

No. 760,336.

PATENTED MAY 17, 1904.

E. A. JACOBY.
RAILROAD TIE.

APPLICATION FILED NOV. 24, 1903.

NO MODEL.

Fig. 1.

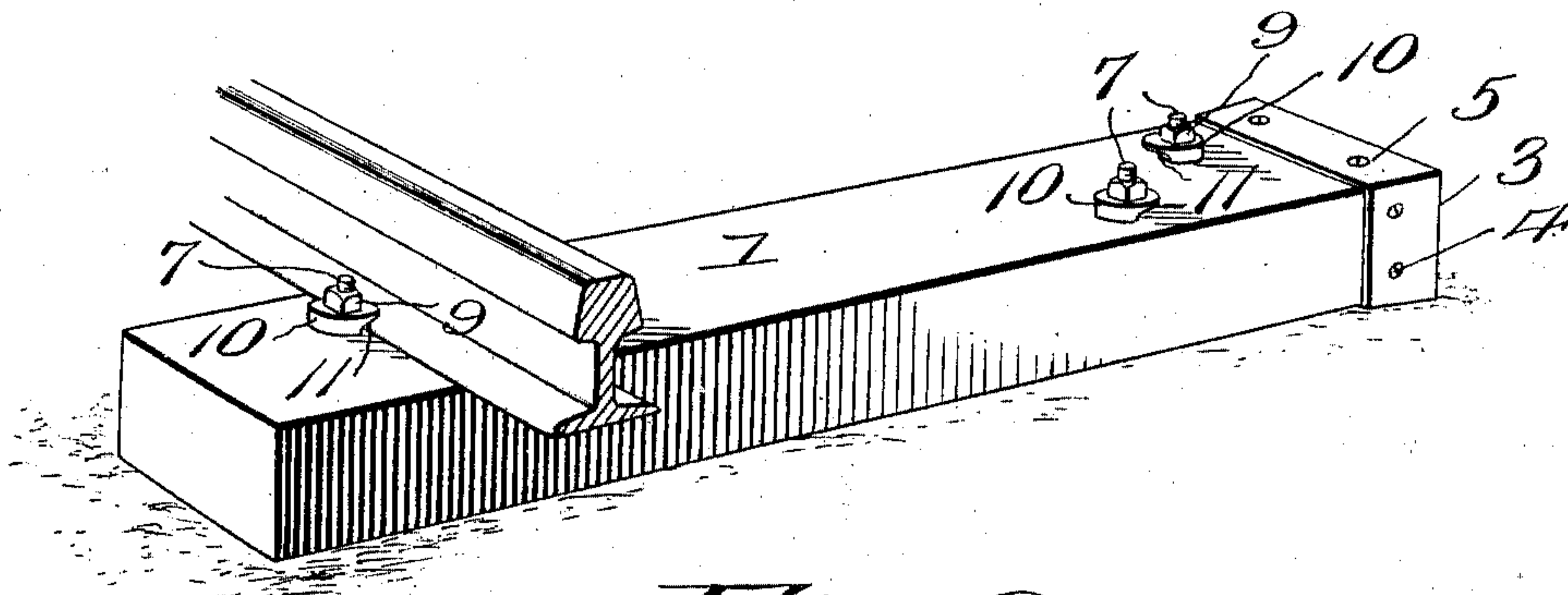


Fig. 2.

