J. A. BROOKS.

RAILWAY TIE.

APPLICATION FILED JULY 16, 1910.

984,535. Patented Feb. 21, 1911.

FIG. 1.

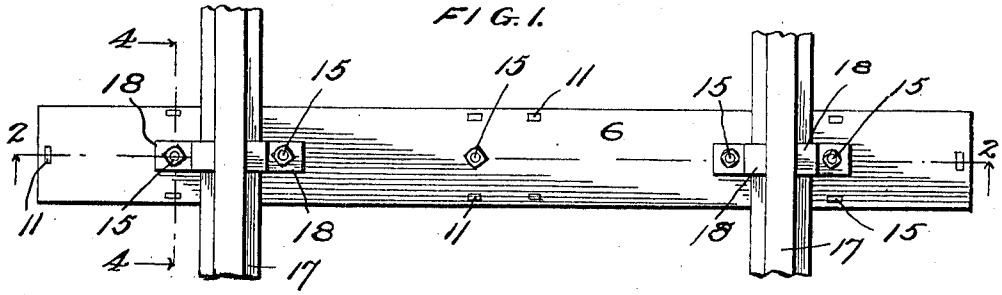


FIG. 2.

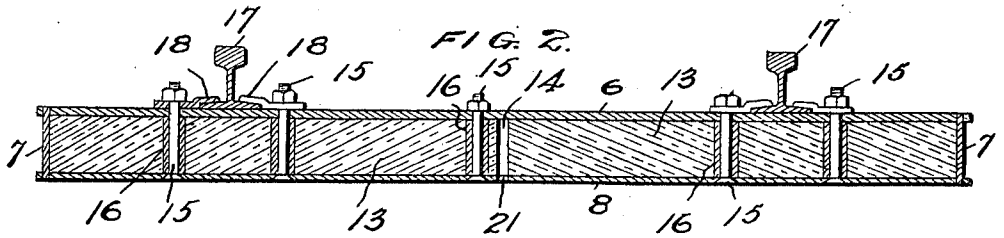


FIG. 3.

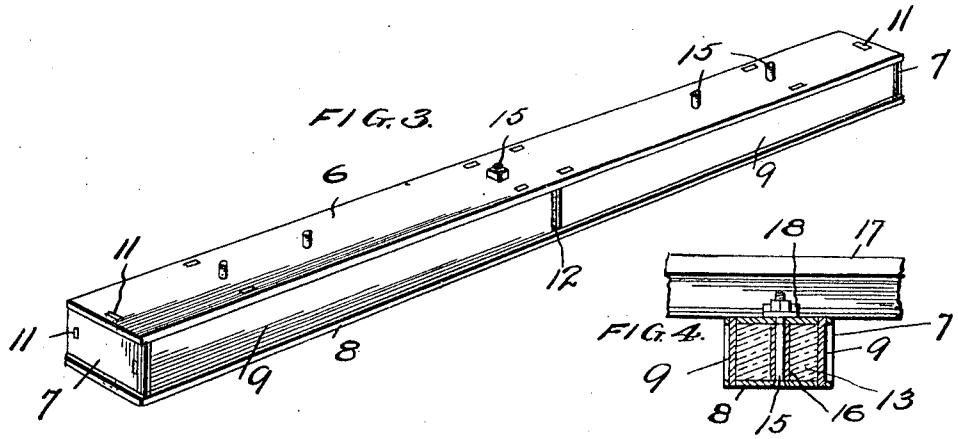


FIG. 4.

FIG. 5.

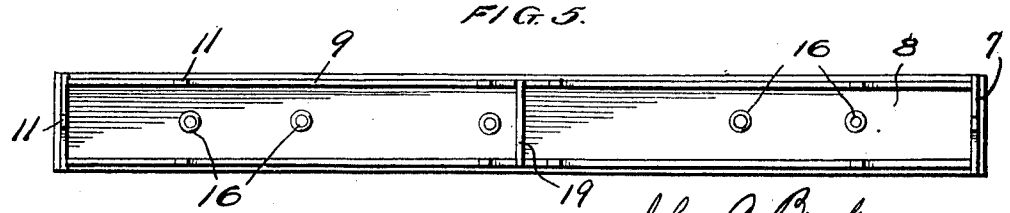
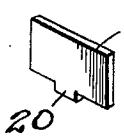


FIG. 6.



