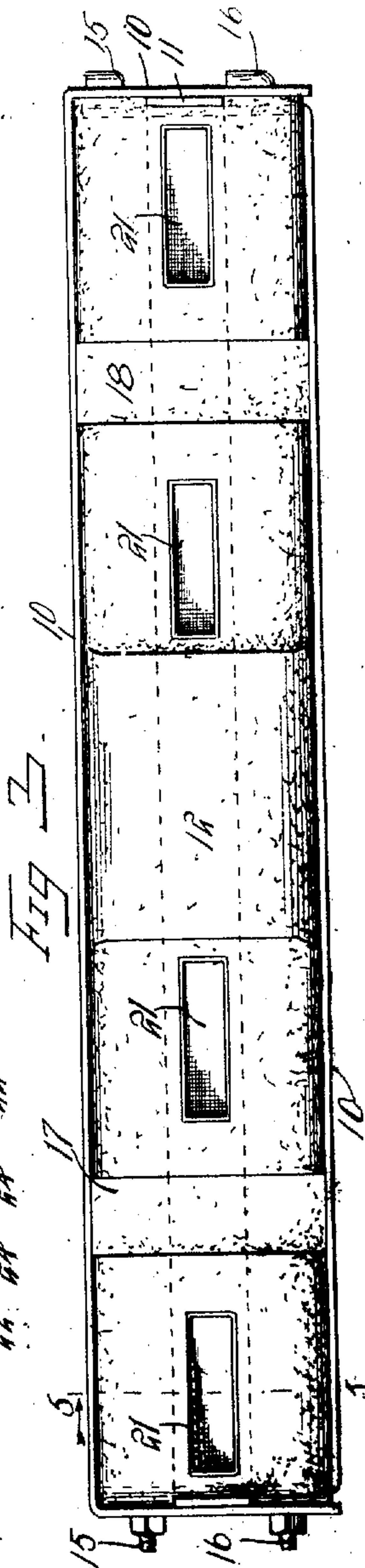
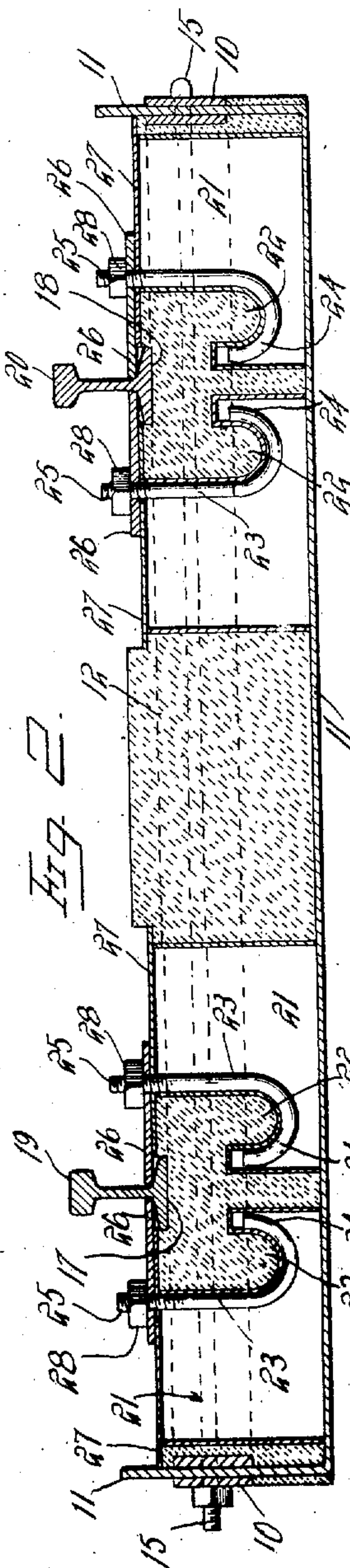
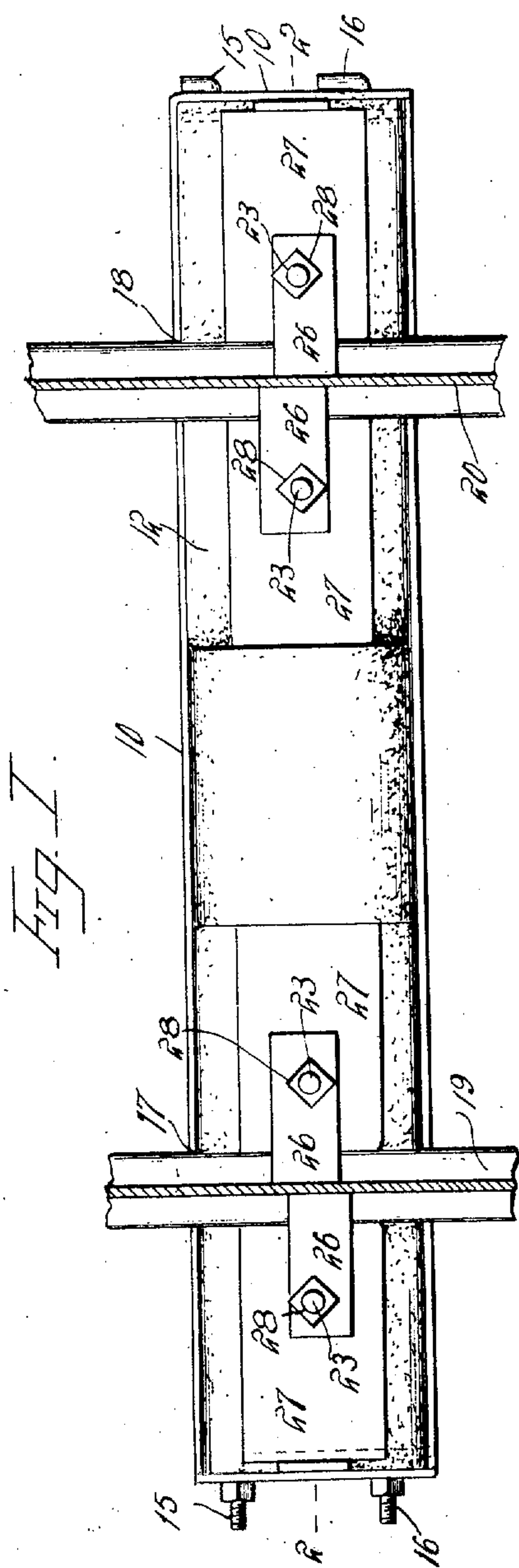


