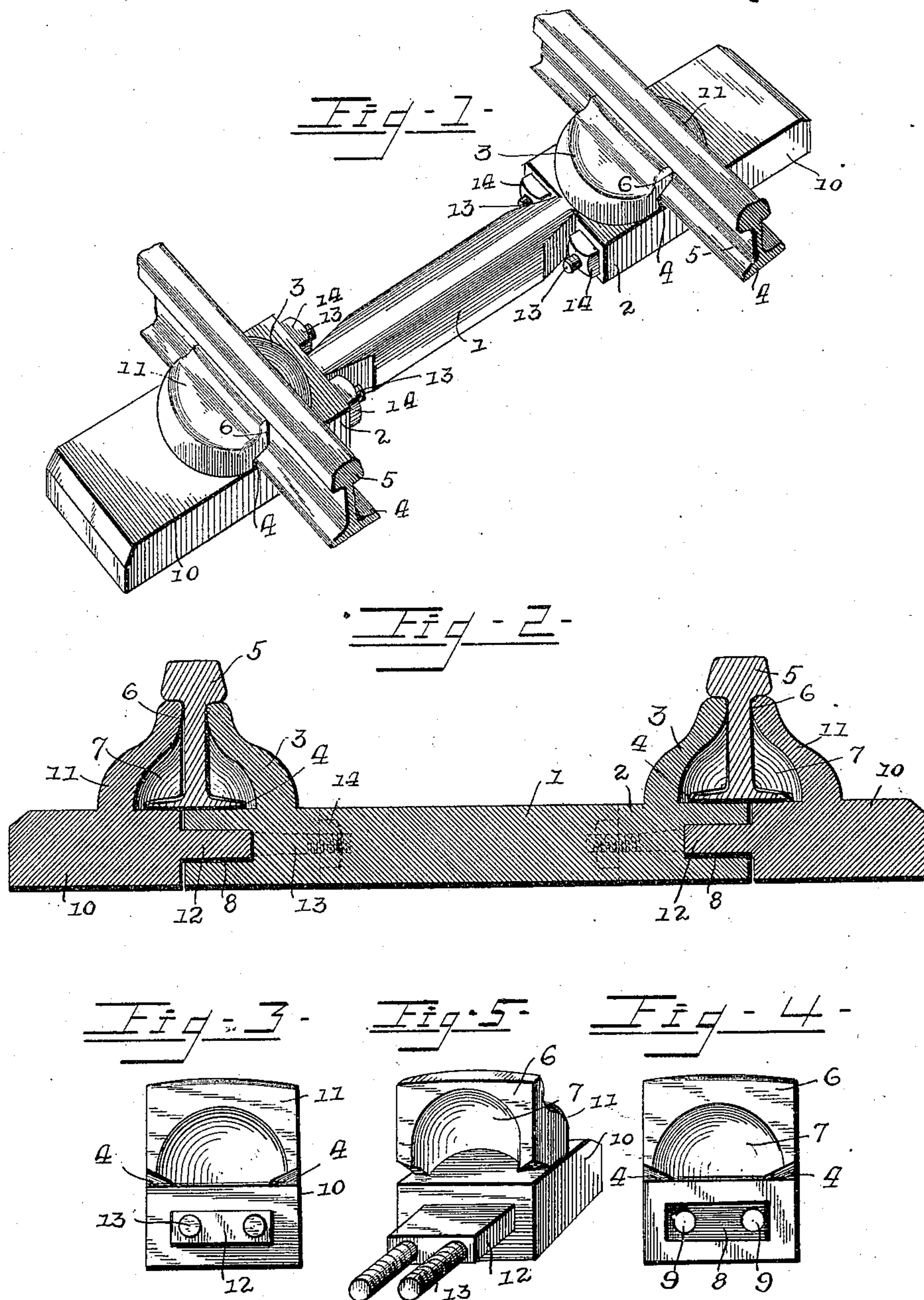


(No Model.)

J. KLINE.
RAILROAD TIE.

No. 601,810.

Patented Apr. 5, 1898.



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UNITED STATES PATENT OFFICE.

