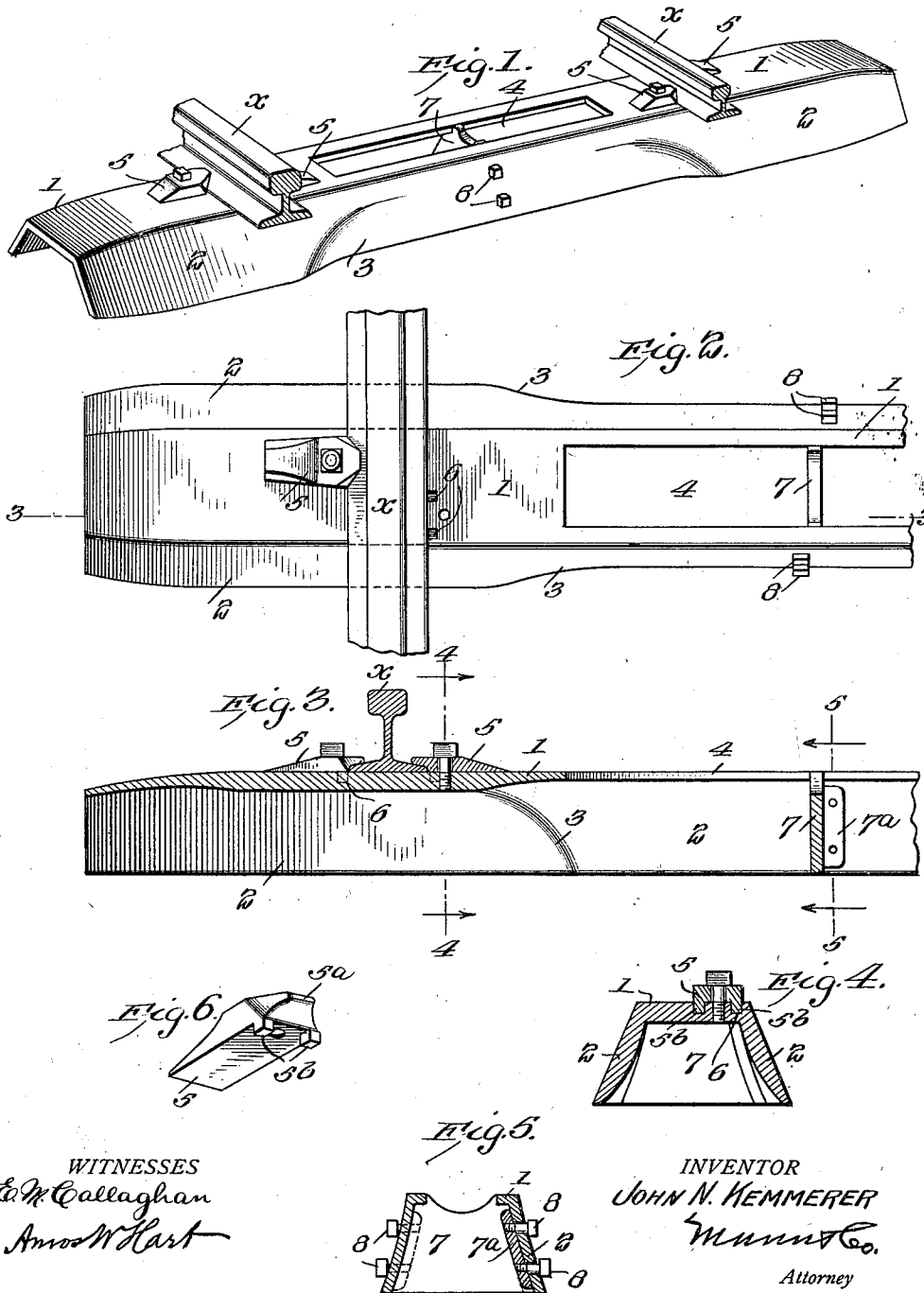


J. N. KEMMERER.
METALLIC RAILWAY TIE.
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1,006,951.

Patented Oct. 24, 1911.



WITNESSES
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JOHN NATAN KEMMERER, OF GREEN TOWNSHIP, CLINTON COUNTY, PENNSYLVANIA.

METALLIC RAILWAY-TIE.

1,006,951.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN N. KEMMERER, a citizen of the United States, and a resident of Green township, in the county of Clinton and State of Pennsylvania, have invented an Improvement in Metallic Railway-Ties, of which the following is a specification.

The object of my invention is to provide a metallic tie which shall combine maximum strength, rigidity, and lightness, and may be manufactured at a low cost, may be easily placed in and removed from the road-bed, and will support rails firmly without danger of moving endwise. These and other features and advantages are hereinafter described, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the tie with sections of railway rails secured thereto. Fig. 2 is an enlarged plan view of a portion of the tie. Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2. Fig. 4 is a cross section on the line 4—4 of Fig. 3. Fig. 5 is a cross section on the line 5—5 of Fig. 3. Fig. 6 is a perspective view of one of the rail fasteners forming an attachment of the tie proper.

The tie has a flat top 1 and pendent sides 2 which are inclined from the top outward at an angle of about thirty degrees. The tie is open at the ends, which are, however, slightly contracted on top and sides, as shown in Figs. 2 and 3, which construction facilitates the hold of the tie on the earth. The same effect is attained by constructing the body or middle portion of the tie slightly narrower, or more contracted than the end portions, as will be seen in Figs. 1 and 2. Such contraction provides sloping shoulders 3, interiorly, as indicated in Figs. 1, 2 and 3. The body or middle portion of the tie is provided with a lengthwise slot 4, which reduces weight and cost of material without unduly lessening strength and rigidity, and also provides a place for insertion and ramming of ballast.

At the points where the rails α are placed and supported, the top portion 1 of the tie is made somewhat thicker than elsewhere, and rail fastenings are provided which consist of blocks 5 having at one end a lug or flange 5^a adapted to overlap the base of the

rail, as shown, and, on the under side, at an adjacent point, with lugs 5^b which are adapted to enter holes 6 in the top of the tie. A hole is made through the blocks 5 to receive a fastening bolt, which, as shown in Fig. 3, is threaded at the lower end only and screws into a threaded hole in the tie, the portion passing through the block 5 being smooth or unthreaded.

In order to strengthen and support the central portion or body of the tie, and especially to prevent endwise movement of the same in the earth, I arrange a partition 7 which is removably, yet firmly, secured in place by means of screw-bolts 8, which are inserted through the inclined sides of the tie and are screwed into flanges 7^a formed on the sloped ends of the partition. No threads are formed in the openings in the tie through which the bolts pass, as will be seen by reference to Fig. 5. This partition is, in practice, set firmly in the earth, which is packed on each side of it by tools applied through the slot or opening 4.

In order to remove the tie, or shift it endwise, the partition or anchor 7 is detached, it being released by unscrewing the bolts 8. This operation is easily performed, since the heads of the bolts are accessible on the outside of the tie. The partition or anchor may be removed through the slot 4 and the latter likewise provides for insertion of the anchor when required after having put the tie proper in place beneath the rails. Another important reason for making the partition 7 detachable is to adapt ties for nesting, which would otherwise be impossible. Thus a number of ties may be placed closely together, which facilitates economical storage and transportation.

What I claim is:—

The improved metallic tie having a flat top, divergent sides, and a longitudinal slot in its middle portion, a transverse partition having its flanged ends provided with threaded openings, and bolts for engaging said flanges and securing the removable partition in place, as shown and described.

JOHN NATAN KEMMERER.

Witnesses:

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