L. L. VAN HORN.
RAILWAY TIE.
APPLICATION FILED AUG. 15, 1910.

Patented Dec. 13, 1910.

2 SHEETS—SHEET 1.

978,413.



Inventor

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Witnesses
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By *[Signature]*

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2 SHEETS—SHEET 2.

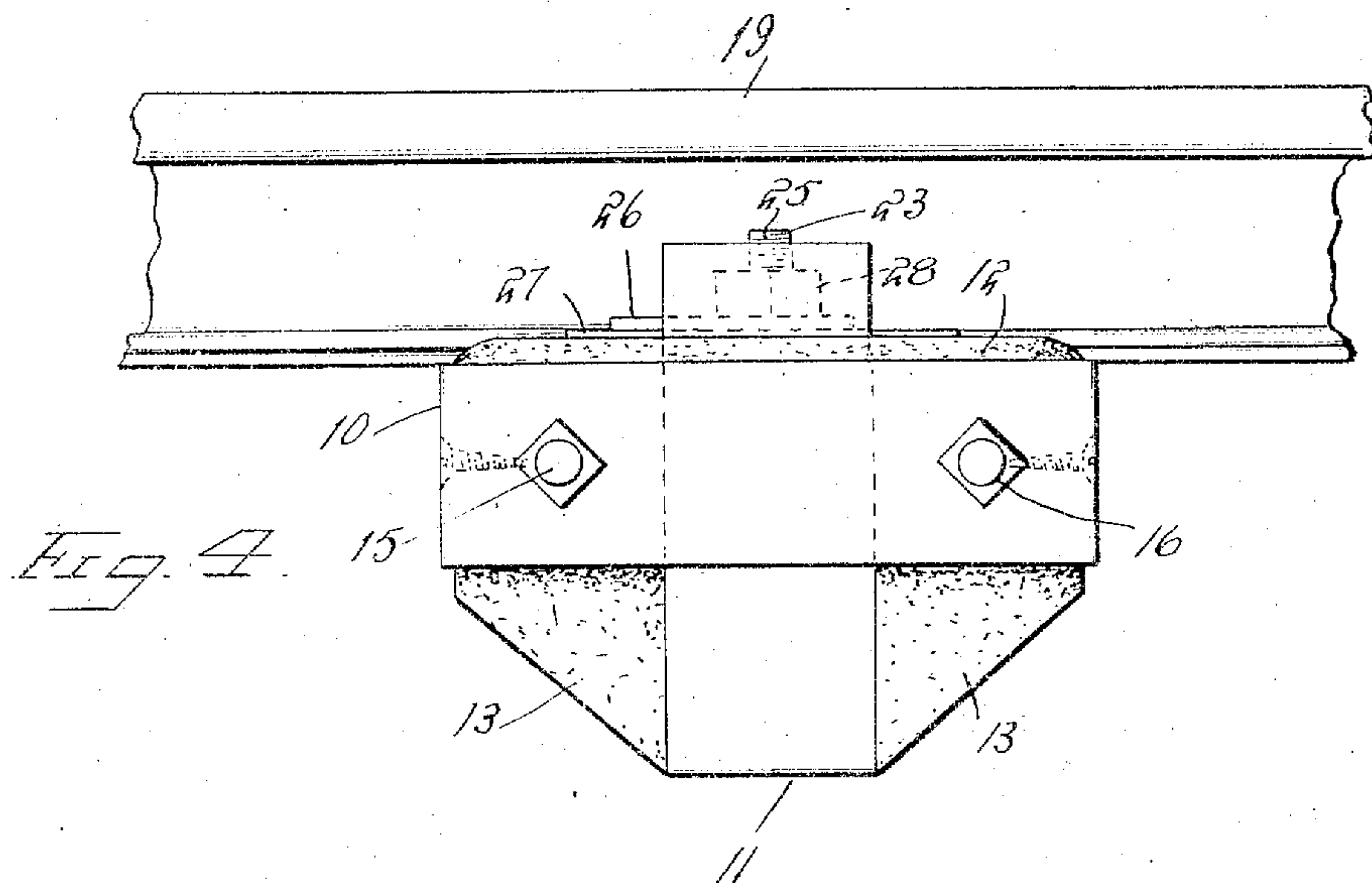
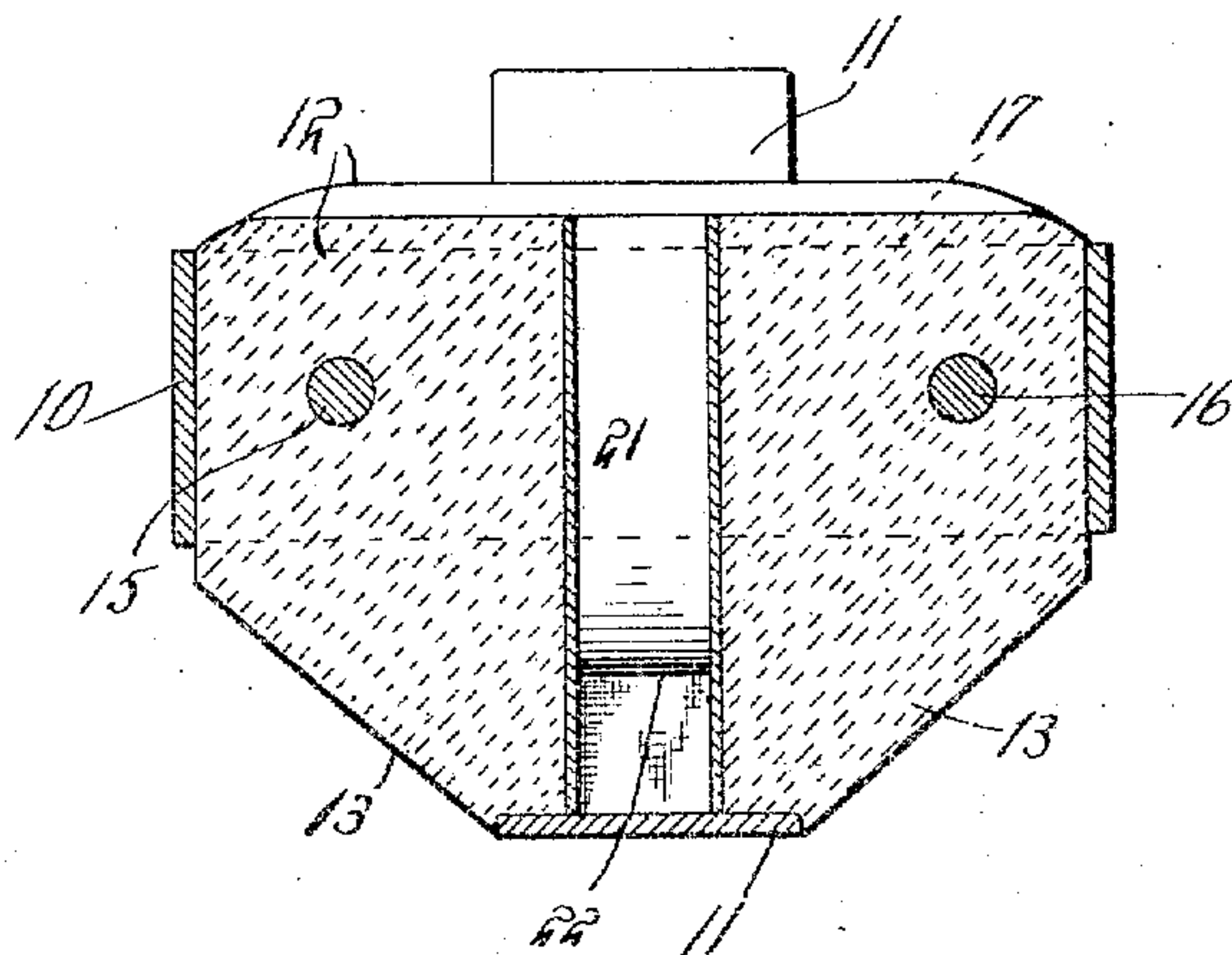


