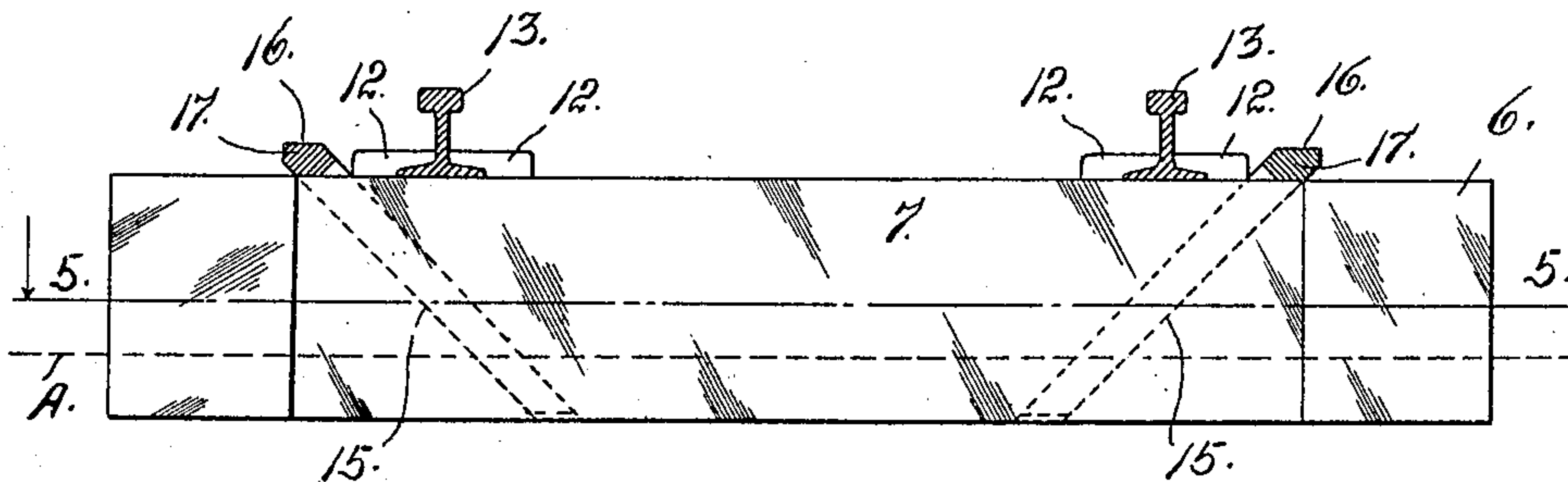
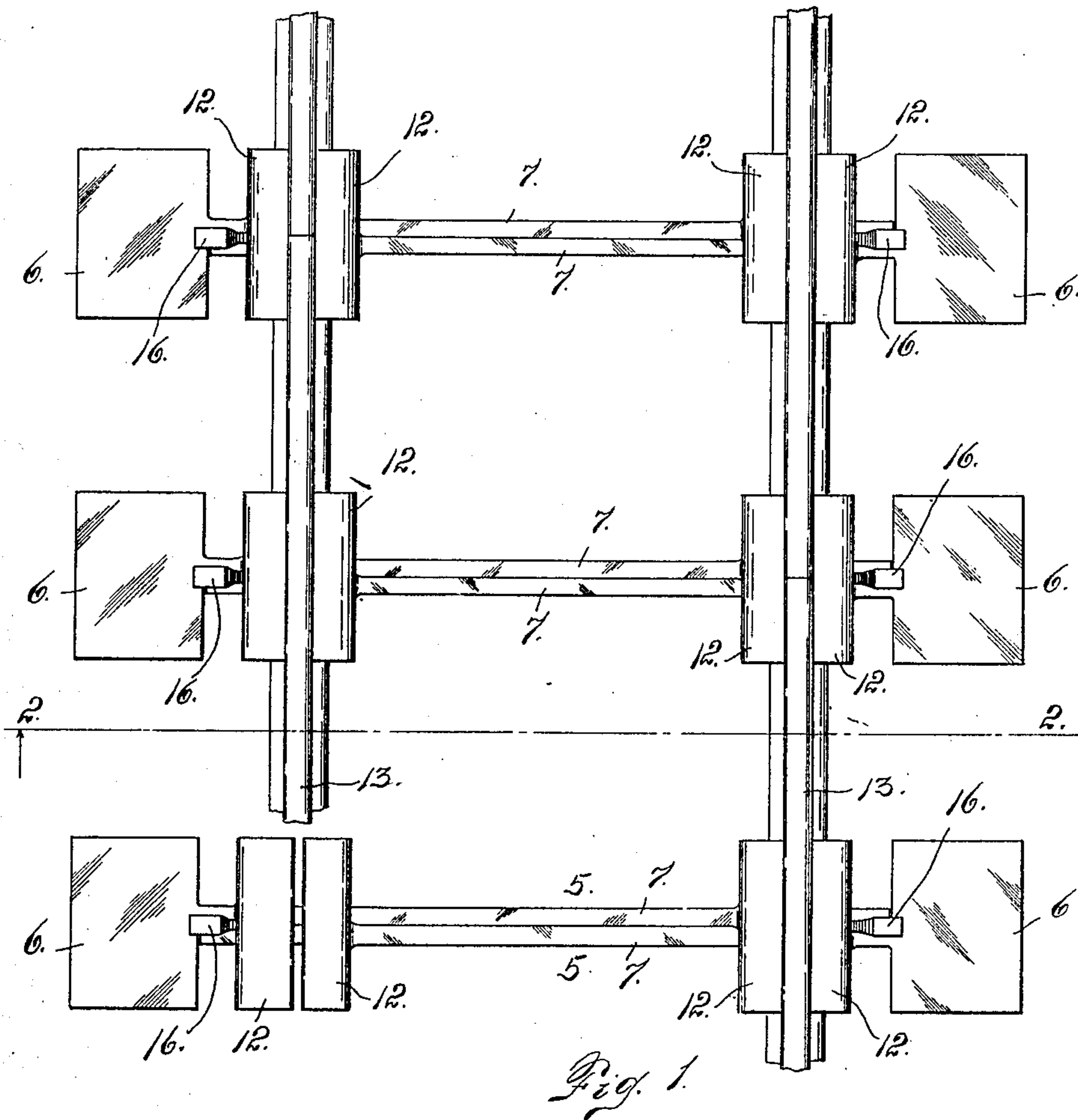


