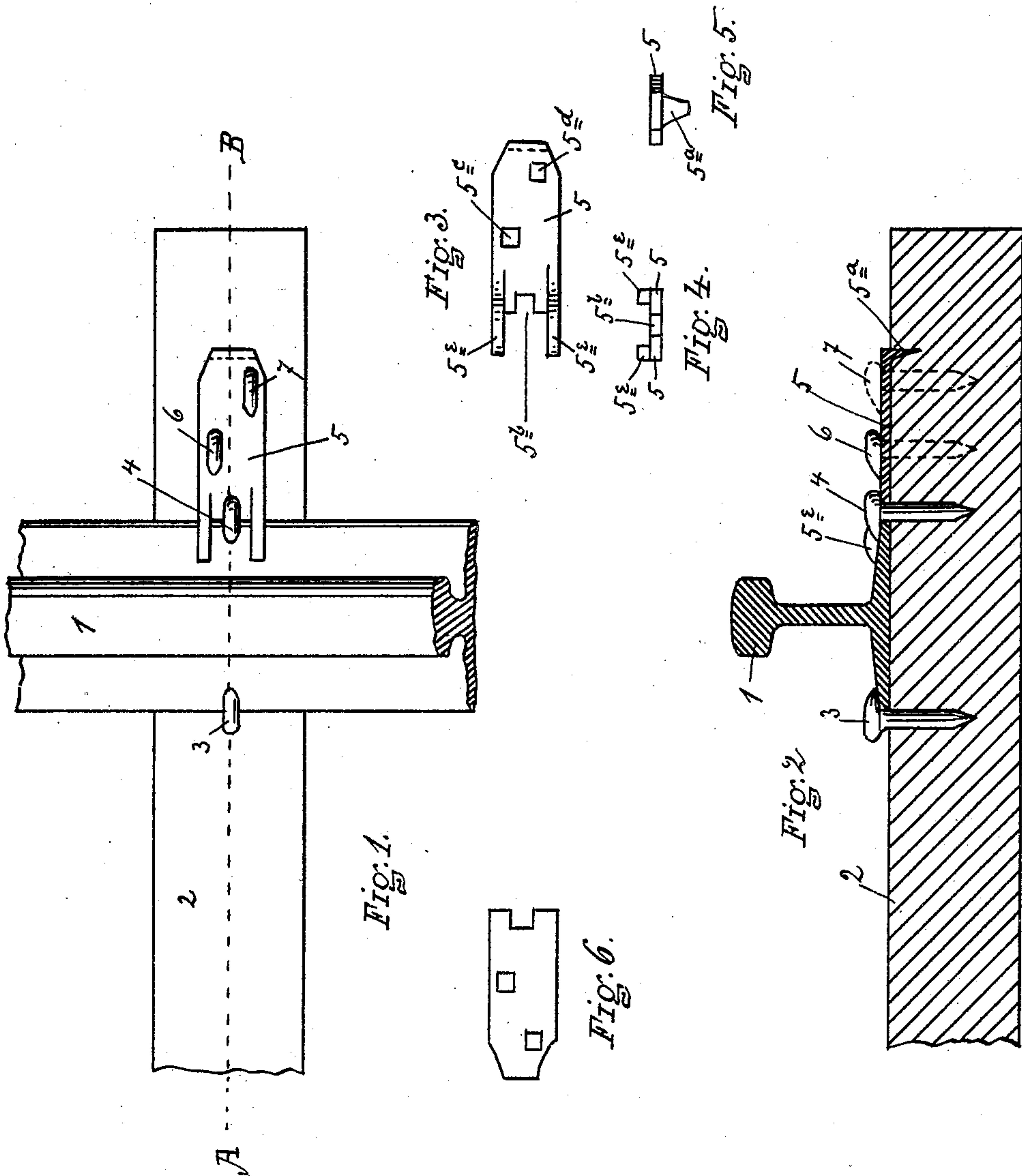


No. 887,830.

PATENTED MAY 19, 1908.

J. MURRAY.  
RAIL SPIKE SUPPORTER AND PROTECTOR.

APPLICATION FILED JULY 18, 1906.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JEREMIAH MURRAY, OF UTICA, NEW YORK.

## RAIL-SPIKE SUPPORTER AND PROTECTOR.

No. 887,830.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed July 18, 1906. Serial No. 326,660.

*To all whom it may concern:*

Be it known that I, JEREMIAH MURRAY, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Rail-Spike Supporters and Protectors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my invention is to provide a rail spike support and protector, which is simple in construction and efficient in operation.