Fig 5



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364

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UNITED STATES PATENT OFFICE.

LELAND L. VAN HORN, OF POSTVILLE, IOWA.

RAILWAY-TIE.

978,413.

Specification of Letters Patent.

Patented Dec. 13, 1910.

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To all whom it may concern.

Be it known that I, LELAND L. VAN HORN, a citizen of the United States, residing at Postville, in the county of Allamakee, State of Iowa, 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.

This invention relates to railway ties.

The object of the invention resides in the construction of a comparatively simple and inexpensive device of this character which at the same time will be exceedingly strong and durable in use.

A further object of the invention resides in the production of a railway tie provided with means for firmly securing the rails in place and which to a measurable extent will be relieved of the vibration to which the rails are in practice subjected.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts as will be hereinafter more fully described and particularly pointed out in the appended claim.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which,

Figure 1 is a plan view of a railway tie constructed in accordance with the invention; Fig. 2, a section on the line 2-2 of Fig. 1; Fig. 3, a plan view of the tie, with the rail and rail securing devices removed; Fig. 4, an end view of the tie as illustrated in Figs. 1 and 2; and, Fig. 5, a section on the line 5-5 of Fig. 3.

Referring to the drawings, the tie is shown as comprising a metallic rectangular frame 10. A bar 11 has its terminals secured to the ends of the frame 10 and its intermediate portion disposed in parallel spaced relation to said frame. Confined within the frame 10 and above the bar 11 is a cement filling 12, the longitudinal edges of which are tapered downwardly substantially from the lower edge of the frame 10 to the base of the filling as at 13. This filling 12 is reinforced by metallic rods 15 and 16 passing therethrough and secured at each end respectively to the ends of the

frame 10 in any suitable and preferred manner. In setting the cement filling 12 the same is provided on its upper face with spaced rail receiving grooves 17 and 18 in which are disposed the rails 19 and 20 respectively. A plurality of sockets 21 are formed in the cement filling 12 by embedding metallic casings therein. These sockets 21 are located on opposite sides of the rail receiving grooves 17 and 18 respectively and are disposed in opposing pairs. Each of these sockets 21 is formed with a downwardly convex shoulder 22 and disposed in each socket is a bolt 23 having a curved lower end 24 engaging the shoulder 22 and conforming to the shape thereof. The upper end of the bolt 23 projects beyond the upper face of the tie and is threaded as at 25.

Mounted upon the upper end of each bolt is a locking plate 26 and a shield plate 27 the former of which is adapted to engage the base of an adjacent rail and the latter to close the open end of the socket 21. A nut 28 traveling on the threaded end of the bolt 23 serves to bind the locking plate 26 upon the rail base and the shield plate 27 upon the upper face of the tie across the open end of the socket, the latter thus preventing the socket from becoming filled with foreign matter and enabling the bolt 23 to be withdrawn from the socket at all times with comparative ease.

From the foregoing it will be apparent that there is produced a simple inexpensive tie which in practice will be strong and durable and which is provided with simple and efficient means for attaching the rails and tie together.

What is claimed is:

A railway tie comprising a rectangular metal frame, a bar having its terminals connected respectively to the ends of said frame and its intermediate portion disposed beneath the frame in parallel spaced relation thereto, a filler of cement within said frame and above the bar, the longitudinal edges of said filler being tapered from the lower edge of the frame to the base of the filler.

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

LELAND L. VAN HORN.

Witnesses:

P. J. BENCHER,
A. W. LANG.