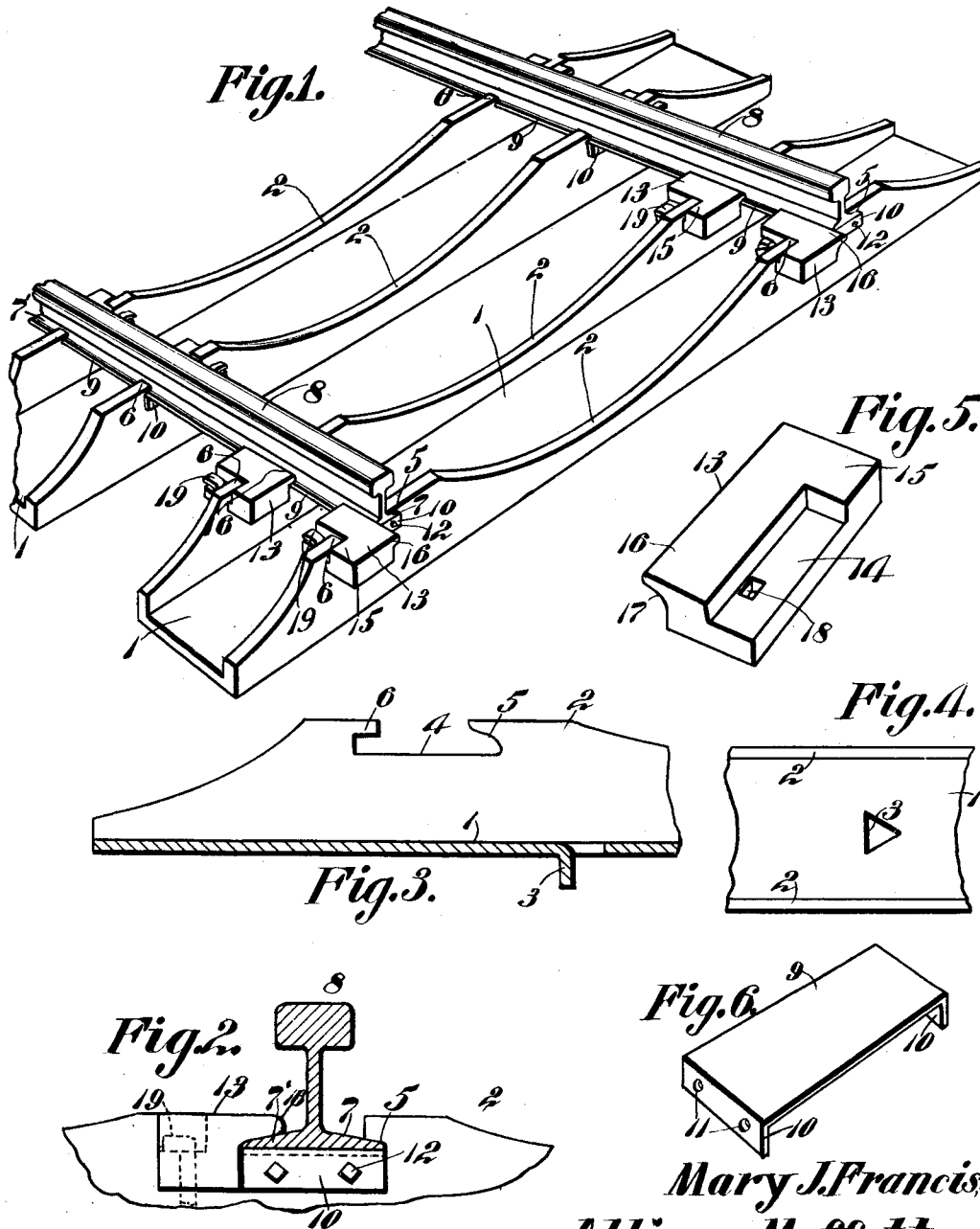


M. J. FRANCIS & A. MOFFETT.
METALLIC RAILROAD TIE.
APPLICATION FILED APR. 5, 1912.

1,036,210.

Patented Aug. 20, 1912.



Witnesses

J. R. Tomlin
L. H. Wilson

Mary J. Francis &
Allison Moffett,
Inventors

by

C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

MARY JANE FRANCIS AND ALLISON MOFFETT, OF GALETON, PENNSYLVANIA.

METALLIC RAILROAD-TIE.

1,036,210.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, MARY J. FRANCIS and ALLISON MOFFETT, citizens of the United States, residing at Galeton, in the county of Potter, State of Pennsylvania, have invented a new and useful Metallic Railroad-Tie, of which the following is a specification.

