

(No Model.)

A. G. BUDINGTON.  
RAILWAY TIE.

No. 464,424.

Patented Dec. 1, 1891.

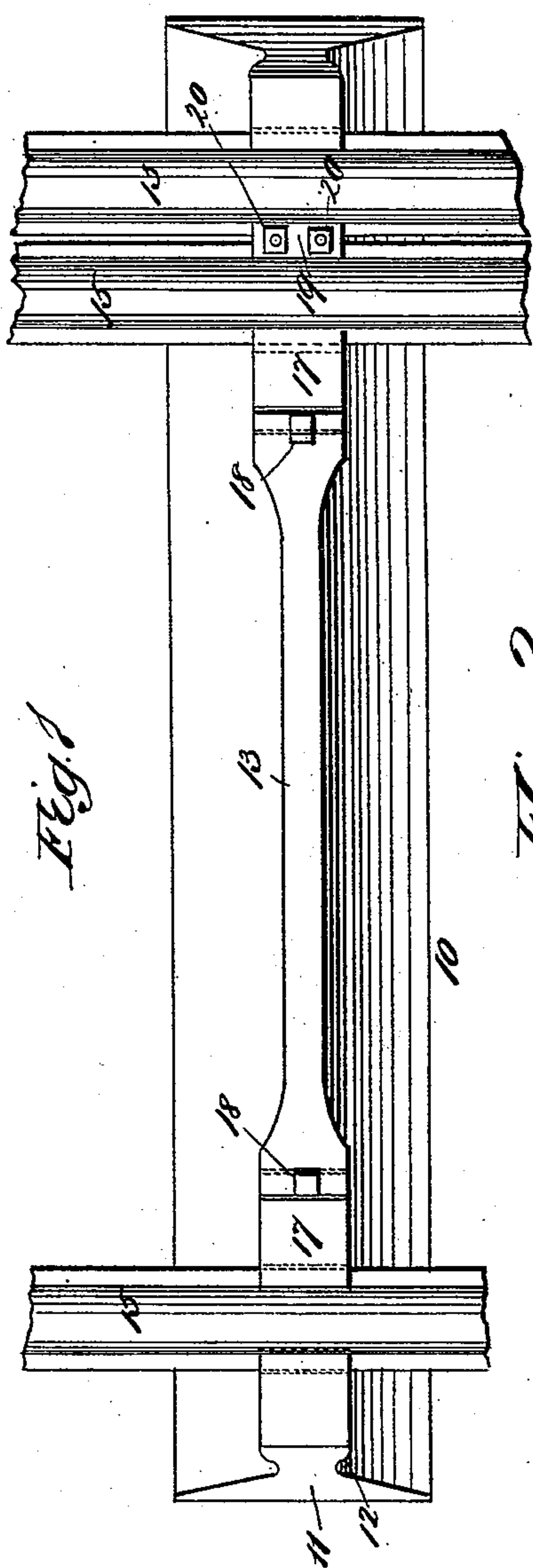


Fig. 1

Fig. 2.

