

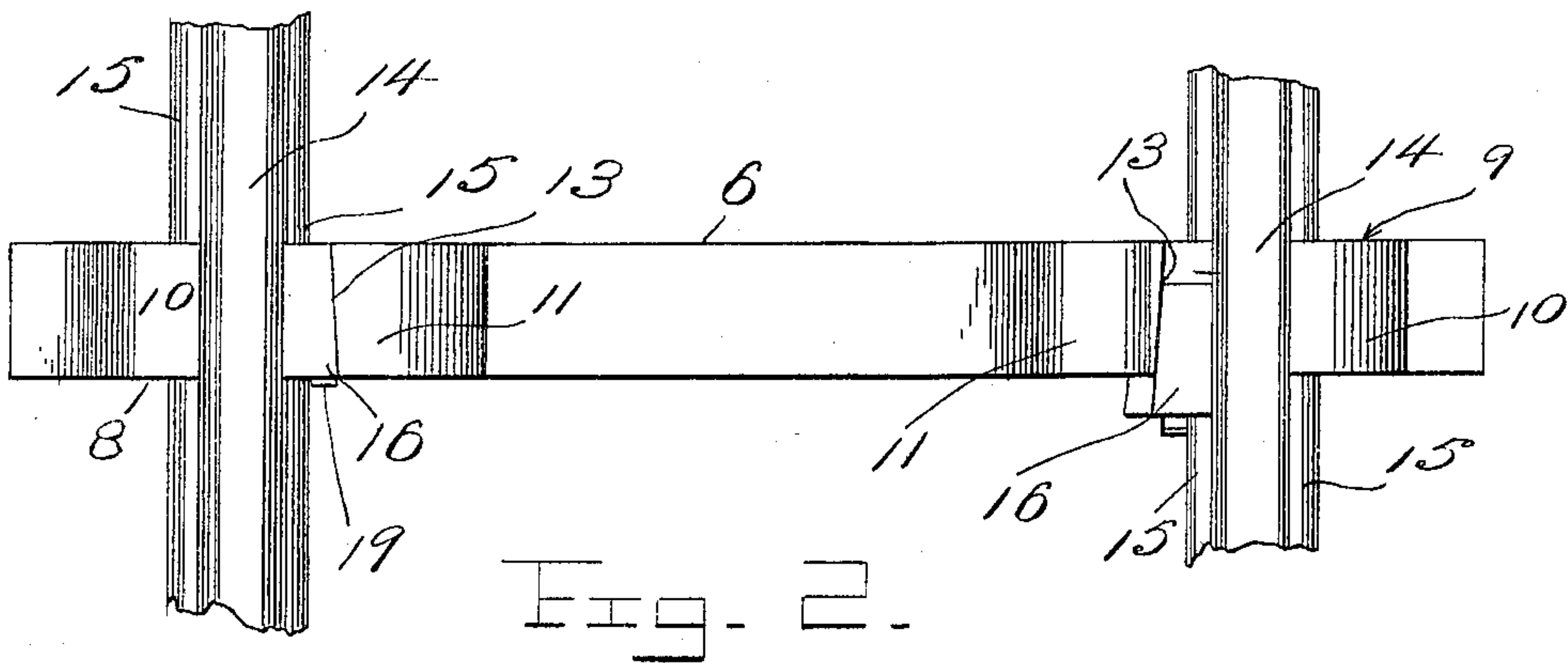
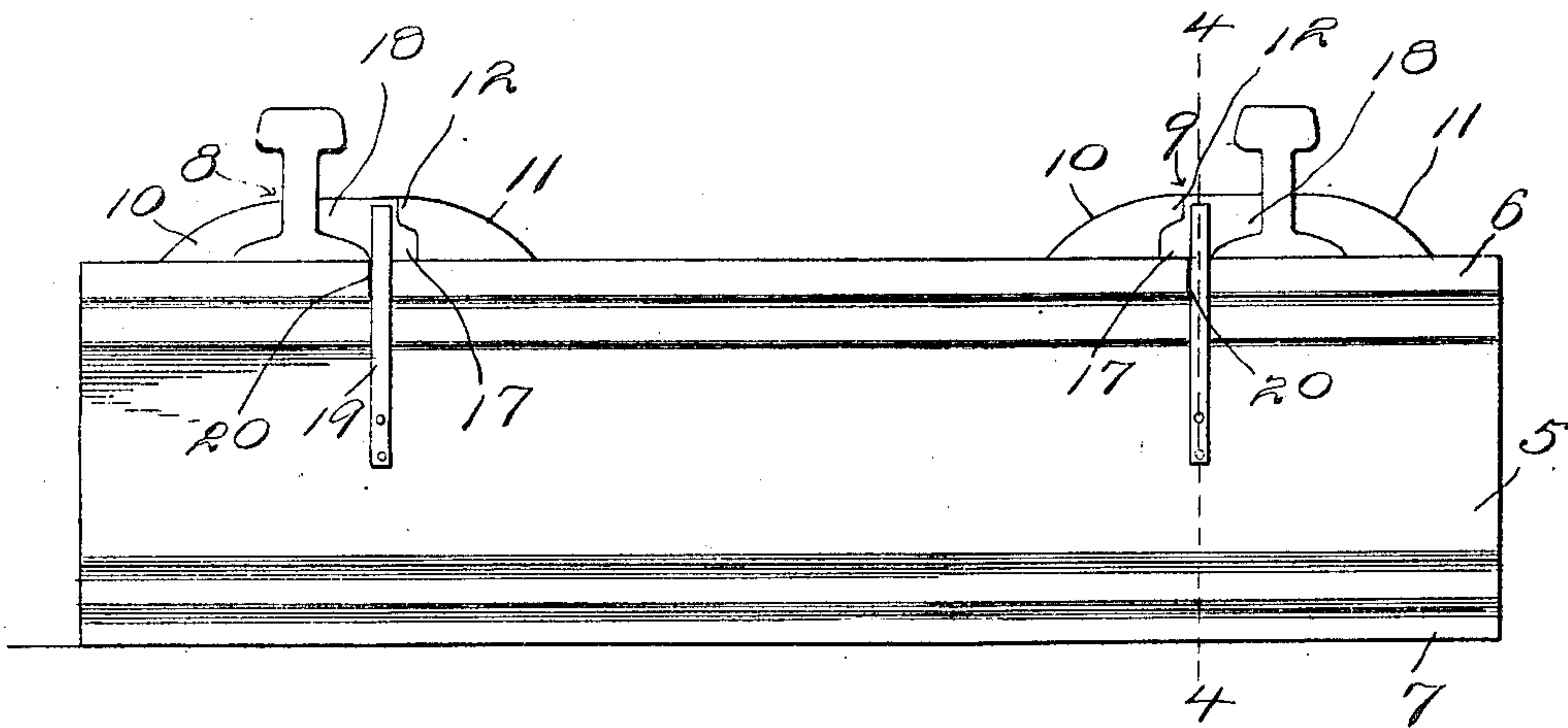
No. 804,166.

