

(No Model.)

W. H. ADDICKS.
METALLIC RAILWAY TIE.

No. 539,211.

Patented May 14, 1895.

FIG. 1

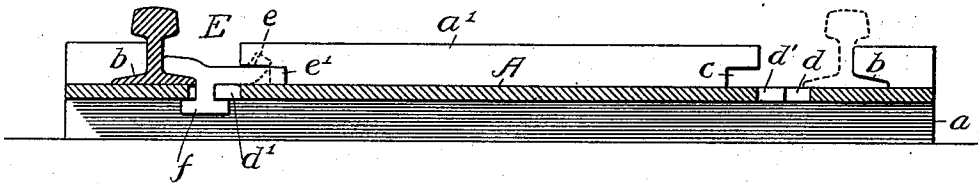


FIG. 2

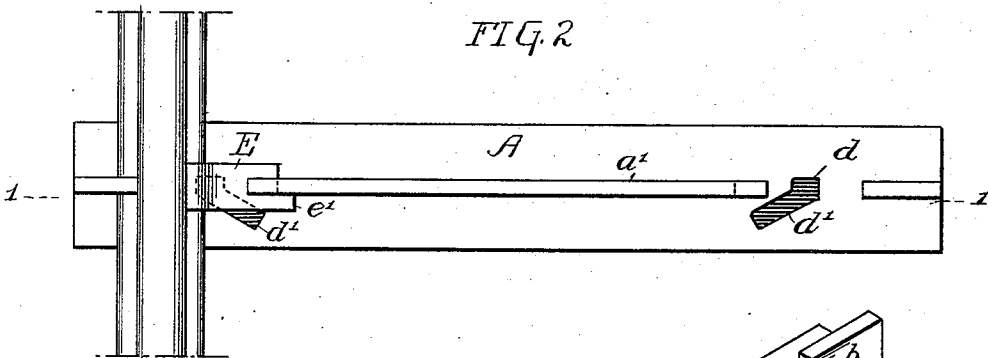


FIG. 3

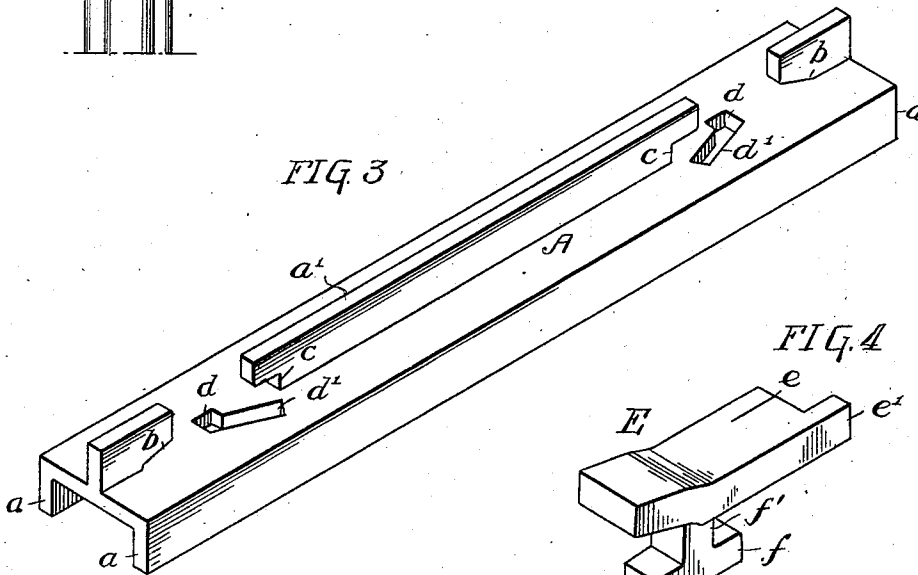
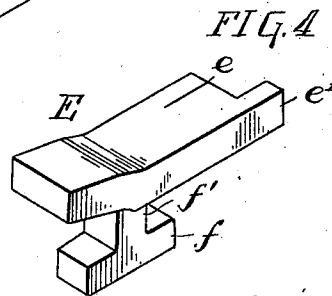


FIG. 4



Witnesses:
John E. Parker
J. Henderson.

Inventor:
William H. Addicks,
by his Attorney,
James Pettit.

UNITED STATES PATENT OFFICE.

WILLIAM H. ADDICKS, OF PHILADELPHIA, PENNSYLVANIA.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 539,211, dated May 14, 1895.

Application filed January 23, 1895. Serial No. 535,896. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ADDICKS, a citizen of the United States, and a resident of the city of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improvement in Metallic Railway-Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of railway ties in which the tie is especially shaped for the purpose of securing the rails in position, its object being to provide an economical construction of tie, which, in connection with auxiliary fastening devices of simple character, may be employed to secure the rails in place, as more clearly set forth hereinafter.