In railroad tracks, particularly where the equipment and traffic are heavy, great difficulty is experienced in keeping the rails from spreading and forcing the spikes outwardly in the tie or wearing them off by the edge of the rail flange. Heretofore it has been found necessary to frequently go over the track and re-spike the rails particularly on the outside. A comparatively few spikes driven into a tie along the edge of a rail cut it up and injure the material so that the tie is soon worthless and must necessarily be replaced.

With my device hereinafter described, one spike at the edge of the rail is so well supported that it has the resistance of three or more against sidewise displacement, and is so well protected that it can not be materially worn by the edge of the rail in a long period of time. By my device the spikes are also distributed so that one line or point on the tie does not necessarily receive all the injury incident to driving the spikes into the tie and splitting the tie by numerous spikes in a line is obviated.

The device herein described is so simple and requires such a small amount of material that its cost does not practically prohibit its general use. These devices are necessarily employed in large numbers and the question of cost is a very material point.

Figure 1 shows a plan view of a section of rail mounted on a section of tie showing my spike support in position thereon. Fig. 2 is a longitudinal section of the same taken on line A—B of Fig. 1. Fig. 3 is a plan view of the spike support. Fig. 4 is a left-hand end view and Fig. 5 a right-hand view of the fastener as shown in Fig. 3. Fig. 6 is a plan view of a modified form of construction.

Referring to the reference letters and figures in a more particular description, 1 indicates a railroad rail mounted in the usual manner upon a tie 2 and secured thereto by a spike 3 adjacent to and engaging with the inside flange of the rail, and a spike 4 adjacent to and engaging the outside flange of the rail.

5 is my spike support consisting of a plate adapted to rest on the top of the tie and preferably formed at the outer end with a tooth or projection 5<sup>a</sup> adapted to be driven into the tie. The plate 5 is provided at the end adjacent to the rail with a recess 5<sup>b</sup> adapted to receive the shank of the spike 4 and fit the same quite closely. The ends of the plate 5 at either side of the recess 5<sup>b</sup> are adapted to abut against the edge of the flange of the rail unless, perchance, the shank of the spike is excessively thick, in which case the said ends will nearly abut against the flange of the rail and be in a position sufficiently proximate thereto to prevent any material wear of the flange of the rail on the shank of the spike. The plate 5 is also provided with offset openings as 5<sup>c</sup> and 5<sup>d</sup>, through which spikes are driven into the tie to better secure the plate on the tie.

It will be noted that the spikes placed in the openings 5<sup>c</sup> and 5<sup>d</sup> will not in their driving destroy or injure the fiber of the ties at a point in close proximation to the base of the rail or in the line of the grain of the tie. The plate 5 may also be provided, as shown in Figs. 3 and 4, with fingers or projections 5<sup>e</sup>, which are adapted to overhang the flange of the rail and rest more or less thereon and serve to some extent to hold the tie and rail together against lateral displacement. The fingers 5<sup>e</sup> are spaced apart so that access may be had with a claw bar to the head of the spike 4 for drawing, and also the spike 4 may be driven without disturbing the plate.

In Fig. 6 is shown a form of construction of plate in which the fingers or projections 5<sup>e</sup> are omitted. The spikes driven through the openings 5<sup>c</sup> and 5<sup>d</sup> are indicated in Figs. 1 and 2 by the reference numbers 6 and 7 respectively.

It will be noted that these spike supports can be applied to rails and spikes already in position; also that they can be applied in new work or reconstruction work. It is deemed preferable to secure the spike support 5 in position on the tie before driving the outside rail spike 4, inasmuch as the spike 4 must then necessarily be driven right



and close to the flange of the rail, making the work much more tight and effective than when employed in the reverse manner, unless extraordinary care is used in the latter instance.

What I claim as new and desire to secure by Letters Patent is:

1. A combined rail brace and spike brace and protector consisting of a plate adapted to be applied to the tie and recessed at the end to receive the spike driven at the edge of the rail and engage the spike and flange of the rail at each side of the spike, and extending laterally away from the rail and having offset spike openings in said extending portion, substantially as set forth.

2. A combined rail brace and spike brace and protector consisting of a plate adapted

to be applied to the tie and recessed at the end to receive the spike driven at the edge of the rail and engage the spike and flange of the rail at each side of the spike, and having fingers or projections overhanging the edge of the flange of the rail and spaced apart to afford access to the head of the spike and the plate extending laterally away from the rail, and having offset spike openings in said extended portion, substantially as set forth.

In witness whereof, I have affixed my signature, in presence of two witnesses, this 13th day of July, 1906.

JEREMIAH MURRAY.

Witnesses:

E. S. HESSE,

GEO. E. RENDELL.