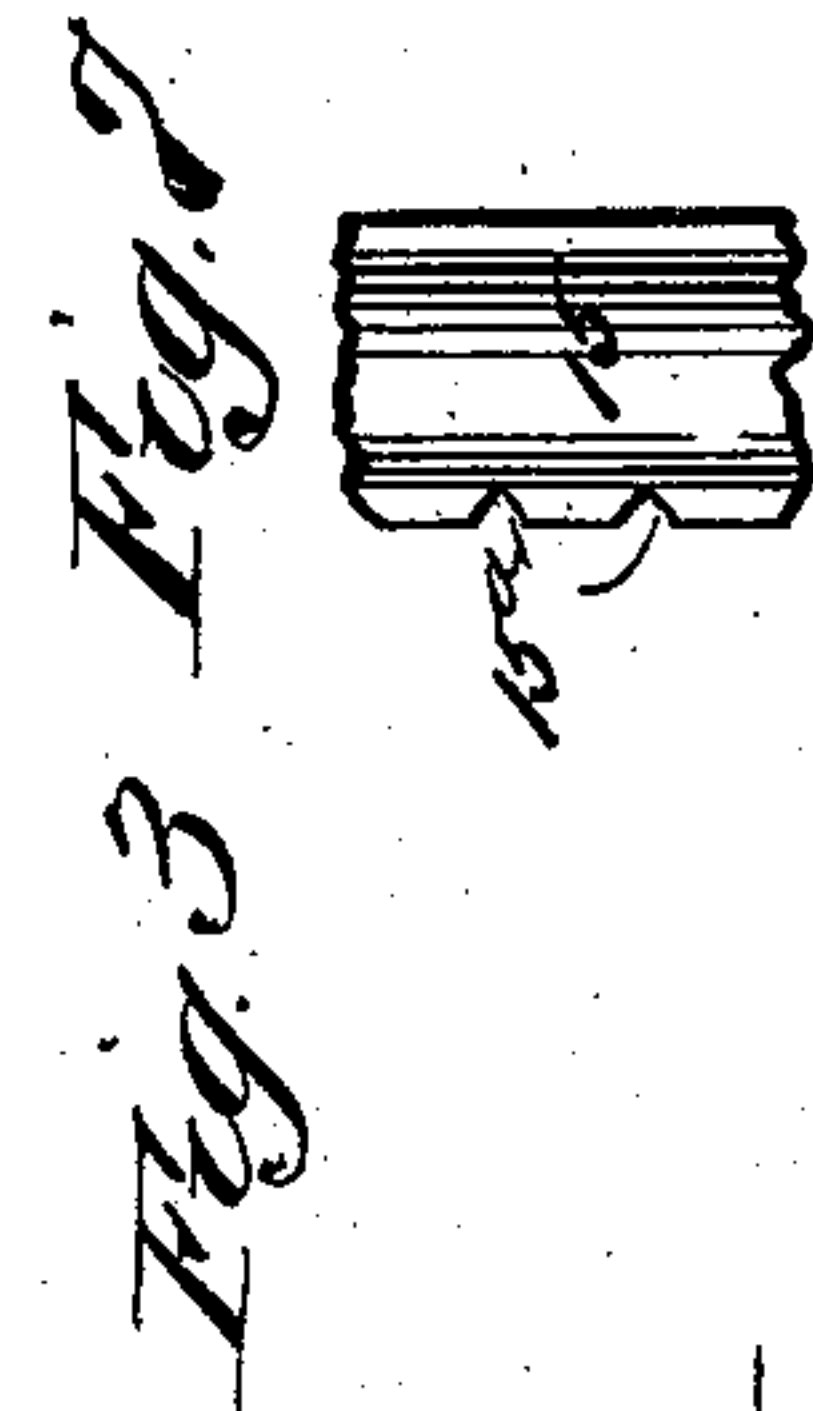
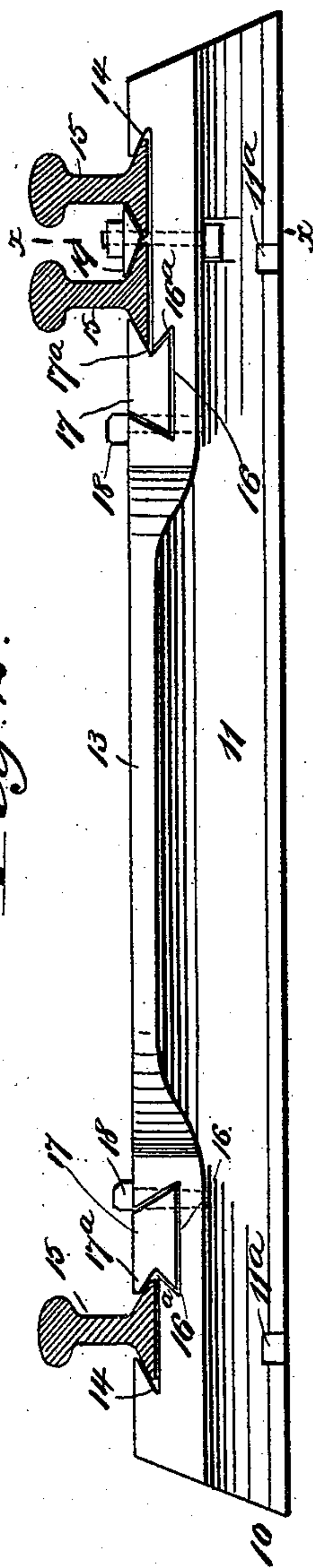