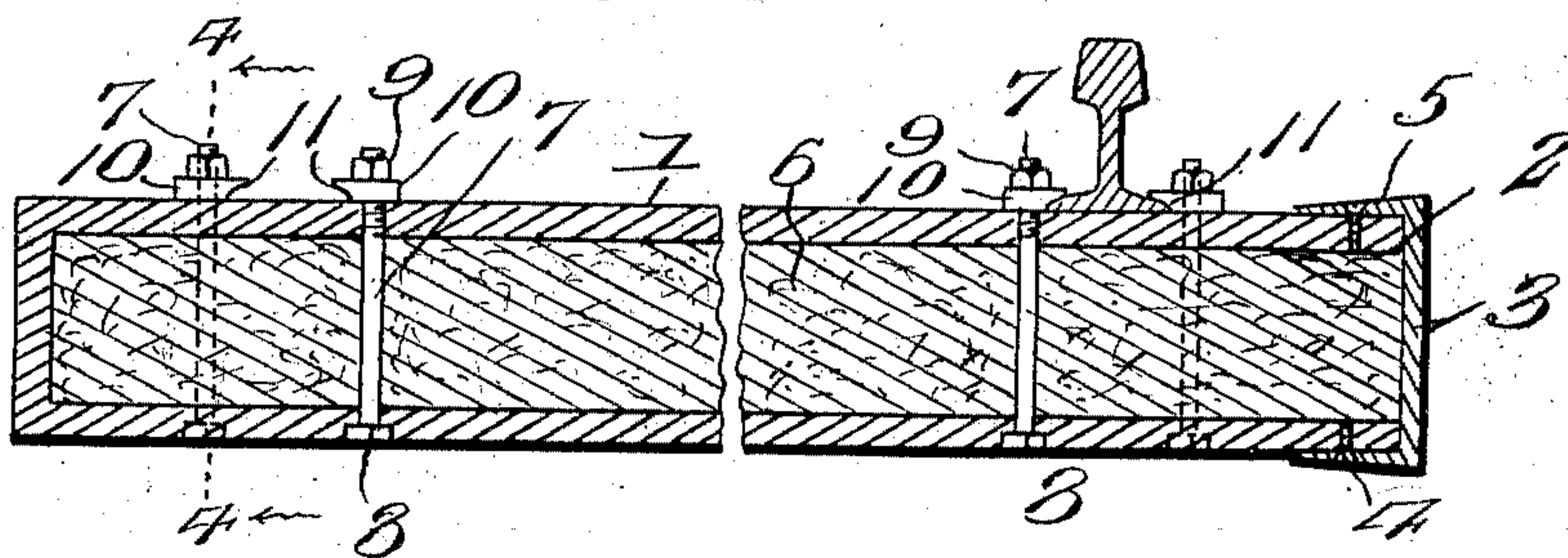


Fig. 3.

