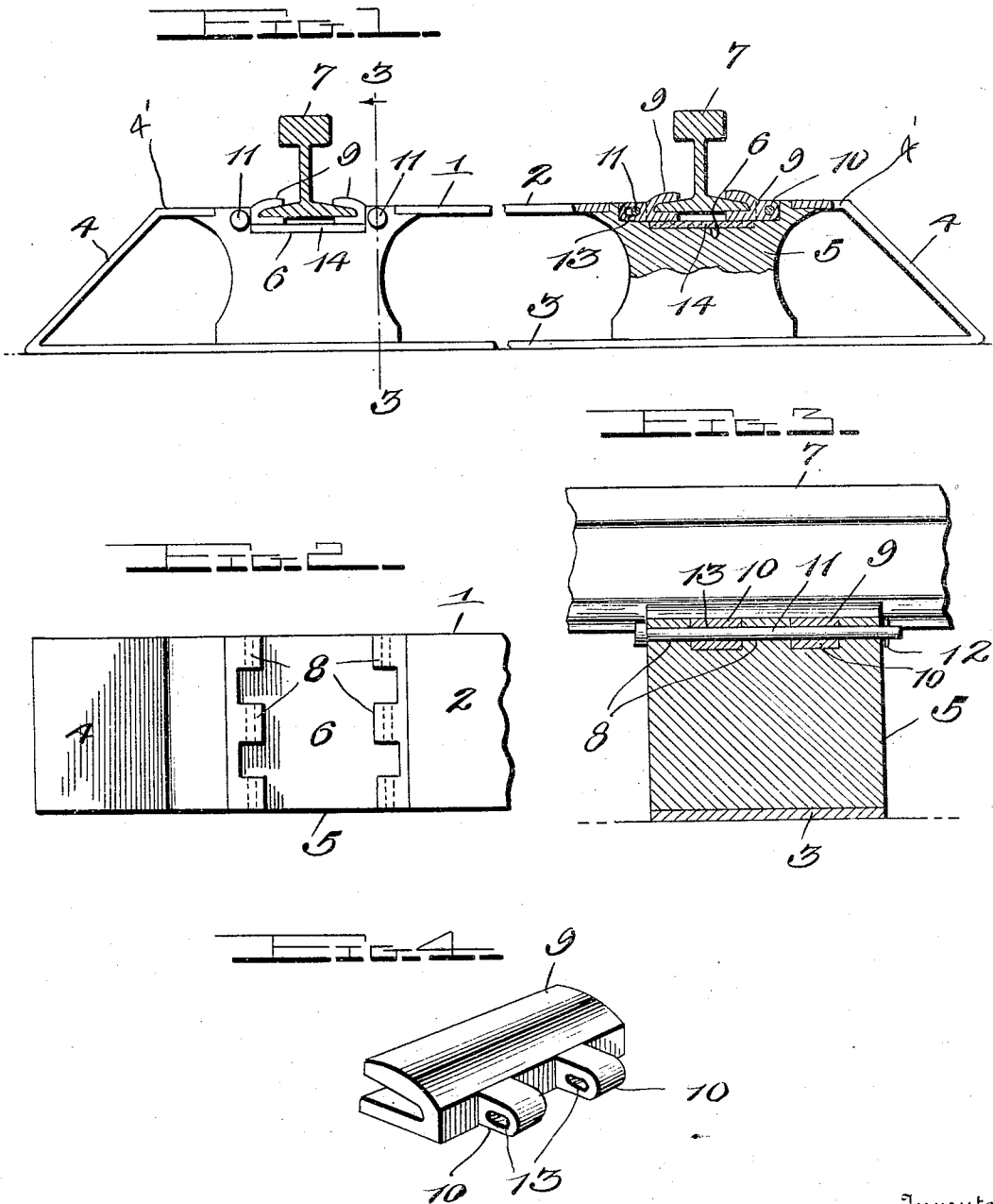


B. B. MORRIS.
METALLIC TIE AND FASTENER.
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1,058,084.

Patented Apr. 8, 1913.



Inventor

B. B. Morris,

Witnesses

Chas. L. Grechtauer.
A. J. Hind.

By

Watson E. Coleman,
Attorney

UNITED STATES PATENT OFFICE.

BIRTIC B. MORRIS, OF EOLINE, ALABAMA.

METALLIC TIE AND FASTENER.

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To all whom it may concern:

Be it known that I, BIRTIC B. MORRIS, a citizen of the United States, residing at Eoline, in the county of Bibb and State of Alabama, have invented certain new and useful Improvements in Metallic Ties and Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in rail ties and fasteners and the primary object of the invention is to provide a metallic tie of improved design with improved means for securing rails thereto.