In the accompanying drawings, Figure 1 is a sectional elevation on the line 1 1, Fig. 2, of a railway-tie constructed in accordance with my invention. Fig. 2 is a plan view of the same. Fig. 3 is a perspective view of the tie proper, and Fig. 4 is a similar view of one of the rail-fastening keys.

Referring to the drawings A represents the tie provided with two lower depending flanges, *a*, so as to form a channel bar, and with a centrally located rib, *a'*, on its upper surface extending longitudinally of the tie and being interrupted or recessed at the points where the rails lay in order that the base of the rails may rest directly upon the broad upper surface of the main body of the tie.

The rib, *a'*, is cut away, and at *b* is recessed to conform to the contour of one side of the base and web of the railway rails near each end of the tie.

Extending through the upper portion of the main body of the tie are slots each having a portion, *d*, extending parallel with the length of the tie, and a portion, *d'*, extending at an angle thereto.

The securing key, E, is formed of a broad metallic plate so shaped at one end as to bear firmly upon the upper portion of the base and one side of the vertical web of the rail, its opposite end being slit at *e*, and being provided also with a projection, *e'*, extending somewhat beyond the end of the plate. Near the center of the plate is a tongue, *f*, connected to the plate by a shank or neck, *f'*, of a

length somewhat greater than the thickness of the metal which forms the upper surface of the tie so that when the tongue, *f*, is passed through the inclined portion, *d'*, of the slot the said tongue will be below the main body of the tie, and when forced into the position shown in Fig. 1 the plate will be prevented from rising and will firmly lock the base of the rail to the upper surface of the tie.

In order to prevent any movement of the key, after it has been forced into the locking position, the rib, *a'*, is provided with a slot or recess, *c*, at a point immediately above the upper surface of the body of the tie, the distance between the rear wall of the slot or recess, *c*, and the web of the rail to be fastened in position being about equal to the length of the keying plate and when the end of the key is forced into this recess the projection, *e'*, being of such length as to prevent its passing through the recess will impinge upon one side of the rib, *a'*, and prevent any further movement of the key in that direction. The slit *e* is then about in line with the opposite side of the rib, *a'*, and that portion of the end of the key beyond the side of the rib may be bent upward, as shown in dotted lines in Fig. 1, and so prevent movement of the key in the opposite direction.

A key and tie constructed in accordance with this invention may be readily placed in position, and the key be secured in place in a comparatively short time, while the key will act effectually to lock the rail in position owing to the contact of the tongue, *f*, with the under side of the main body of the tie and the contact of the neck, *f'*, with the end wall of the slot, *d'*, and the contact of the end of the key with the end wall of the recess, *c*, forming a positive abutment.

Where it becomes necessary to employ a guard rail, as at bridges, curves or switches, the recess in the rib may be made sufficiently wide to receive the two rails and an auxiliary spacing block be placed between the main rail and the guard rail, as described more fully in my application filed of even date herewith.

It is clear that in my improved construction herein described the necessity is obviated for the employment of spikes, screws, &c., as in former constructions which are al-

ways liable to work loose under the vibrations consequent upon the passage of the trains; also that the parts necessary to the complete construction of my invention are reduced to a minimum, and these parts are constructed so as to be interchangeable and can be readily replaced. It is also clear that in this construction the line and gage of the rails so adjusted will be accurate and positive and can be thus readily set into position without loss of time and labor, as, for instance not only in the original construction of the line, but in case of accidental destruction or derangement of the line.

15 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the railway tie having on its upper surface a recessed rib, one wall of each recess being adapted to partially embrace one side of the rail, there being through the upper surface of the main body of the tie an inclined slot extending at an angle to the length of the tie, with a locking key having a tongue adapted to enter and be confined in position by said slot, and one end of said key being adapted to partially embrace and confine in position the railway rail, and its opposite end being adapted to be secured to the recessed rib, substantially as specified.

2. The combination of the railway tie having an upper recessed rib, *a'*, one wall of which at *b*, is adapted to receive and partially embrace one side of the rail; slot, *d, d'*, provided through the upper surface of the main body of the tie with a locking key, *E*, having a tongue, *f*, adapted to enter and be confined in said slot, one end of said key being provided with a slit, *e*, and a projection, *e'*, for securing said end of the key to the rib, *a'*, substantially as specified.

3. The combination of the railway tie having on its upper surface a recessed rib, *a'*, one wall, *b*, of each recess adapted to receive and partially embrace the rail, and the opposite wall having a recess or slot, *c*, there being in the upper surface of the main body of the tie two slots, *d, d'*, situated one near each end of said tie, a locking key, *E*, a tongue, *f*, thereon adapted to said slot, a neck portion, *f'*, connecting the tongue and key, one end of said key having a slit, *e*, and a projection, *e'*, substantially as specified.

In witness whereof I have hereunto set my hand this 19th day of January, A. D. 1895.

WILLIAM H. ADDICKS.

Witnesses:

C. PERCY WILLCOX,
HORACE PETTIT.