WITNESSES

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RAILWAY-TIE.

984,535. Specification of Letters Patent. Patented Feb. 21, 1911.

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To all whom it may concern:

Be it known that I, JOHN A. BROOKS, a citizen of the United States, residing at Clinton, in the State of Indiana, have invented new and useful Improvements in Railway-Ties, of which the following is a specification.

The present invention relates more particularly to ties of a composite character, and the primary object is to provide a simple and inexpensive structure, which is very durable, and which will permit the "give" or relative movement of the ends, in order to avoid rupture or injury to the central portion of the tie.

An embodiment of the invention that is at present considered the preferable one, is illustrated in the accompanying drawings, wherein:—

Figure 1 is a top plan view of the tie, showing two rail sections secured in place thereon. Fig. 2 is a longitudinal sectional view on the line 2—2 of Fig. 1. Fig. 3 is a perspective view of the tie. Fig. 4 is a cross sectional view. Fig. 5 is a plan view of the casing in condition to receive the concrete. Fig. 6 is a detail view of the concrete separator plate.

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

In the embodiment disclosed, a metallic casing is provided that is composed of a continuous top plate 6, end walls 7, a bottom plate 8, and side walls that are composed of sections 9. The top and bottom walls are provided in their opposite side margins and in their ends with sockets, and the side wall sections 9 and end walls have lugs 11 on their edges, which fit in the said sockets. As a result, it will be evident that the side and end walls will be held in position when the casing is in assembled condition.

It will be noted by reference to Figs. 2 and 3 that the sections of each side wall are disposed end to end and have their adjacent ends spaced apart, as illustrated at 12, so that the end portions of the casing can "give" or relatively move. Bodies 13 of concrete or of other cementitious material, are located within the casing, and are substantially of the same length as the side wall sections 9, these concrete bodies thus being disposed end to end and having their adjacent ends spaced apart, as illustrated at 14 in Fig. 2. The top and bottom walls and the concrete bodies are held in place by vertical tie bolts 15 that pass therethrough, the concrete bodies being preferably provided with sleeves 16 for the reception of said bolts, these sleeves thus permitting the removal and replacement of any bolt that may become injured or broken. The rails 17 rest upon the top plate 6, and are held in place by track fasteners 18 that are located on said top plate and overhang the base flanges of the rails. These track fasteners are secured in place by certain of the tie bolts 15.

In forming the concrete bodies, the bottom, sides, and end walls are placed in position, as shown in Fig. 4, and detachably fitted between the sections 9 of the side walls, is a separator plate 19 having a depending lug 20 that engages in a central opening 21, made for the purpose in the bottom 8, as shown in Fig. 2. The concrete is placed in the mold, thus produced, and when sufficiently set, the plate 19 is removed, after which the top is placed in position, and the bolts are passed through to fasten the casing together. It is to be understood that before the concrete is introduced, the sleeves 16 are also positioned.

It will be evident that this structure can be cheaply produced, and that it will be very durable. At the same time, it will be noted that inasmuch as the central portion of the casing is unoccupied and the side walls are broken away, the end portions of the tie can move relatively to each other, and thus jar and vibration will be provided for, without endangering the tie structure.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A railway tie, comprising a casing composed of upper and lower plates, side walls engaged therewith, and a concrete body located within the casing.

2. A railway tie, comprising a casing composed of upper and lower plates, side walls having lugs interlocked with said

plates, and a concrete body located within the casing.

3. A railway tie, comprising a casing composed of upper and lower plates having sockets, side walls having projecting lugs engaged in the sockets, and concrete bodies located end to end in the casing.

4. A railway tie, comprising a metallic casing composed of top and bottom plates, side walls comprising oppositely disposed sections separate from but secured to both the top and bottom plates, and concrete bodies located end to end in the casing between the opposite sections of the side walls.

5. A railway tie, comprising a metallic casing composed of upper and lower metallic plates having sockets in their upper margins, side walls composed of sections having lugs that are engaged in the sockets, said sections being spaced apart at the central portion of the tie, concrete bodies substantially co-extensive with the side wall sections and disposed between the same, tie bolts extending between the bodies and plates, and track fasteners secured by certain of said bolts.

6. A casing for composite railway ties, constituting a concrete mold and including a detachable top and a removable separator plate.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN A. BROOKS.

Witnesses:
MARK E. NEBEKER,
JOHN O. STARK.