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METAL RAILWAY TIE.
APPLICATION FILED FEB. 28, 1908.

912,920.

Patented Feb. 16, 1909.

2 SHEETS—SHEET 1.



Witnesses
J. D. Thornburgh.
Otto E. Hoddick.

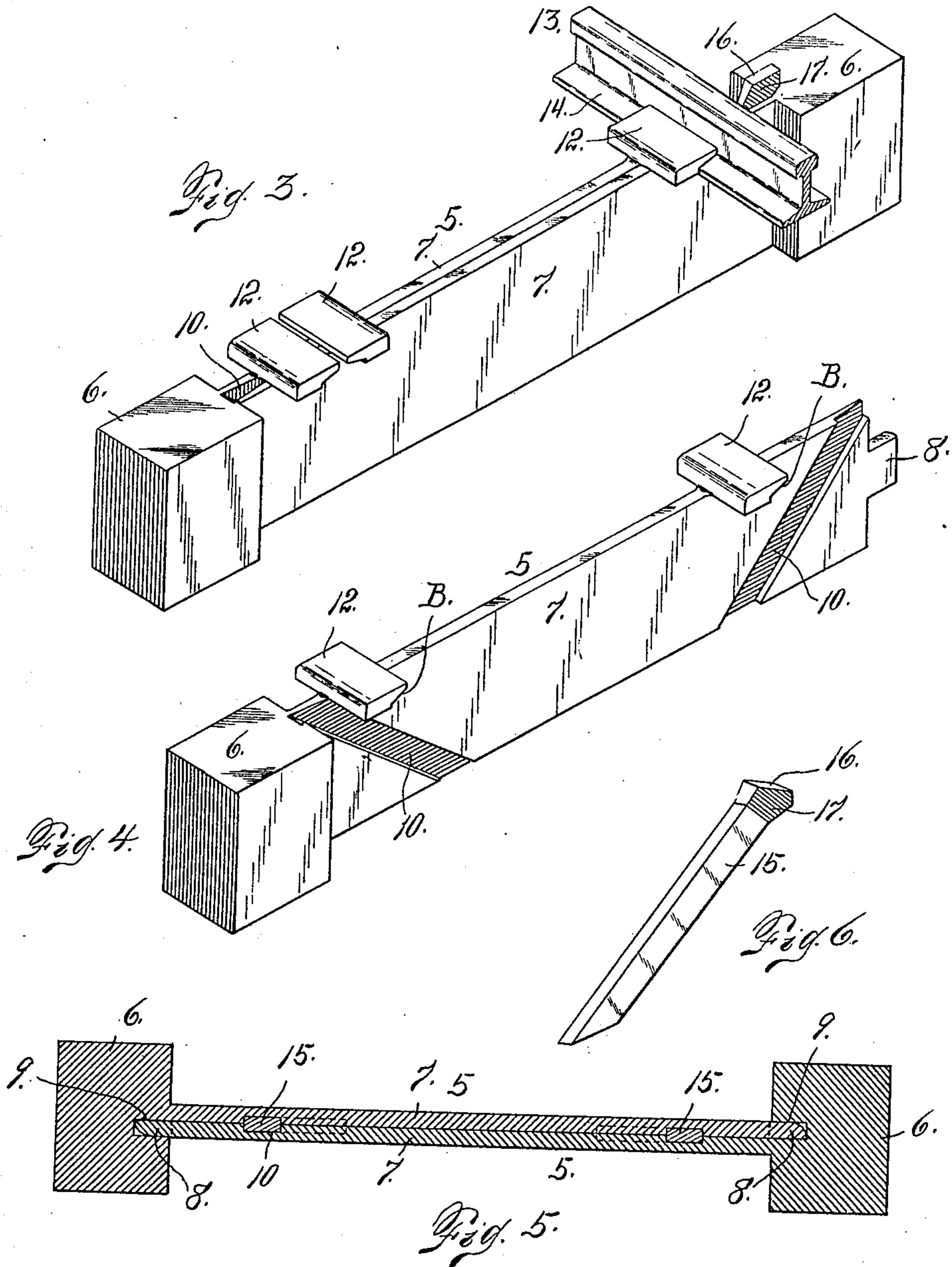
Inventor
Frank Timmons.
By A. J. D. [Signature]
Attorney

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UNITED STATES PATENT OFFICE.

