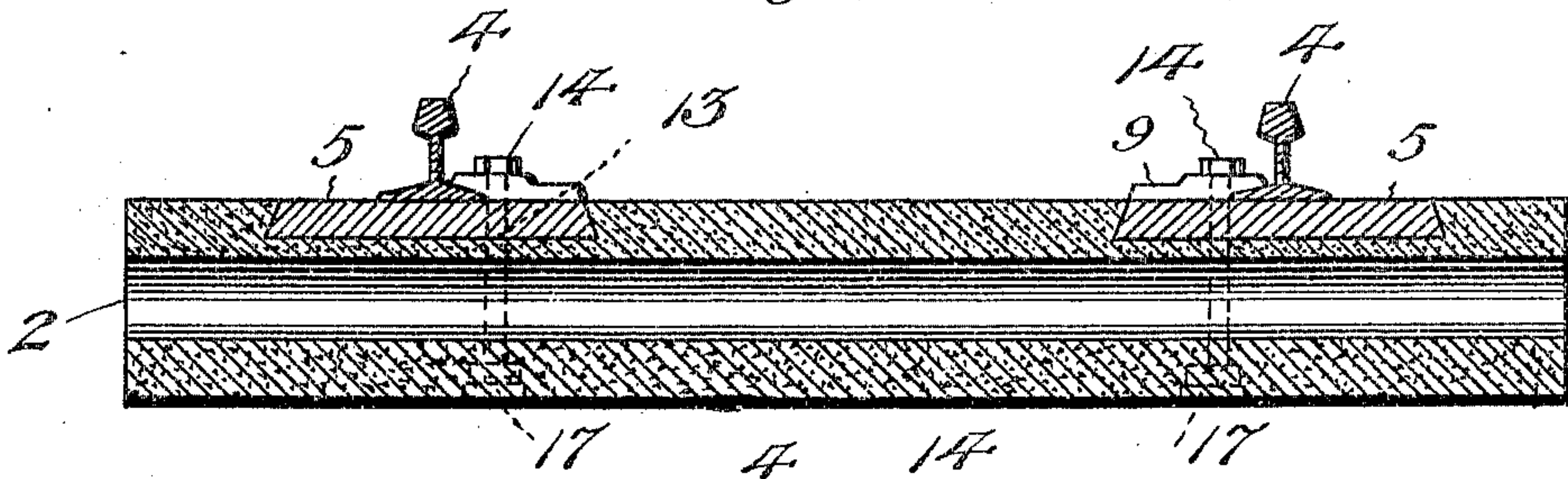


Fig. 3.