PATENTED NOV. 7, 1905.

R. M. ORR.  
RAILWAY TIE.  
APPLICATION FILED JUNE 10, 1905.

2 SHEETS-SHEET 1.

Fig. 1.



Witnesses  
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2 SHEETS—SHEET 2.

Fig. 3.

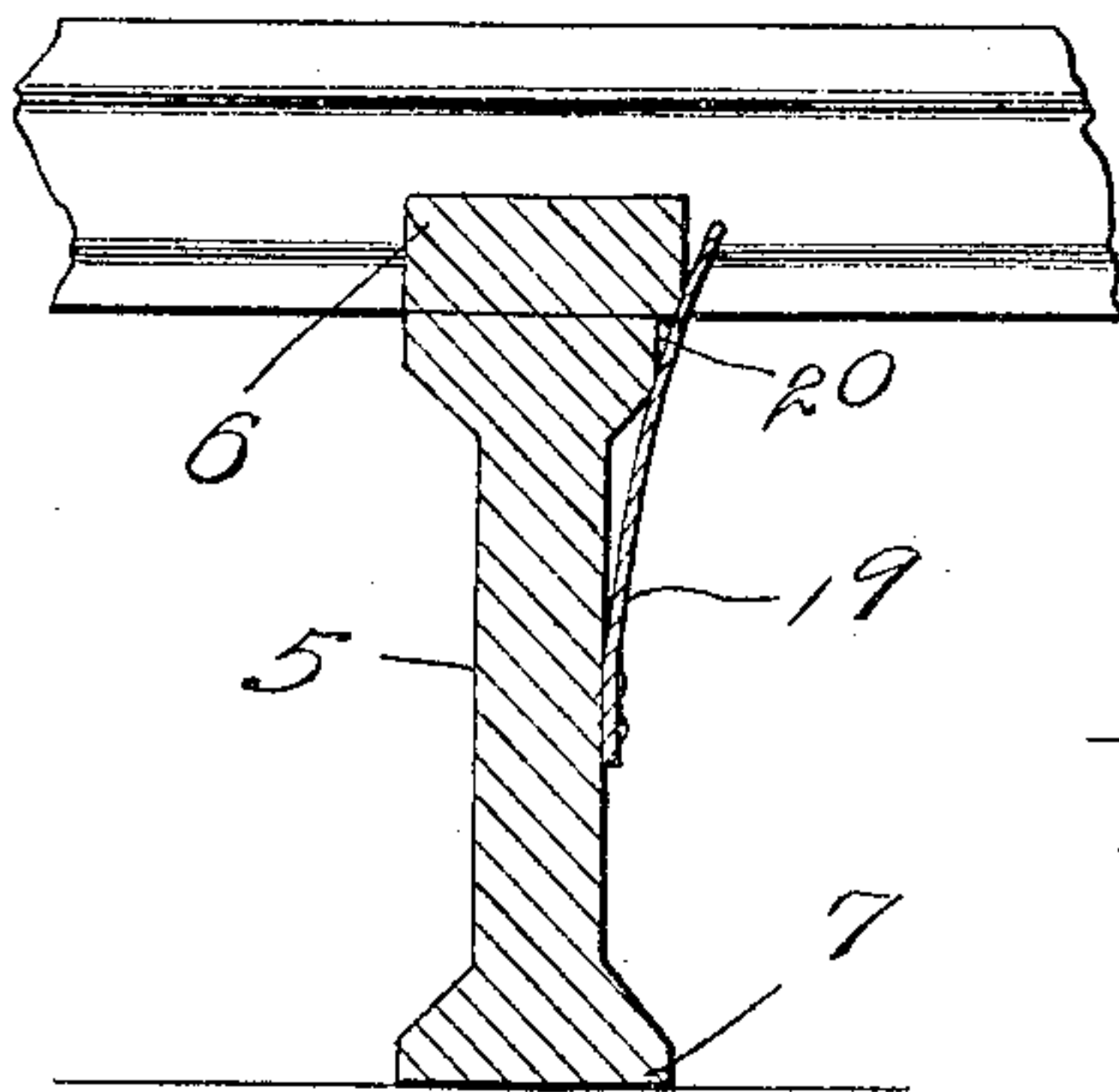
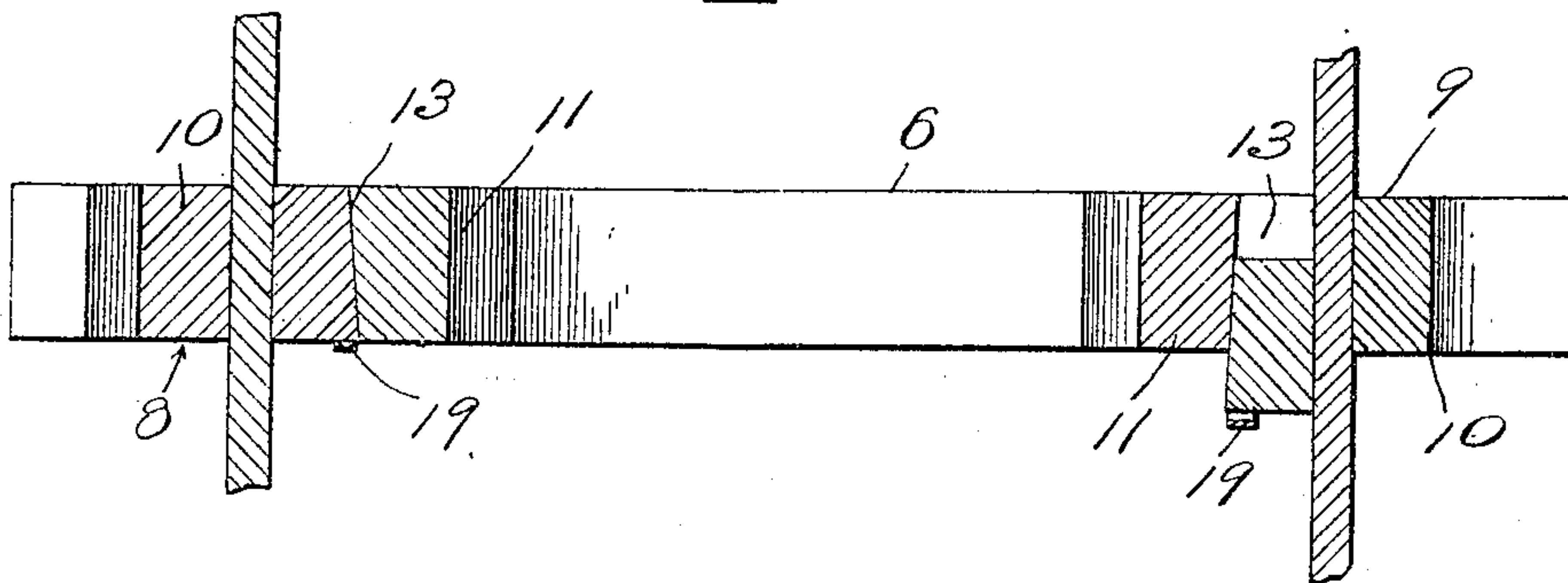


