

No. 748,304.

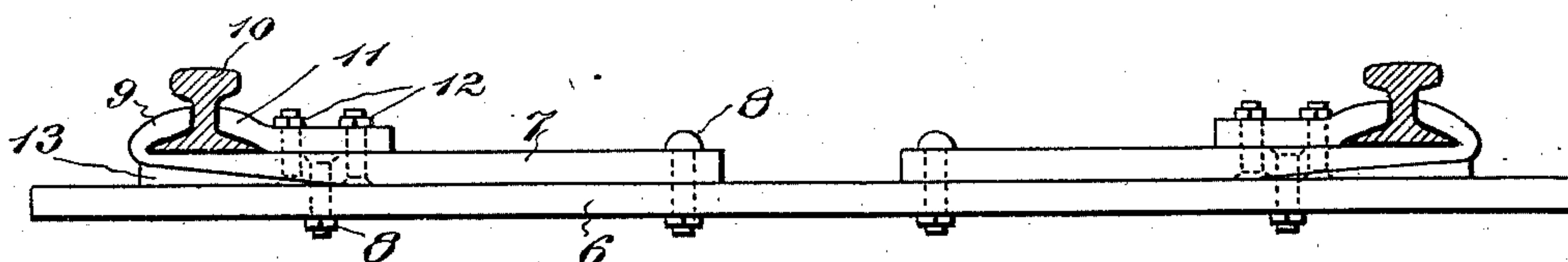
PATENTED DEC. 29, 1903.

J. F. OLIN & M. ALEXANDER.

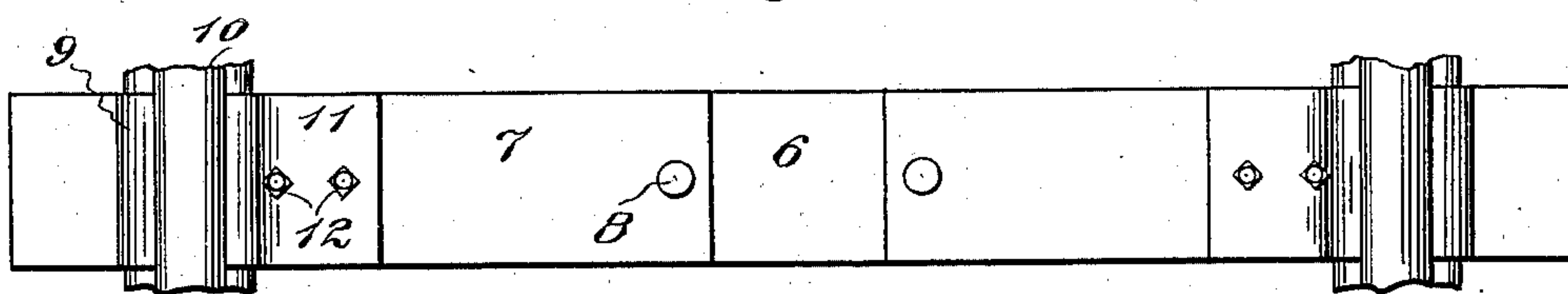
RAILROAD TIE.

APPLICATION FILED OCT. 1, 1903.

NO MODEL.



*Fig. 1.*



*Fig. 2.*

Witnesses

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# UNITED STATES PATENT OFFICE.

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## RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 748,304, dated December 29, 1903.

Application filed October 1, 1903. Serial No. 175,332. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN F. OLIN, residing at Lyman, and MALFORD ALEXANDER, residing at Lisbon, in the county of Grafton, State of New Hampshire, citizens of the United States, have invented certain new and useful Improvements in Railroad-Ties; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 figures of reference marked thereon, which form a part of this specification.

This invention relates particularly to metallic railroad-ties, and has for its object to provide an improved tie of that kind combined with means for attaching and holding the rails thereto without danger of spreading of the rail.

A further object is to form a tie with which the rail rests on a cushion to avoid pounding of the wheels and excessive wear on the rails at the ends thereof.

An embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the tie, and Fig. 2 is a plan view thereof.

Similar figures of reference indicate similar parts throughout both views.

Referring specifically to the drawings, the main piece of the tie is a metallic plate, (indicated at 6.) This is of the length of a common wood tie and is of sufficient width and thickness to give the requisite body and strength to hold the rails—say a width of seven inches and a thickness of one inch. To this main piece two metallic plates 7 are secured, as by bolts 8, extending through both of said parts, and said plates are turned up or hooked at the outer ends, as shown at 9, so that the end of the plate rests against the web of the rail 10, forming a rail-brace, and upon the top of the base of the rail, forming

a clip which holds the rail on one side. The rail is held and braced on the other side by clips 11, which rest against the web of the rail and upon the base thereof and which are secured to the plates 7 by bolts, as shown at 12.

At 13 rubber or wood pieces are indicated which are set in under the rails and between the plates 7 and the main plate 6. These rubber or wood sections are held in place by the pressure of the bolts 8 when the parts are tightened together and form cushions which yield to the slight extent sufficient to avoid the disagreeable pounding at the rail-joints incident to rigid ties.

The use of wooden ties and of spikes to attach the rails thereto and the expense incident to the frequent renewal and repair thereof are avoided by the use of the tie above disclosed, the parts of which are practically indestructible except the cushions, which can be readily renewed by loosening part of the bolts and slipping in new rubbers between the plates.

What we claim as new, and desire to secure by Letters Patent, is—

1. A railroad-tie, comprising a single metallic base-plate, two rail-plates bolted thereto, on which the rails rest, and having outer ends hooked over the base of the rails, clips bolted to said plates and engaging the base of the rail on the other side, and cushions between the base-plate and the rail-plates.

2. A railroad-tie, comprising a metallic base-plate, two metallic rail-plates fastened thereto, having integral clips and rail-braces engaging the outside of the rails and removable clips engaging the inside of the rails, and rubber cushions between the base-plate and the rail-plates.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN F. OLIN.

MALFORD ALEXANDER.

Witnesses:

A. A. WOOLSON,

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