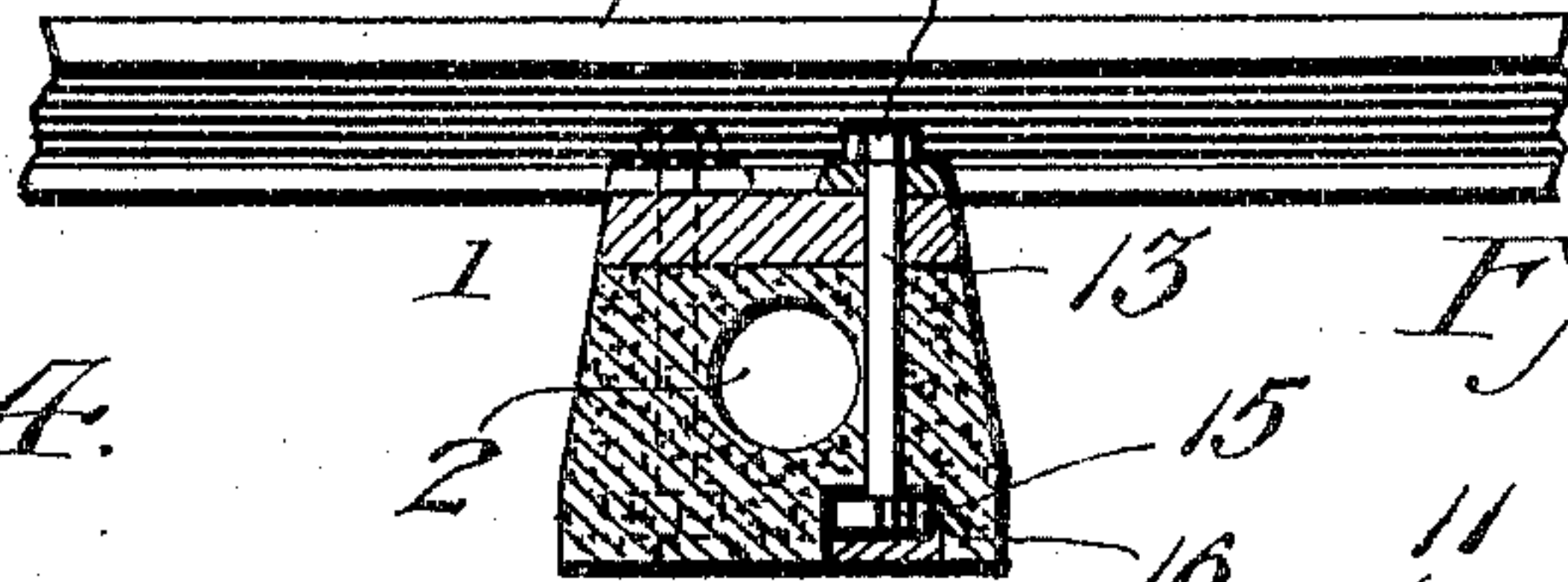


Fig. 4.