Fig. 4.

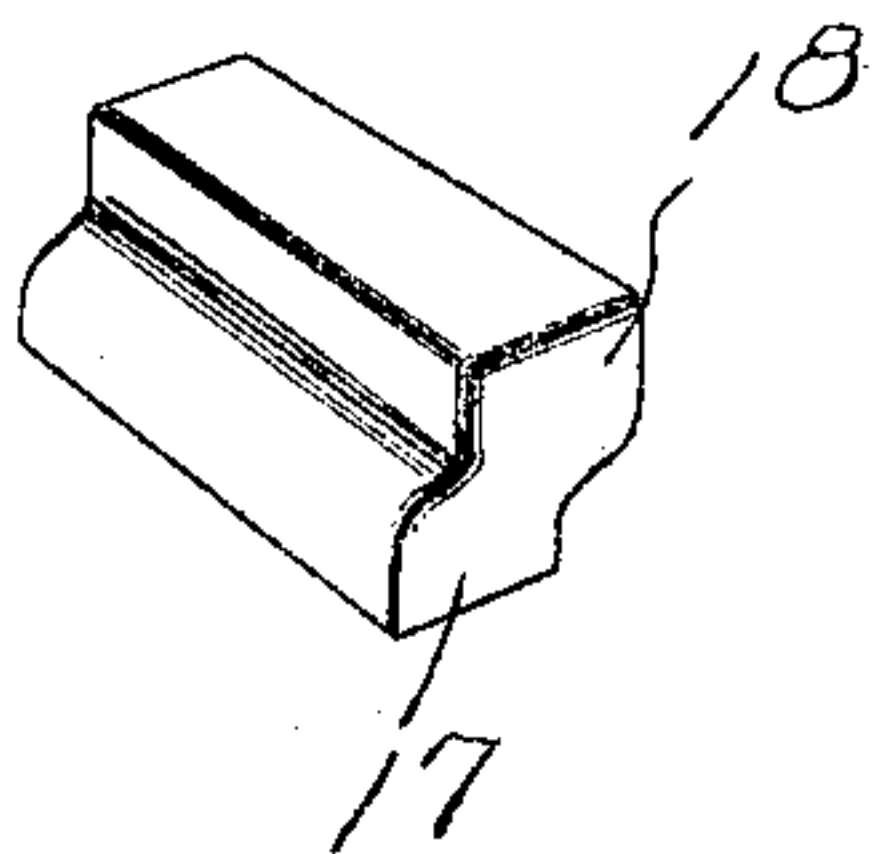


Fig. 5.

