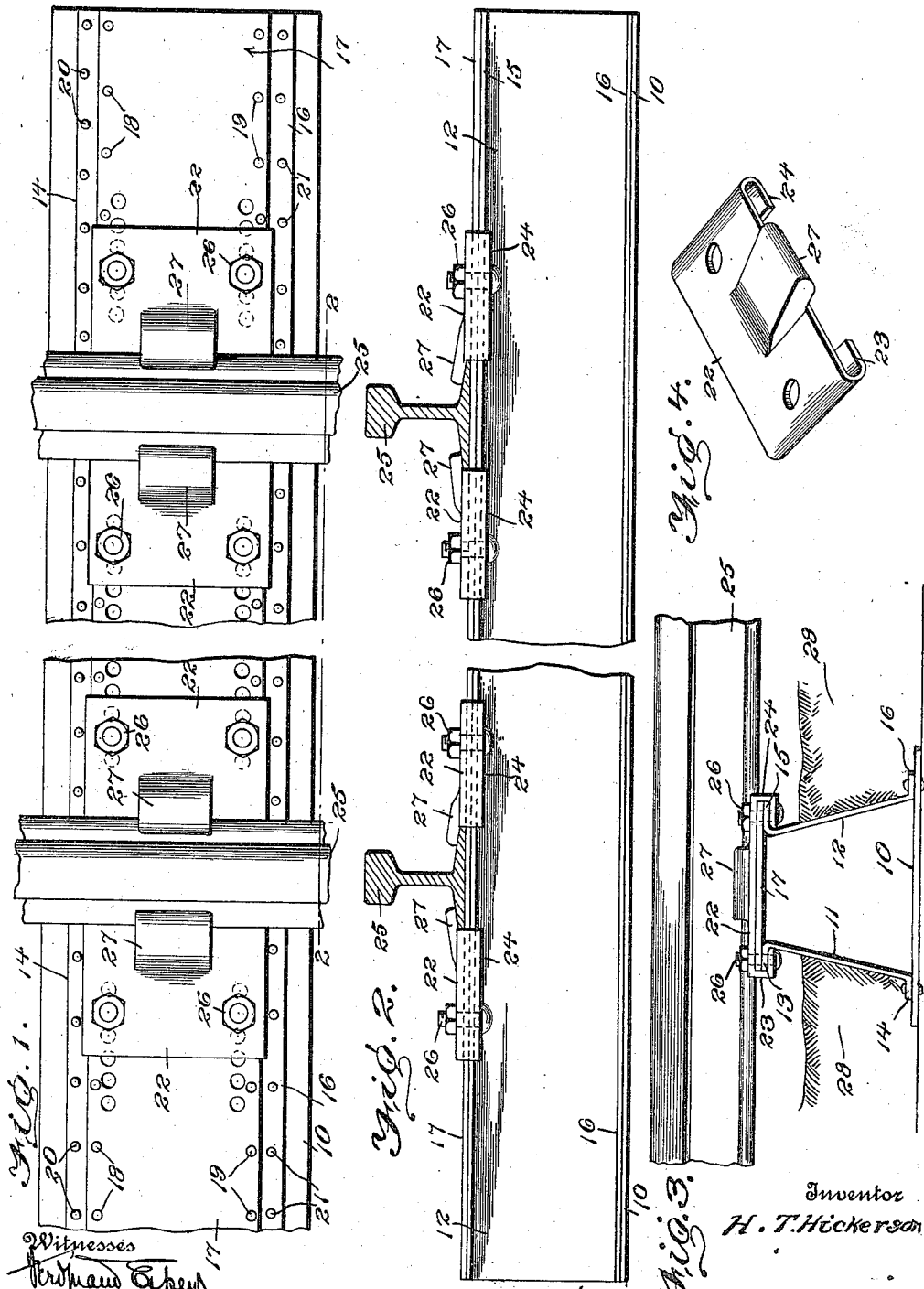


H. T. HICKERSON.
 METAL RAILWAY TIE.
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Patented Apr. 29, 1913.



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METAL RAILWAY-TIE.

1,060,184.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY T. HICKERSON, citizen of the United States, residing at Montgomery City, in the county of Montgomery and State of Missouri, have invented certain new and useful Improvements in Metal Railway-Ties, of which the following is a specification.