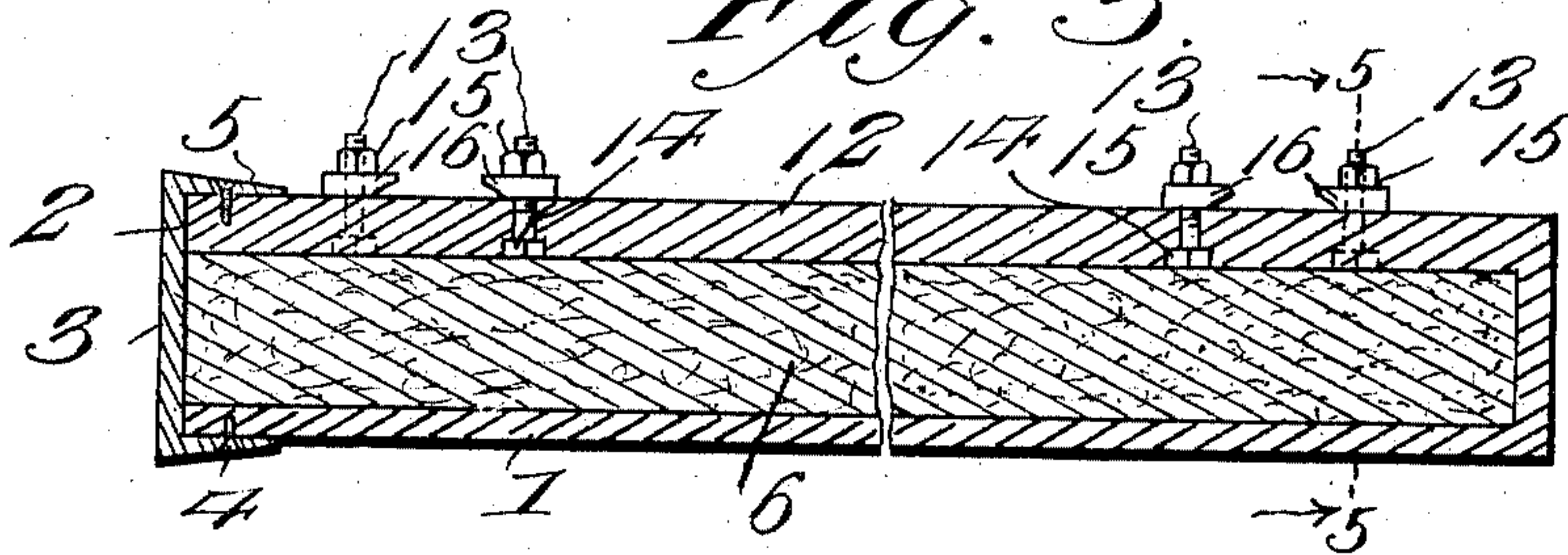
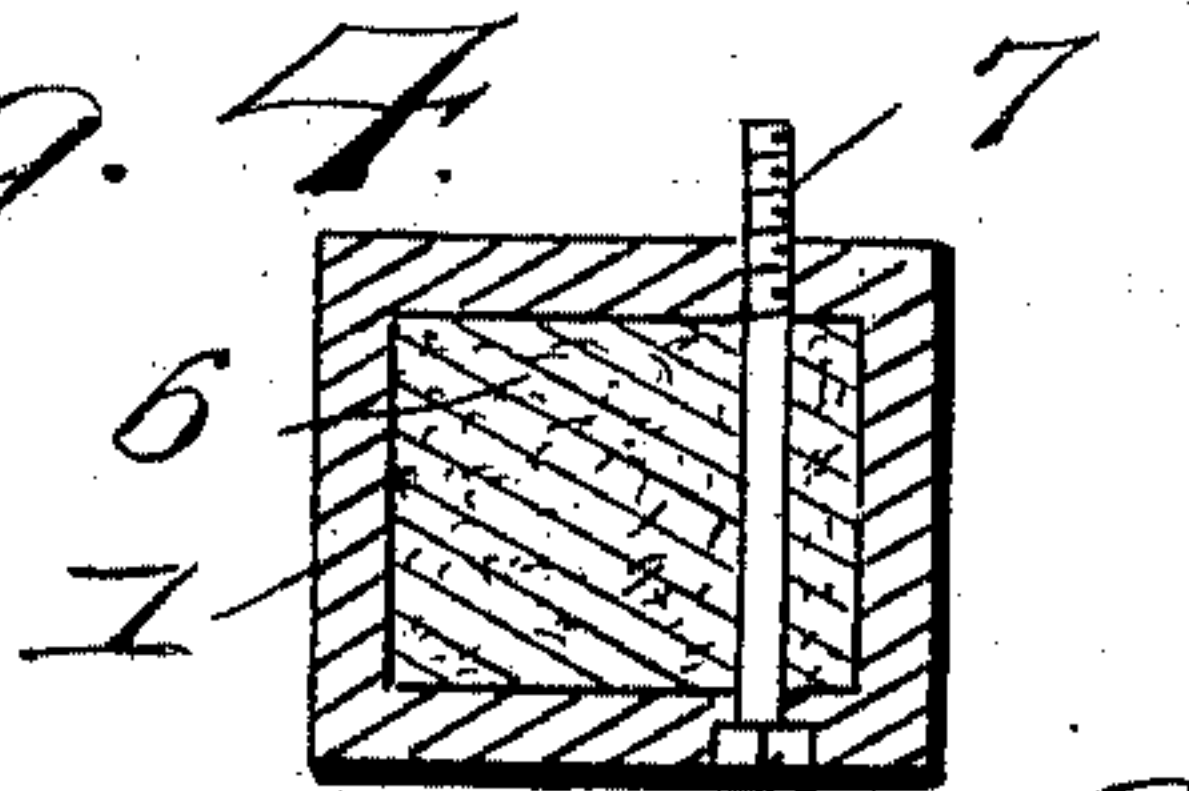