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# UNITED STATES PATENT OFFICE.

ROBERT M. ORR, OF VANDERGRIFT HEIGHTS, PENNSYLVANIA.

## RAILWAY-TIE.

No. 804,166.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed June 10, 1905. Serial No. 264,638.

*To all whom it may concern:*

Be it known that I, ROBERT M. ORR, a citizen of the United States, residing at Vandergrift Heights, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties; and I 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.

This invention relates to railroad-tracks, and more particularly to ties therefor, and has for its object to provide a metallic or other non-fibrous tie which will be provided with means for attaching rails thereto without the use of spikes, screws, or similar devices, this attaching means being so arranged that the rails may be quickly placed in position and removed.

Another object is to provide a tie of the above-described nature which may be manufactured at a low figure.

Other objects and advantages will be apparent from the following description, and it will be understood that changes in the specific construction shown and described may be made within the scope of the claims and that any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the present tie, showing rails in position thereupon. Fig. 2 is a top plan view of the structure shown in Fig. 1. Fig. 3 is a horizontal section through the structure in a plane slightly above the upper face of the body of the tie. Fig. 4 is a section on line 4 4 of Fig. 1. Fig. 5 is a detail view of the key.

Referring now to the drawings, the present tie comprises a body portion including a central vertical web 5 and top and bottom flanges 6 and 7, respectively. Secured to the top flange 6, adjacent to the ends thereof, there are pairs of spaced rail-receiving members 8 and 9, respectively, the members of each pair being indicated at 10 and 11. These members have inwardly-directed flanges 12 at the upper portions of their mutually-adjacent faces, and the inner face of the member 11 of each pair is slanted with respect to the inner face of the member 10 to give the space 13 between the members a minor and a major end.

Rails 14, having the usual base-flanges 15, are disposed in the spaces 13 against the members 10, the flanges 12 of the members 10 extending over one of the base-flanges 15 of each rail, and keys 16 are engaged in the spaces 13 between the rails and the members 11, these keys having oppositely-directed flanges 17 and 18 at their tops and bottoms, respectively, which extend horizontally, the flanges 18 projecting over the base-flanges of the rails, while the flanges 17 extend beneath the flanges 12 of the members 11. The sides of the keys which rest against the members 11 are slanted to conform to the slant of these members, and spring-plates 19 are secured to the web 5 of the tie at their lower ends and rest at their upper free ends against the major ends of the keys 16, which lie at the major ends of the spaces 13, as will be readily understood. The spring-plates are sufficiently resilient to permit of movement of their upper ends away from the keys, so that the latter may be withdrawn, and when the springs are in their normal position they lie in engagement with notches 20, formed in the top flange 6 of the tie to hold the springs against lateral displacement.

What is claimed is—

1. In a railroad-tie the combination with a body portion, of spaced rail-receiving members located upon each end and having inwardly-directed flanges at their upper portions, the inner face of one of the members being slanted with respect to the other member to give the space between the members a minor and a major end, a rail having a base-flange disposed with said flange beneath the flange of the unslanted member, a key having a slanted face disposed between the rail and the slanted member and having flanges engaged respectively over the base-flange of the rail and beneath the flange of the slanted member and means operating against the major end of the key to hold the latter yieldably in position.

2. In a railroad-tie the combination with a body portion, of spaced rail-receiving members located upon each end and having inwardly-directed flanges at their upper portions, the inner face of one of the members being slanted with respect to the other member to give the space between the members a minor and a major end, a rail having a base-flange disposed with said flange beneath the flange of the unslanted member, a key having

a slanted face disposed between the rail and the slanted member and having flanges engaged respectively over the base-flange of the rail and beneath the flange of the slanted member,  
5 and a spring-plate secured to the body portion of the tie at its lower end and resting at its upper end against the major end of the key to hold the latter yieldably in operative position, said body portion having a notch in

which the spring-plate is received to hold said tie plate against lateral displacement.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT M. ORR.

Witnesses:

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