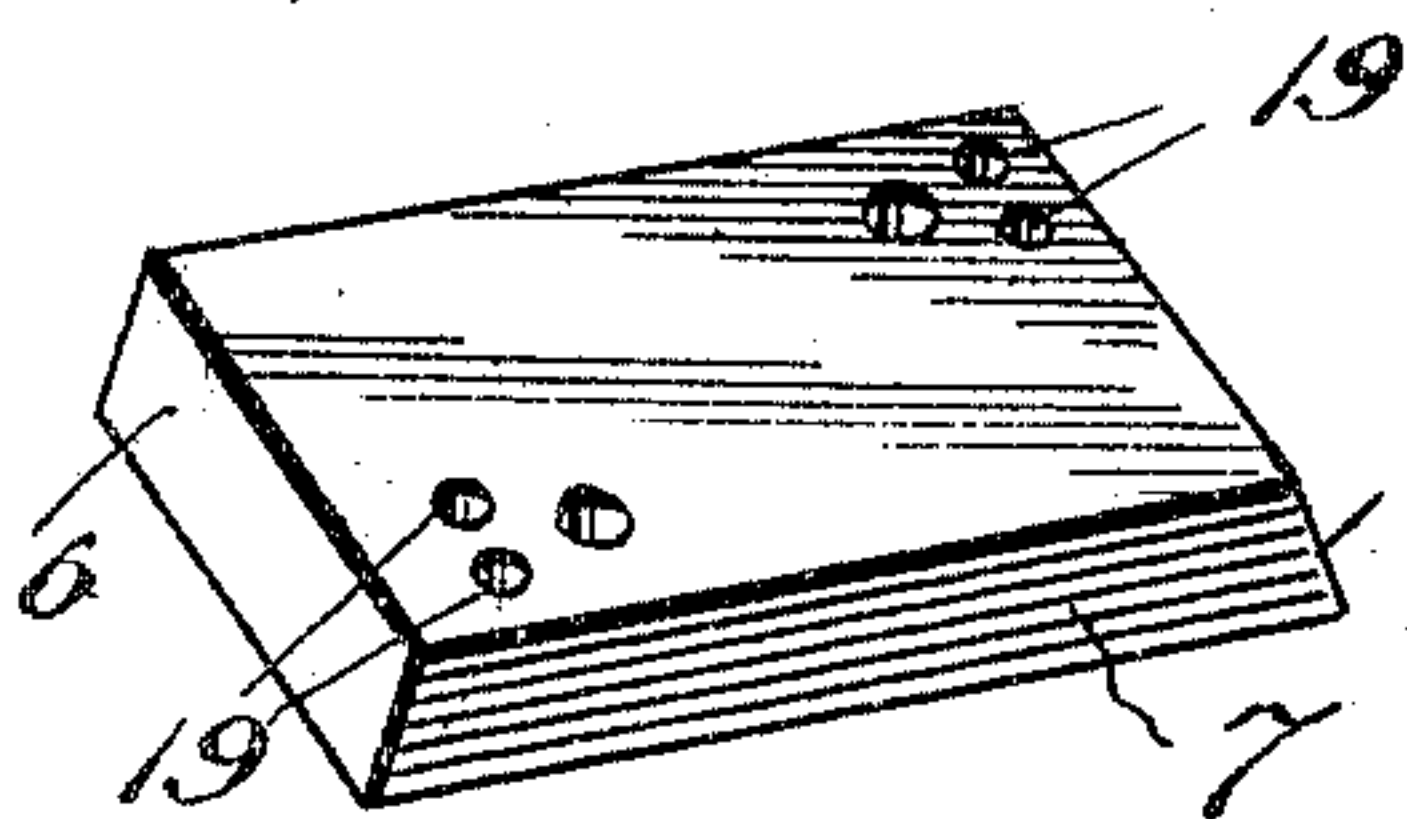


Fig. 5.

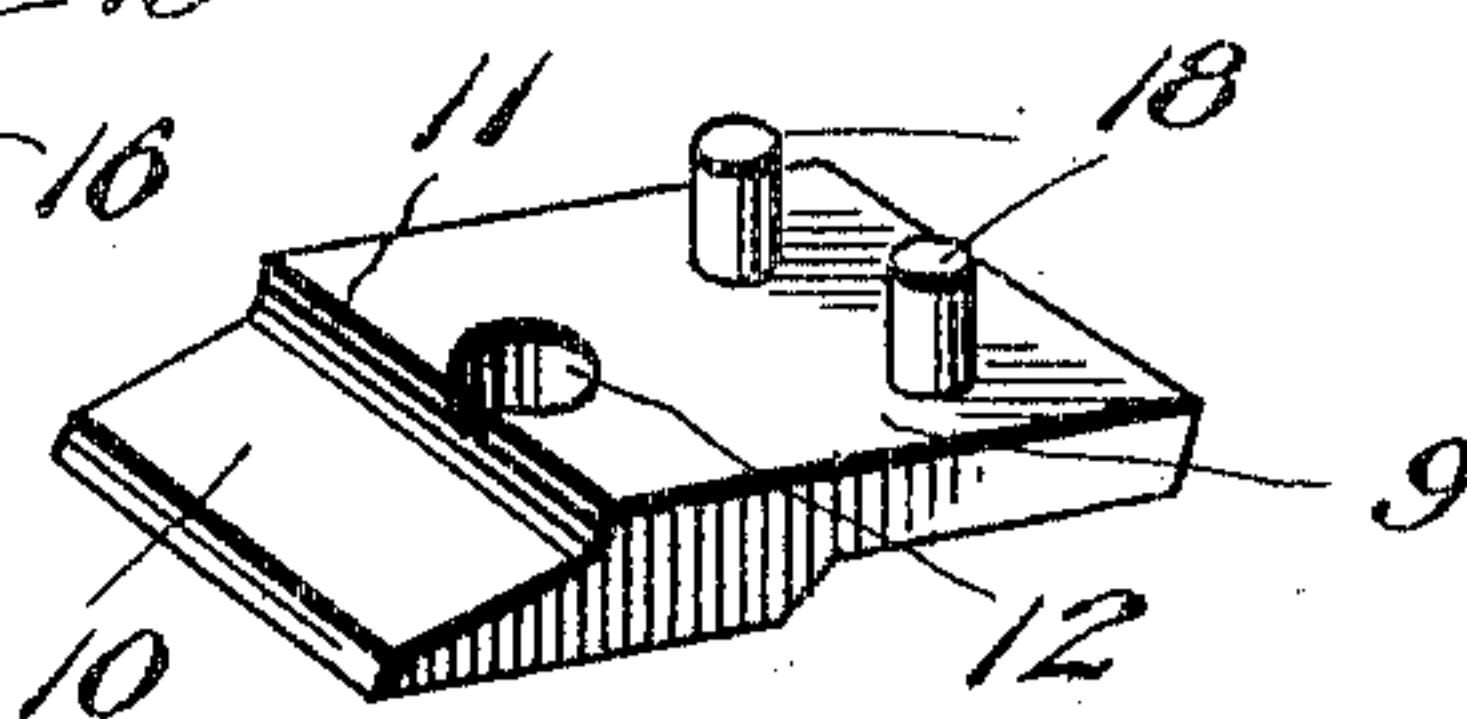
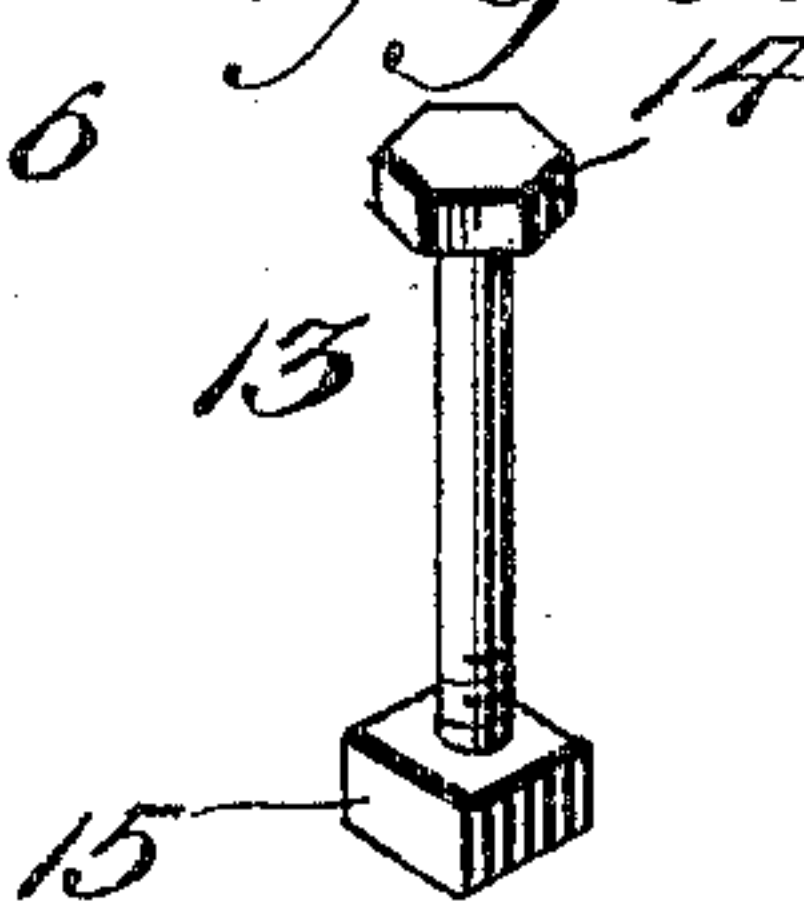