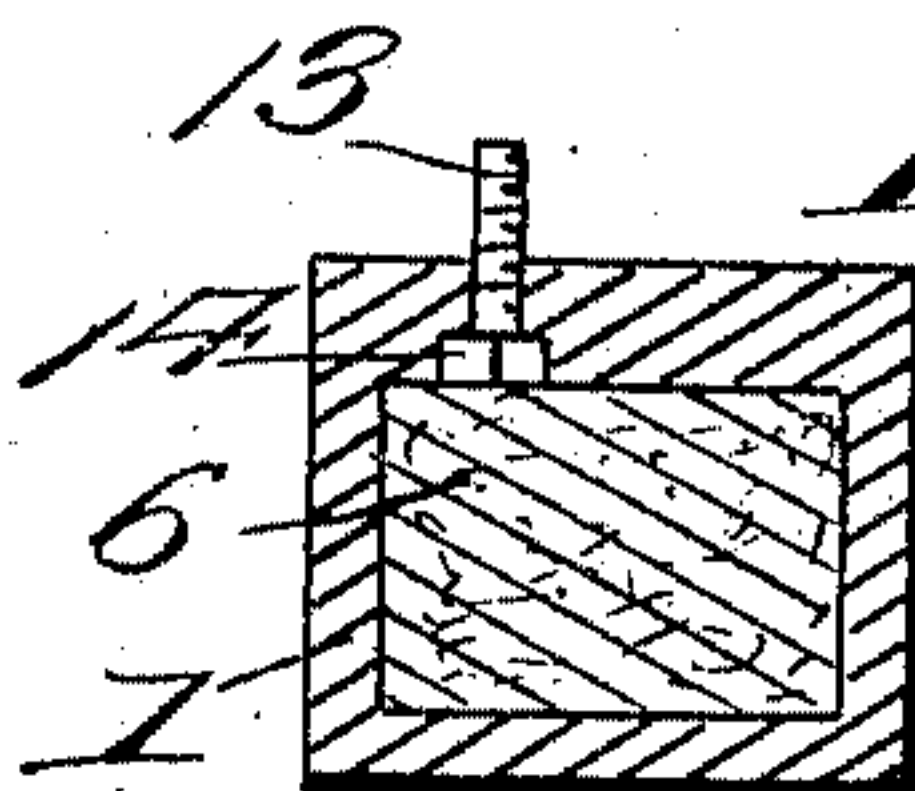
Fig. 4.



Witnesses.

Wm. D. Barth.
Chas. S. Hoyer.

Fig. 5.



Inventor

E. A. Jacoby,

334

Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

ELMER A. JACOBY, OF PENNSBURG, PENNSYLVANIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 760,336, dated May 17, 1904.

Application filed November 24, 1903. Serial No. 182,480. (No model.)

To all whom it may concern:

Be it known that I, ELMER A. JACOBY, a citizen of the United States, residing at Pennsburg, in the county of Montgomery and State of Pennsylvania, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to railroad-ties, and has for its object to provide a simple and effective device of this class of a strong, durable, and indestructible nature composed, preferably, of non-combustible material, the cost of manufacture of the tie being reduced to a minimum and embodying in connection therewith securing means for holding rails firmly in place thereon.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter set forth.