A further object of the invention resides in providing a plurality of hinged clamping members on the tie which are adapted to engage the base flanges of the rail to secure the latter to said tie and a still further object resides in the provision of a device which is extremely simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a vertical section through the tie embodying my improvements therein. Fig. 2 is a fragmentary plan view thereof. Fig. 3 is a vertical transverse section through the device as seen on line 3—3, Fig. 1; and Fig. 4 is a perspective view of one of the clamping members.

In describing my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates my improved tie consisting of a top plate 2, a bottom plate 3 and the inwardly inclined end plates 4, the bottom and end plates being preferably formed of a single sheet of metal. The top plate 2 is considerably shorter than the bottom plate 3 and the ends thereof rest in offset portions formed at the inner opposed upper edges of a pair of supporting blocks 5 and 6, the latter being suitably mounted and secured on the bottom plate 3. The upper faces of these blocks fit flush with the upper face of

the top plate 2 and the outer opposed ends of said blocks at the top thereof are also offset to receive inwardly bent portions 4' formed on the upper ends of the inclined end plates 4. These bracing or supporting blocks 5 are provided with seats or channel-ways 6 in one upper faces thereof which extend transversely of the tie and are adapted to receive the base flanges of the rails therein. I have, however, provided an improved means for the securing of the base flanges of the rails in these seats or channel-ways 6 and to this end, I provide a plurality of knuckles or the like 8 on the side walls of said channel-ways or seats 6. Any number of these knuckles may be provided on each of the side walls of the channel-ways, but I have shown three knuckles in each case, which is most preferable. A pair of clamping members 9 is also provided for each seat or channel-way 6 and the same have the outer side edges thereof provided with the additional knuckles 10 which are so arranged thereon as to alternate with the aforesaid knuckles 8. In positioning these clamping members, the knuckles 10 are disposed between the knuckles 8 and the pins or pintles 11 inserted therethrough, said pins being locked into position by means of the cotter pins or keys 12 and it will thus be seen that a hinge connection between the clamping members and the supporting blocks 5 will be formed. The mouths or channel-ways of these clamping members 9 are designed coincident to the outline of the base flanges of the rails 7 so as to snugly receive the latter therein and in order to permit a slight movement of certain of said clamping members, which is necessary in the application of said rails in position, the inner clamping members of each set have the knuckles thereof provided with enlarged bores or slots, as shown at 13.

The blocks 5 which form a supporting means for the rails 7 are preferably formed of metal and in order to lessen the metallic sound which is caused by the traffic over said rails and also to permit a certain amount of resiliency between the rails and said blocks, plates of wood or other fibrous material 14 are provided and positioned in the seats or channel-ways 6.

In operation, assuming that the clamping members have been properly applied to the tie and the tie properly mounted in the road-bed, so that the top plate 2 thereof just

projects above the surface of the road-bed, should it be desired to secure the rails thereto, the same are disposed over the channel-ways in the supporting blocks 5. The rails 5 are held some distance above the seats or channel-ways and the clamping members 9 swung upwardly so as to allow the side edges of the base flanges of said rails to be engaged therewith. A downward vertical 10 movement of said rails will obviously force said clamping members in locked position over said base flanges to assume a position as shown in Fig. 1 of the drawings and the slight play which is necessary in such a 15 downwardly vertical movement of the rails is compensated for by the provision of the enlarged bores or slots 13, as described above. When once locked into position in the manner described, said rails will be securely held 20 to the tie against all lateral or longitudinal movement.

From the foregoing it will be seen that I have provided a simple, inexpensive and efficient means for carrying out the objects 25 of the invention and while I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing 30 from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what I claim is:—

35 1. A metallic tie of hollow design comprising a top, a bottom and ends therefor,

said top being provided with openings, supporting blocks mounted on the bottom and having the upper ends thereof projecting through the openings in said top and engaged with the latter, the upper faces of 40 said blocks being provided with transverse channel-ways, and means to secure rail sections in said channel-ways.

2. A rail tie of hollow design comprising 45 a top, a bottom and ends therefor, said top being provided with openings, supporting blocks mounted on the bottom of said tie and projecting through the openings in the top thereof, said blocks being engaged with 50 portions of the top and provided with transverse channel-ways, and means carried in the channel-ways of said blocks for securing rail sections thereto.

3. A metallic tie comprising a bottom section, end sections formed thereon, the upper 55 free ends of the end sections being bent inwardly to form portions of a top for the tie, supporting blocks mounted on the bottom section and receiving the aforesaid inwardly bent portions of the end sections 60 thereon, a top plate also resting on said supporting blocks, said supporting blocks being provided with transverse channel-ways, and means carried on said blocks for securing 65 rail sections thereto.

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

BIRTIC B. MORRIS.

Witnesses:

PELHAM D. BROWN,
S. D. McGEE.