Fig. 6.



Witnesses

Geo. Ackerman Jr.
Frank B. Hoffman.

Inventor

Thomas E. McCormick,

By

Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

THOMAS E. McCORMICK, OF WAYNESBURG, OHIO.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 776,342, dated November 29, 1904.

Application filed April 6, 1904. Serial No. 201,876. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. McCORMICK, a citizen of the United States, residing at Waynesburg, in the county of Stark and State of Ohio, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to railway-ties, the object of the invention being to provide a cheap, reliable, and practically indestructible tie which is not affected by the weather or subject to decay or corrosion, the tie being so constructed as to adapt it to form an efficient support for the rails and embodying means whereby the rails may be easily and effectively secured thereto, at the same time providing for expansion, contraction, and impact or concussion.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts, as hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a railway-tie embodying the present invention, showing the rails secured thereto. Fig. 2 is a vertical longitudinal section through the tie. Fig. 3 is a cross-section through the same. Fig. 4 is an enlarged perspective view of one of the bearing-blocks. Fig. 5 is a reverse perspective view of one of the clips. Fig. 6 is a detail view of one of the clip-securing bolts.

Like reference-numerals designate corresponding parts in all the figures of the drawings.

The tie contemplated in this invention is composed of earthenware, such as clay, which is shaped by suitable means into proper form and then burned and, if desired, glazed in a manner similar to a hollow tile or brick or block for building purposes. In the formation or molding of the tie the base is left broader than any other portion of the tie, while the opposite sides thereof are tapered or chamfered, as shown at 1, and an opening 2 is made to extend entirely through the tie from end to end, said opening being approximately centrally arranged. The tie is also

provided during the process of manufacture with dovetailed grooves or recesses 3, extending transversely across the top of the tie in line with the rails 4, said grooves or recesses being adapted to receive wooden bearings or bearing-blocks 5, which are also of dovetailed shape and driven into the recesses 3, as shown in Figs. 1, 2, and 3. The opposite edges 6 of the bearing-blocks are beveled to engage the undercut shoulders at opposite ends of the recess 3, while the remaining edges 7 of the bearing-blocks are also chamfered to lie flush with the beveled or inclined sides 1 of the tie. Thus each bearing-block is set flush within the upper portion of the tie, sufficient material being left between the recesses 3 and the longitudinal bore or opening 2 to obviate any liability of crushing the tie under superimposed weight.