Fig. 3

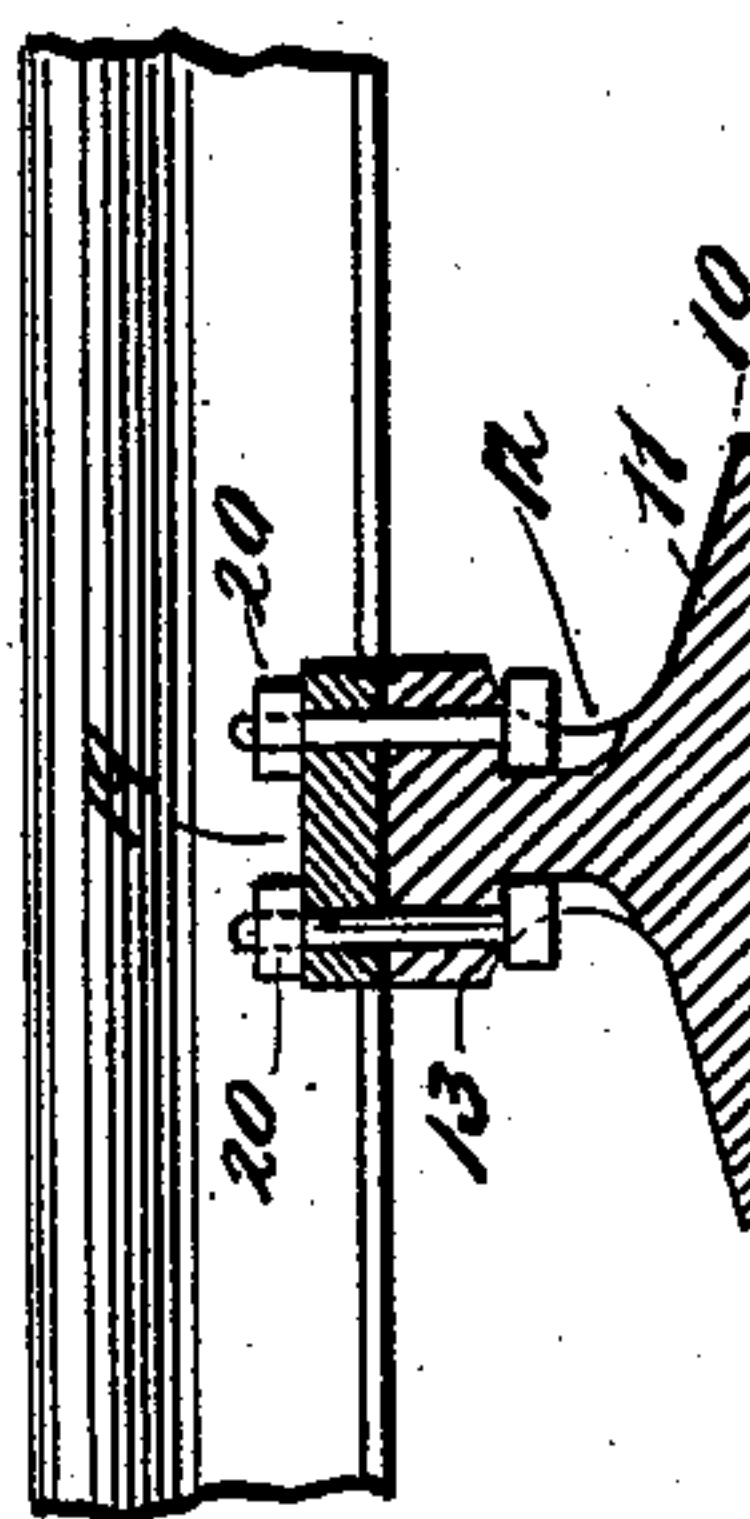


Fig. 4



Fig. 5

Fig. 6

WITNESSES:

*P. McArdle.*  
*W. Sedgwick*

INVENTOR:

*A. G. Budington*  
BY *Munn & Co.*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

ALBERT G. BUDINGTON, OF AUSTIN, TEXAS.

## RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 464,424, dated December 1, 1891.

Application filed March 3, 1891. Serial No. 383,583. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT G. BUDINGTON, of Austin, in the county of Travis and State of Texas, have invented a new and Improved Railway-Tie, of which the following is a full, clear, and exact description.

My invention relates to improvements in metallic railway-ties; and the object of my invention is to produce a simple, cheap, and substantial tie which may be firmly secured in the road-bed and which will hold single rails or double rails in such a manner that they cannot be accidentally displaced.

To this end my invention consists in a railway-tie constructed substantially as herein-after described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a tie embodying my invention, showing at one end a single rail and at the other end double rails secured thereon. Fig. 2 is a side elevation of the same, showing the rails in section. Fig. 3 is a cross-section on the line  $xx$  in Fig. 2. Fig. 4 is a detail perspective view of the block used in securing two rails to the tie when placed side by side. Fig. 5 is a detail perspective view of the key for fastening a single rail to a tie. Fig. 6 is a detail view of the stay-pin used in fastening the key to the tie and rail; and Fig. 7 is a broken detail plan view of one of the rails, which is notched to receive the bolts for securing the rail-block in place.

The tie 10 is provided with a broad base 11, which is adapted to rest firmly upon the road-bed, and which is notched on the edges, as shown at 11<sup>a</sup>, so that it may be secured by spikes upon a bridge. The tie tapers toward the top, being hollowed out on the sides, as shown at 12, so as to render it as light as possible, and the top of the tie terminates in a rib 13, which extends the entire length of the tie.

The tie 10 is provided on the top and near each end with a transverse dovetail recess 14 to receive a rail 15, and the recess on one end of the tie, as shown in Figs. 1 and 2, may be wide enough to receive two rails placed side by side, and when constructed in this

manner the tie is adapted to be used upon curves where it is necessary to use a guard-rail. The inner sides of the recesses 14 open into similar but deeper recesses 16, the recesses 16 being also dovetailed and having their diverging sides extended below the plane of the base of the recesses 14. The recesses 16 are adapted to receive keys 17, which are shaped to fit the recesses, so that they may be pushed in from one side, and the keys 17 have the sides next the rail provided with a central notch 17<sup>a</sup>, so that the upper edge of the key will fit closely upon the rail-flange and the lower edge will be locked beneath the shoulder 16<sup>a</sup> of the dovetailed recesses 16. The key will thus be firmly clamped to the rail, and to guard against its removal headed pins 18 are driven downward through recesses 17<sup>b</sup> in the inner edges of the keys and into perforations in the tie which are adapted to receive them.

Where two rails are placed side by side, as shown at one end of the drawings in Figs. 1 and 2, the key 17 is secured to the inner rail, as described, and a block 19 is placed between the two rails and upon their flanges, the block having a flat top surface and having its under side inclined, so that it will fit closely upon the rail-flanges. The block is perforated near each end and is securely clamped to the rail-flanges by means of bolts 20, which extend downward through the block and through recesses in the tie, which are made to receive them, as shown in Fig. 3, and by tightening the bolts the block is securely clamped to the rails and the rails are held rigidly to the tie. The rails 15 are notched on their inner edges, as shown at 15<sup>a</sup>, when they are placed side by side, so that the bolts 20 may extend downward through the notches.

From the foregoing description it will be readily seen that the rails may be quickly fastened to the tie and that the keys and pins prevent their displacement.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A railway-tie 10, having a broad base 11, opposite side recesses 12, a longitudinal top rib 13, transverse dovetail recesses 14, one of which is of a width to accommodate the bases

of two rails, similar but deeper recesses 16,  
into which the recesses 14 open, vertical pin-  
openings extending down through the dove-  
tail inner walls of recesses 16, bolts 20, ex-  
5 tending up through the base of the long re-  
cess 14 from opposite sides of the tie, the  
block 19, through which the upper ends of the  
bolts pass, the keys 17, fitting the dovetail re-

cesses 16 and having the central notch 17<sup>a</sup> to  
fit over the base of a rail and notched at 17<sup>b</sup> 10  
to register with the vertical pin-openings, and  
the headed pins 18, substantially as set forth.

ALBERT G. BUDINGTON.

Witnesses:

K. C. MILLER,  
C. M. MILLER.