JOHN KLINE, OF NESCOPECK, PENNSYLVANIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 601,810, dated April 5, 1898.

Application filed September 30, 1897. Serial No. 653,622. (No model.)

To all whom it may concern:

Be it known that I, JOHN KLINE, a citizen of the United States, residing at Nescopeck, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Railroad-Tie, of which the following is a specification.

This invention relates to metallic cross-ties for railways, its object being to provide a metallic tie formed in three sections so constructed that the middle section will extend between the track-rails and partially below them at its respective ends and support said rails on their inner sides and the end sections will abut against the ends of the middle section below the rails and support the rails on their outer sides and be detachably connected to the middle section.

The invention will be fully described in the following specification and its novel features clearly defined in the subjoined claims.

In the drawings, Figure 1 is a perspective view of my improved metallic tie, showing portions of the track-rails in position. Fig. 2 is a vertical longitudinal section. Fig. 3 is an end view of one of the end sections. Fig. 4 is a similar view of the middle section. Fig. 5 is a perspective view of one of the end sections.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates the middle section of my improved cross-tie, the end portions 2 of which are provided with transverse extensions or widened laterally and each provided with a vertical projection 3, the outer vertical face of which is undercut to form a recess 4 to receive one side of the base of a track-rail 5, while the vertical face 6 will engage one side of the web of the rail, as clearly shown in Figs. 1 and 2. The vertical side 6 of the projection is preferably cored out, as indicated at 7, to reduce the weight of the section without impairing its strength. A rectangular recess 8 is formed in each end of the middle section 1, from which openings 9 lead outwardly to each side of the narrow portion of the section.

The end sections are indicated by 10 and each is provided with a vertical projection 11 at its inner end shaped similar to the projections 3, before described, and adapted to bear

against the outer sides of the rails 5 when the sections are secured together. Each end section is provided with a rectangular tongue 12, which extends horizontally from its inner end and is adapted to fit snugly in the recess 8 in the end of the middle section 1, with which said end section is adapted to be engaged. From the outer end of each tongue 12 two pins 13 project to extend through the openings 9, and these pins are threaded at their outer ends to receive the nuts 14, by means of which the sections will be firmly locked together, with the track-rails clamped between the middle section 1 and the respective end sections 10.

From the foregoing description it will be seen that the middle section projects partially below the track-rails at each end and supports the inner sides of the rails, while the end sections abut against the ends of the middle section below the track-rails and support the outer sides of the track-rails. It is also obvious that the end sections can be quickly attached to or detached from the middle section when desired. A cross-tie made in accordance with my invention will obviate the necessity of using spikes and will afford a very strong support and brace for the track-rails. By making it in sections, as described, the ties can be easily handled to be placed in position to support the rails or removed therefrom.

It will be understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

1. A metallic tie comprising a central section adapted to extend between and engage the inner faces of a pair of rails and provided with lateral extensions having openings, the end sections engaging the outer faces of the rails and provided with threaded pins extending through the openings of the lateral extensions, and nuts engaging the threaded pins and arranged at the inner edges of the lateral extensions, substantially as described.

2. A metallic cross-tie comprising a central section provided with lateral extensions having openings, the end sections provided with

threaded pins extending through the openings of the lateral extensions, nuts engaging the threaded pins and arranged at the inner edges of the lateral extensions, and the vertical projections 3 mounted on the sections and engaging the inner and outer faces of the rails, each projection being provided with vertical faces and recessed at 7 and undercut at 4 to provide recesses to receive the bottom flanges of the rails, substantially as described.

3. A metallic tie formed of three sections, the middle sections being adapted to extend between and partly below the track-rails and having its ends widened laterally and provided with vertical projections to engage the web of the respective rails on their inner sides and having also a recess in each end from which openings extend out to opposite

sides of the middle portion of the section, and the end sections being adapted to abut against the ends of the middle section below the rails and having vertical projections to engage the web of the respective rails of their outer sides, each end section having a tongue on its inner end to fit in the recess in the ends of the middle section, threaded pins extending from the tongue through the said openings, and nuts on the threaded pins, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN KLINE.

Witnesses:

BENJN. EVANS,
R. T. JOHNSON.