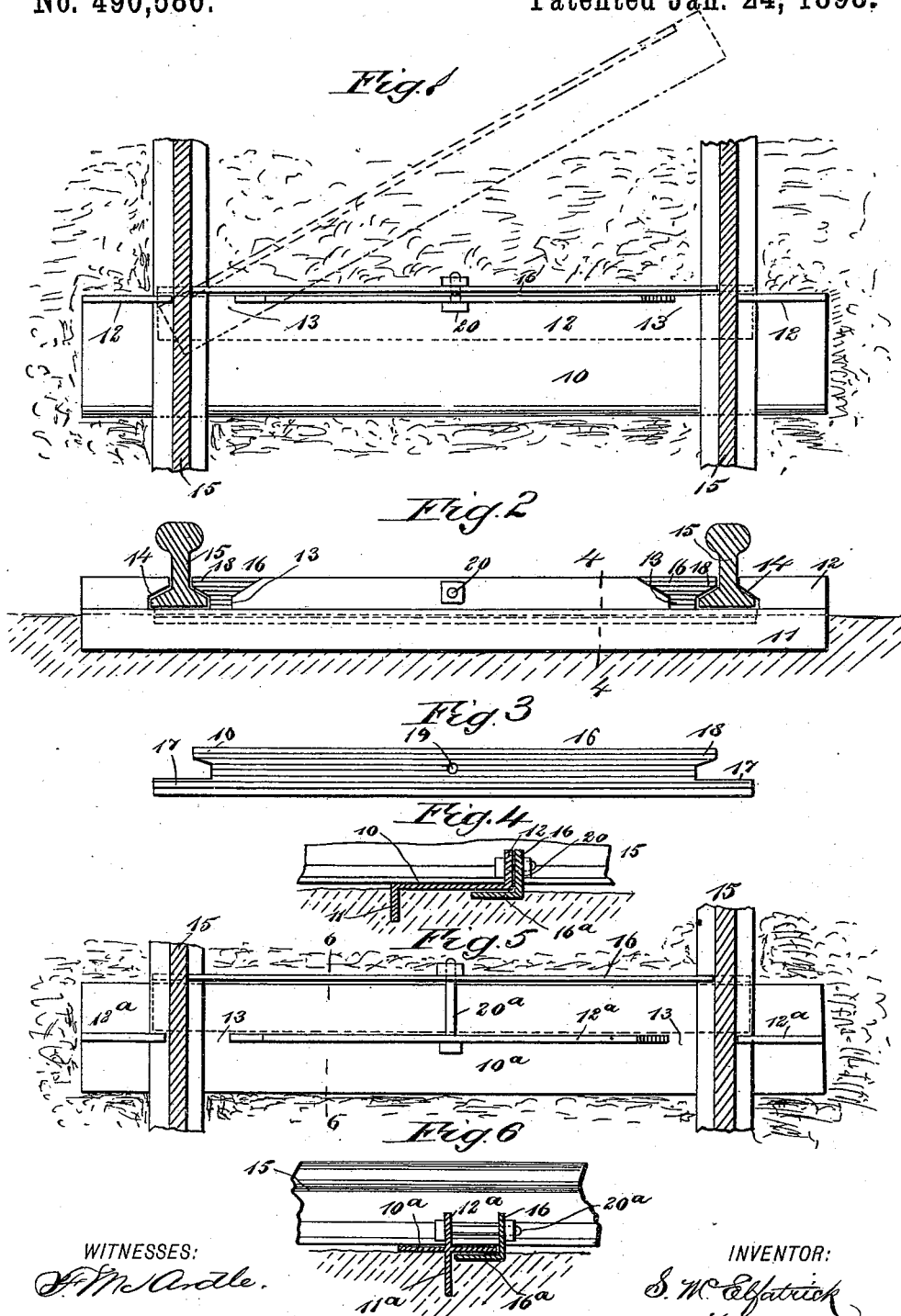


(No Model.)

S. McELPATRICK.
RAILWAY TIE.

No. 490,586.

Patented Jan. 24, 1893.



WITNESSES:
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SAMUEL McELFATRICK, OF PRINCETON, KENTUCKY.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 490,586, dated January 24, 1893.