This invention relates to improvements in metal railway ties, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a simply constructed railway tie in which provision is made for utilizing the "tamping" to anchor the tie to the road bed and to prevent "creeping" or other movements of the same.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described, and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention: Figure 1 is a plan view of one of the improved ties with portions of rails in position thereon; Fig. 2 is a side elevation of the same with the rails in section on the line 2—2 of Fig. 1; Fig. 3 is an end elevation; Fig. 4 is a detached perspective view of one of the combined clamp and chair plates.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The improved tie is constructed wholly of metal as light as possible consistent with the strains to which it will be subjected and comprises a base or foundation plate 10 preferably about the usual length of an ordinary tie or about 8 feet, and preferably of greater width than the ordinary tie or about 12 inches, but it will be understood that it is not desired to limit the invention to any particular dimensions for the parts, and these dimensions may be varied according to the weight of the rolling stock employed. The plate 10 will be of greater width than the other portions of the tie to secure the requisite support.

Secured upon the upper face of the plate 10, are two web members 11—12, the web 11 having outwardly directed flanges 13—14

at its upper and lower edges, while the web 12 is provided with similar outwardly directed flanges 15—16 at its upper and lower edges. The body portions of the webs 11—12 converge inwardly so that they are spaced apart a less distance at their upper ends than at their lower ends, thus forming the body of the tie with converging side walls, the object to be hereafter explained. The flanges 14—16 bear upon the plate 10 and are spaced inwardly from its side edges as shown in Fig. 3, whereby lateral projections along the entire length of the tie at each side are produced upon which the tamping material bears to assist in holding the tie in the ground, as hereafter more fully explained. Bearing upon the upper flanges 13—15 is a longitudinal plate 17. The flanges 13—15 are riveted or otherwise secured as shown at 18—19 to the plate 17, while the flanges 14—16 are riveted as indicated at 20—21 to the plate 10. By this means it will be obvious that a simply constructed tie is produced which is strong and durable and wherein each part reinforces and supports the other so that deflection or unequal yielding is effectually prevented.

The upper portion of the tie is supported or reinforced by a plurality of transverse holding members which are likewise utilized to assist in holding the rail in position. The plates are precisely alike and the description of one will suffice for all. Each plate comprises a body portion 22 having inwardly directed flanges 23—24 which bear around the edges of the plate 17 and the flanges 13—15, and materially assist in holding the parts in coupled relations. The body portions of the plates 22 thus extend transversely of the plate 17 and are spaced apart a distance equal to the width of the tie flanges of the rails, the latter being represented conventionally at 25. By this means the rails are held from lateral movement or from movement longitudinally of the tie. The flanges 13—15 and the portion of the plate 17 which extends over the flanges, are provided with a plurality of perforations to receive clamp bolts 26 whereby the plates 22 may be firmly connected to the tie structure. Any required number of the apertures may be employed, but a sufficient number will be used to enable the rails to be adjusted to any required extent. Each of the plates 22 is provided with an upwardly di-

rected lug 27 which extends over the flanges of the rails and thus holds the latter in position and prevents upward movement of the same. By this simple means the rails
 5 are firmly anchored to the tie and all displacement effectually prevented.

It will be noted that relatively wide sections of the lower portions of the tie extend beneath the "tamping" indicated at 28,
 10 while the tamping likewise bears against the inwardly inclined outer faces of the webs 11—12. By this means the weight of the tamping is utilized to materially assist
 15 in holding the tie in place and effectually preventing any tendency to upward movement. This is an important feature of applicant's device and adds materially to its efficiency and utility.

The material employed for the tie is preferably steel of suitable strength and may be

galvanized or otherwise painted or treated to prevent corrosion.

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

A railway tie comprising a relatively
 25 wide base plate, side webs having outwardly directed flanges engaging the base plate and with outwardly directed upper flanges, the body portions of the side webs being converged inwardly whereby sloping side webs
 30 are produced, an upper plate bearing upon the upper flanges, means for connecting the lower flanges to the base, and means for connecting the upper flanges to the upper plate.

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

HENRY T. HICKERSON. [L. S.]

Witnesses:

W. O. SAILERS,
 J. E. OWINGS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."