The bearing-blocks 5 are of sufficient size to enable rail-engaging clips 8 to be located at opposite sides of the rails and at diagonally opposite corners of the bearing-blocks, as shown in Fig. 1. Each clip comprises a body portion 9 and a lip 10 projecting inward therefrom and engaging the adjacent base-flange of the rail, as clearly shown in Figs. 1 and 2, the preferred arrangement being that the lower surface of the body portion 9 is out of actual contact with the bearing-block 5, so as to enable the lip 10 to bear firmly against the base-flange of the rail.

Adjacent to the shoulder 11, formed at the junction of the lip with the body 9, there is arranged a bolt-hole 12, through which is passed a bolt 13, one side of which is thus adapted to come into direct contact with the edge of the base of the rail, as indicated in Fig. 2. The bolt 13 is provided with a suitable head 14 at its upper end, while the lower threaded end thereof is received in a nut 15, which seats in a recess 16 formed in the bottom of the tie, said recess being of the same shape as the nut 15, whereby said nut is held from turning. After placing the nut 15 in position a plug 17, which may be of wood, is driven into the recess, so as to retain the nut in place and protect the same from moisture. Each clip is further provided at a point outside of and beyond the bolt 13 with one or

more downwardly-projecting lugs or pins 18, which are received in sockets in the tie. These sockets 19 may extend only part or all the way through the bearing-block, or, if desired, the sockets may be continued into the material of the tie itself and the lugs or pins made long enough to pass through the bearing-block and engage the tie proper.

From the foregoing description it will be seen that a practically indestructible tie is produced which is not affected by changes in the weather and dampness from the earth. The concussion of the rails is borne by the wooden bearing-blocks and not directly by the tie. The nuts which secure the clip-retaining bolts are held in place by the plugs driven into the openings. The bolt-holes and the nut-receiving recesses may be formed in the tie during the molding operation by inserting correspondingly - shaped pieces of wood, which are subsequently consumed during the burning or baking of the tie.

The wooden bearing-blocks are by preference dipped in a wood preservative before being driven into the recesses in the ties, thus materially increasing the life of said bearing-blocks. The manner of securing the rails to the ties also admits of new ties being substituted for old ones without extensive repairs to the road-bed. The tie is also in the main fire-proof and is much cheaper to manufacture than the ordinary metallic railway-ties. It is also to be noted that the rail-attaching devices do not in any way weaken the tie, the several holes and recesses being arranged to dodge each other.

Having thus described the invention, what is claimed as new is—

1. An earthenware railway - tie provided with nut-receiving recesses in its bottom, bearing-blocks seated in undercut recesses in the top surface of the tie, rail-clips, and bolts passing through said clips, blocks and tie and having nuts on their lower ends.

2. An earthenware tie provided with nut-receiving recesses in its bottom, bearing-blocks seated in undercut recesses in the top surface of the tie, rail-clips, bolts passing through the clips, blocks and tie and having nuts on their lower ends, and plugs for holding said nuts in place.

3. A tie having undercut recesses in its upper surface and nut-receiving recesses in its lower surface, wooden bearing-blocks in the undercut recesses and having sockets, securing-clips having lugs entering the sockets, and bolts passing through the clips, blocks and ties and having nuts located in the nut-receiving recesses.

4. A tie having undercut recesses in its upper surface and nut-receiving recesses in its lower surface, wooden bearing-blocks in the undercut recesses and having sockets, securing-clips having lugs entering the sockets, bolts passing through the clips in contact with the side flanges of the rail, and through the blocks and tie and having nuts located in the nut-receiving recesses, and wooden plugs in the nut-receiving recesses holding the nuts in place.

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

THOMAS E. McCORMICK.

Witnesses:

L. H. SCHEIDEGGER,
J. C. GREGORY.