The present invention relates to improvements in metallic railroad ties, the primary object of the invention being the provision of a metallic tie having two parallel upstanding webs longitudinally thereof and provided with rail flange and rail brace receiving slots at the rail bearing portions thereof, a plate being provided to fit within the slots and below the rail flange and brace to lock the webs against spreading, whereby a rigid and light metallic tie is provided and one which will lock the tie against turning and will permit the desired longitudinal expansion thereof.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a perspective view of several of the ties placed in rail supporting position. Fig. 2 is a section through a rail showing the supporting edge of each one of the webs and the adjacent brace portions in elevation. Fig. 13 is a longitudinal sectional view through one end of one tie. Fig. 4 is a top plan view of a portion of the tie showing the means for preventing the creeping of the tie. Fig. 5 is a perspective view of the rail flange engaging wedge and brace. Fig. 6 is a perspective view of the plate for preventing the webs of the tie from spreading.

Referring to the drawings, the numeral 1 designates the base plate of a tie, which is formed of metal and provided with two parallel upstanding webs 2. Cut from the body of the webs 2 of the tie is a prong 3, which provides a means to engage the surface and prevent the longitudinal creeping of the tie due to any cause whatsoever.

The upper edge of the respective webs 2 at the rail supporting portion of the tie are each provided with a recess 4 so cut as to

provide an inclined projection 5 and a rectangular projection 6.

In order to hold the webs against spreading, the plate 9 is provided with the two parallel flanges 10, is positioned within the respective slots or recesses 4 so that the flanges 10 thereof project upon the outer faces of the webs 2 and are held thereto by means of the apertures 11 and bolts 12. The plates also provide the proper base for the fitting of the rail flanges 7 and 7' and the rail 8, which as clearly shown in Fig. 2, fits upon the plate 9 so that the flange 7 is projected below the projection 5 and is locked therein by means of the rail brace and wedge 13, which as shown in Fig. 5, is provided with the recessed portion 14 and the projection 15, so that the said brace may be inserted within the remaining portion of the recess 4. By this means the projection 15 and the reduced portion due to the recess 14 receives the projection 6 of its respective web 2, will limit the movement of the wedge and rail brace relatively to the rail and also support and carry web. The rail flange engaging lip 16 of the brace 13 is curved as at 17 to fit upon the flange 7' of the rail and thus securely holds the rail in the proper position against spreading or turning, but permitting the necessary longitudinal movement due to the contraction and expansion of the rail. A rectangular aperture is provided through the brace 13 and when the brace is properly positioned, the aperture 18 is upon the opposite side of the web 2 to the projection 15, so that the locking pin 19 may enter the aperture 18 and act as a wedging means or locking means to hold the wedge relative in position against any movement.

The upper edges of the webs 2, may be straight, but in order to reduce the weight and economize metal, they may be curved as shown, both intermediate of their ends and at the ends.

From the foregoing description taken in connection with the drawings, it is evident that a metallic railroad tie made according to the present invention will permit of the easy introduction and removal of the rail, while the wedging and bracing device 13 will lock or wedge the respective flanges of the rail in the proper rail supporting position, the co-action thereof with the respective lugs 5 and 6 of the webs holding the rail in place against spreading or turn-

ing. By reason of the plate 9 and the positioning thereof upon the upper recessed edges of the webs, the webs are prevented against spreading at the rail engaging portions thereof and thus form a rigid structure at this point.

What is claimed is:

1. A metallic railroad tie, having a longitudinal base plate provided with longitudinally disposed and parallel flanges, the rail bearing edges of each flange being provided with a rail flange receiving recess of greater length than the rail base and one side of which recess is engaged by the rail base, a plate of substantially the same width as the rail base having its ends seated within a recess of each flange and forming a means to retain the flanges against spreading and a support for the rail base between the flanges, and a removable rail base and flange locking block insertible in each recess to hold the base downwardly and seated against the opposite side of the recess.

2. A metallic railroad tie, having a longitudinal base plate provided with longitudinally disposed and parallel flanges, the rail bearing edges of each flange being provided with a rail flange receiving recess of greater length than the rail base and one side of which recess is engaged by the rail base, a plate of substantially the same width as the rail base having its ends seated within a recess of each flange and forming a means to retain the flanges against spreading and a support for the rail base between the flanges, two blocks to each rail base, each of which is provided with a rail base en-

gaging lip and a recessed portion upon the opposite side to the lip for insertion within the recess of its flange when the lip is in rail base engagement, and a removable locking pin for co-action with the block and flange to lock the block against longitudinal movement.

3. A metallic railroad tie, having a longitudinal base plate with two parallel upstanding flanges, said flanges at the rail supporting edges thereof being provided each with a modified dove-tailed recess for the reception of the base of a rail, said recess being of greater width than the rail base, a plate connected to the upper edges of the flanges with its ends seated within the opposite recess to form a tie to hold the flanges against spreading and to provide a support for the rail base the full width of the tie, a removable rail base engaging block insertible in each recess and having a lip to engage one edge of the rail base when the other edge is seated in the other side of the recess, said block having a reduced portion to fit in the other side of the recess, and a removable locking pin insertible through the block to engage the flange and lock the block against longitudinal movement.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

MARY JANE FRANCIS.
ALLISON MOFFETT.

Witnesses:

C. H. FRANCIS,
WARD S. ENGLISH.