In the drawings, Figure 1 is a perspective view of a tie embodying the features of the invention and showing a portion of one rail secured thereon. Fig. 2 is a longitudinal vertical section of the tie as shown by Fig. 1. Fig. 3 is a longitudinal vertical section of the tie embodying a modification. Fig. 4 is a transverse vertical section on the line 4 4, Fig. 2. Fig. 5 is a transverse vertical section on the line 5 5, Fig. 3.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates the tie-body, which is formed of suitable metal—such as steel, wrought, galvanized, or cast iron—and consists of a metal shell having one end, the opposite sides, and the top and bottom of integral construction, the opposite end 2 being open and adapted to be closed by an integral cap 3, which is fitted thereover and secured in place by fastening-screws or analogous devices 4. The flanges 5, embracing the open end of the body of the tie, are reduced by inwardly inclining the same to avoid material obstruction or the formation of enlarged shoulders at the point where the cap is secured to the tie. The tie is provided with a filling 6 of asphalt, cement, concrete, pulp of corn-stalks, wood, or other pulp made from any substance, or such filling may be a combina-

tion of the above-mentioned materials. The filling 6 will be packed solidly in the tie and practically form a homogeneous mass, which will serve to add strength to the tie and also in the use of some materials lighten the same. After the filling is inserted in the tie the cap 3 is disposed over the open end 2 and secured, thus forming a practically fireproof device of this class.

The improved tie embodies two means of fastening the rails thereon, the first means consisting of a pair of bolts 7, arranged in staggered relation adjacent to each end of the tie and having their heads 8 embedded in the bottom or face of the tie-body. The upper extremities of these bolts are screw-threaded to receive securing-nuts 9, which hold clip-washers 10 in close contact with the upper surface of the top of the tie-body. The inner opposing edges of the clip-washers 10 are upwardly and outwardly inclined to provide clamping edges 11, adapted to take over the opposite portions of the base-flange of a rail to hold the latter in immovable position on the tie. By loosening the nuts 9 the clip-washers 10 can be turned so as to move the clamping edges 11 thereof in outward directions with respect to the flange of a rail to be secured, and the rail may then be placed between the said washers and the latter afterward turned to cause the clamping edges 11 thereof to engage the base-flange of the rail. After the clip-washers are caused to engage with the rail-flange they are secured by tightening the nuts 10.

The second or modified form of the rail-fastening used in connection with the improved tie is illustrated by Figs. 3 and 5, and in this instance the tie is in all respects similar in construction to that shown by Figs. 1, 2, and 4, with the exception that the top 12 is materially thickened to provide a stable support for short bolts 13, arranged similarly to bolts 7 and having their heads 14 embedded in suitable recesses in the under side of the top 12. The upper ends of the bolts 14 are engaged by nuts 15 and clip-washers 16, similar to those heretofore set forth.

The bolts 7, as will be understood and clearly shown, pass through the filling 6 of the tie

and may be disposed in operative position after the tie is completed. The bolts 13 are placed in position in the top 12 of the tie before the filling 6 is inserted in the latter. In
5 some instances both ends of the tie may be open and provided with a cap similar to that set forth on one end, and it is preferred that the tie having only one end open be used, as time will be saved in the completion of the
10 same.

One of the main advantages of the improved tie, aside from the general integral construction of the latter, is the disposition of the rail-fastenings so that the screw-threaded ends of
15 the bolts will be exposed at the top of the tie and adapt a rail to be quickly applied without disturbing the position of the tie or as readily removed.

Changes in the proportions, dimensions, and
20 minor details may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. A hollow tie, having one end, the oppo-
25 site sides, and the top and bottom integrally

formed, a filling within the tie, and a cap fitted over and closing the opposite end.

2. A hollow tie, having one end, the opposite sides, and the bottom continuous with each other, a filling within the tie, a cap fitted over
30 and closing the opposite end, bolts projecting upwardly through the top of the tie and having secured thereto terminals, the said bolts having lower annular heads embodied in a part of the tie, nuts on the said terminals,
35 and rail-securing clip-washers interposed between the nuts and the top of the tie over the bolts, the said washers having reduced edges to engage rail-flanges, the bolts individually fastened through the centers of the clip-wash-
40 ers and the nuts on the said bolts forming the sole means of securing the washers in immovable position.

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

ELMER A. JACOBY.

Witnesses:

CHARLES K. MESCHTER,
H. W. KRIEBEL.