Application filed March 4, 1892. Serial No. 423,703. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL McELFATRICK, of Princeton, in the county of Caldwell and State of Kentucky, have invented a new and Improved Railway-Tie, of which the following is a full, clear, and exact description.

My invention relates to improvements in metallic railway ties, and the object of my invention is to produce a simple form of tie which may be easily shaped and consequently cheaply made, which may be quickly and securely placed in position on a roadbed, and which may as easily be applied to the rails and will hold them so that they cannot get loose.

To this end, my invention consists in a railway tie, the construction of which will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the tie embodying my invention, showing in section two rails secured thereon; Fig. 2 is a side elevation of the tie, showing the rails in section; Fig. 3 is a detail side elevation of the straining bar which forms the inside clamp of the rails; Fig. 4 is a cross section on the line 4—4 in Fig. 2; Fig. 5 is a plan view of a modified form of the tie, showing in section a pair of rails thereon; and Fig. 6 is a cross section of the same, on the line 6—6 in Fig. 5.

The body 10, of the tie is a flat, plain metal plate high enough to extend beneath a pair of rails, and having on one edge a depending flange 11, adapted to be embedded in the roadbed of a railroad, and having on the opposite edge a vertical flange 12, which is cut away or recessed near the ends, as shown at 13 in Figs. 1 and 2, and the end walls 14 of the recesses, that is, the adjacent portions of the flange 12, project inward so as to form clamps adapted to fit upon the outer sides of the flanges of the rails 15. The flange 12 is cut away at the point 13, through its entire height, so that the rails may rest flatwise upon the body 10 of the tie. A straining bar 16 forms the inside clamp of the rails, this bar having a bottom flange 16^a, which is adapted to extend beneath one edge or side of the body 10, as shown in Fig. 4, thus strengthening the

same, and the flange 16^a also strengthens the straining bar. The straining bar is adapted to extend between the two rails 15, and its ends are notched as shown at 17, the upper walls 18 of the notches being shaped to fit snugly upon the inner flanges of the rails 15.

The straining bar 16 is perforated near the center, as shown at 19, so that it may be fastened to the flange 12 of the tie body 10, by means of a bolt 20. The straining bar would undoubtedly stay in place without the bolt, but it is better to use it to provide against any possible displacement; but it will be seen that the bolt may be dispensed with, and it will also be understood that the middle portion of the flange 12 of the tie body, and the bottom flange 16^a of the straining bar, could also be dispensed with without departing from the principle of my invention, but it is better to use the flanges named for the reason that they strengthen the tie and it may consequently be made of lighter metal where the flanges are used.

The straining bar 16 is applied as follows: The rails 15 are placed in the recesses 13 of the tie body, and pushed to the outer extremities of the recesses so that the walls 14 of the flanges 12 will fit upon the rail flanges; then one end of the straining bar 16 is placed so as to clamp the inner flange of one rail, the bar being placed diagonally across the track, as shown by dotted lines in Fig. 1, and the free end of the bar may then be driven to place against the body of the tie and against the opposite rail, thus forming an inside clamp for each rail, and the rail will thus be held firmly between the outer clamps formed by the recessed flange 12 and the inner clamps on the notched ends of the straining bar.

In Figs. 5 and 6, I have shown a modified form of the tie, and in this case the flat body 10^a has a depending flange 11^a formed near its center instead of at one edge, and the flange 12^a on the upper side is also produced near the center of the body, but this flange is exactly similar in construction to the flange 12 already described. The straining bar 16 is used as in the previous case, but a longer fastening bolt 20^a is substituted for the bolt 20, as the straining bar and flange 12^a will not touch each other.

From the foregoing description it will be

seen that this tie is extremely simple and that it will cost but little to make it. It will be also noticed that the rails are held without spikes, that they may be quickly secured to the tie, and that the tie will hold them so that they cannot possibly be displaced by accident.

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

The combination, of the flat tie body hav-

ing clamping devices near its ends to fit the outer flanges of the rails, and a straining bar adapted to extend between the rails and fit their inner flanges, the straining bar having a bottom flange extending beneath the body of the tie, substantially as described. 15

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Witnesses:

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