FRANK TIMMONS, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF TO VICTOR E. DAVIS,
OF DENVER, COLORADO.

METAL RAILWAY-TIE.

No. 912,920.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed February 28, 1908. Serial No. 418,243.

To all whom it may concern:

Be it known that I, FRANK TIMMONS, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Metal Railway-Ties; and I do 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 letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in metal railway ties, my object being to provide a construction of this class which shall do away with the necessity for bolts and spikes.

Ordinarily the rails are secured to the ties by the use of spikes, while the rail joints are formed by the use of fish plates and bolts. In my improved construction the tie is composed of two members and devices for holding the rails in place are formed integral with the said members. These consist of plates which overlap the flange of the rail wherever the ties are located and they take the place both of the ordinary fish plates and also the place of spikes for securing the rails to the ties.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a top plan view of a section of track showing a number of my improved ties in place. Fig. 2 is a section taken on the line 2—2 Fig. 1. Fig. 3 is a perspective view of one of my improved ties, showing a piece of rail in position and one of the locking keys in place, the other being removed. Fig. 4 is a perspective view of one of the tie members. Fig. 5 is a section taken on the line 5—5 Fig. 2. Fig. 6 is a perspective view of one of the keys employed in locking the tie members together.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate each of two substantially similar twin coöperating members. Each of these members is provided at one extremity with an enlargement 6, the

body of the member beyond this enlarged extremity consisting of a relatively thin plate 7 provided at its extremity opposite the enlargement 6 with a tongue 8 adapted to enter a socket 9 formed in the head 6 of the other member. Each member is also provided with two inclined grooves 10. Each of these grooves extend from the extremity of the plate 7 and is directed inwardly as it extends downwardly, both extremities being open. The plate 7 of each member is also provided with two plates 12 adapted to overlap the flanges 14 of the rails 13.

When the two members are assembled, the grooves 10 in each member coincide as to position with the corresponding grooves of the other member thus forming openings adapted to receive locking keys 15 which lock the tie members in the assembled relation and prevent any longitudinal movement until the keys are removed. Consequently when the keys are in place, the tongues 8 of the plates 7 are maintained in engagement with the recesses 9 of the heads 6. The grooves 10 of each member and consequently the openings formed by the two sets of grooves when the members are assembled, are slightly wedge-shaped being larger at their upper extremities and tapering as they extend downwardly. The keys 15 are of counterpart shape, whereby there is always a tendency for the keys to move downwardly under the influence of the vibration to which the ties are subjected. This prevents the keys from escaping at either extremity of the openings in which they are located. The keys are slightly enlarged at their upper extremities as shown at 16 and these heads are inwardly beveled on opposite sides as shown at 17, to facilitate their removal by use of a suitable tool having jaws adapted to grasp the head of the key on opposite sides. When the ties are in use, they are preferably embedded in the ground a short distance, the depth being indicated by the dotted line A in Fig. 2. They are located at suitable intervals. When the two members of each tie are assembled, the plates 12 which are beveled on their rail-engaging edges as shown at B, overlap the flanges of the rails on opposite sides and tightly engage the said rails after the locking keys are placed in position and the rails can

never become loose, since the keys have a tendency to move downwardly by virtue of their wedge shape.

Having thus described my invention, what I claim is:

1. A railway tie composed of two substantially similar members, each having a recessed head at one extremity and a tongue at its opposite extremity, the tongue of each member being adapted to enter the recess in the head of the other member, each member having inclined grooves, the grooves of the two members coinciding as to position when the members are assembled, and locking keys adapted to enter the openings formed by the grooves of the assembled members, the members being provided with plates adapted to overlap the flanges of the rails on opposite sides when the members are assembled, substantially as described.

2. A metal railway tie composed of two members, each member having a recessed head at one extremity and a tongue at its opposite extremity, the tongue of each member being adapted to enter the recess in the other member, each member having inclined grooves which coincide as to position with

grooves formed in the other member, the said grooves forming wedge-shaped openings, and keys of counterpart shape adapted to enter said openings, substantially as described.

3. A metal railway tie composed of two members, each member having a recessed head at one extremity and a tongue at its opposite extremity, each member also having inclined grooves which coincide as to position with the grooves formed in the other member, and keys adapted to enter the openings formed by the grooves when in the assembled position, substantially as described.

4. A metal railway tie composed of two interlocking members each member having formed therein inclined grooves, and locking keys adapted to enter the openings formed by the grooves when said members are assembled, substantially as described.

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

FRANK TIMMONS.

Witnesses:

VICTOR E. DAVIS,
DENA NELSON.