

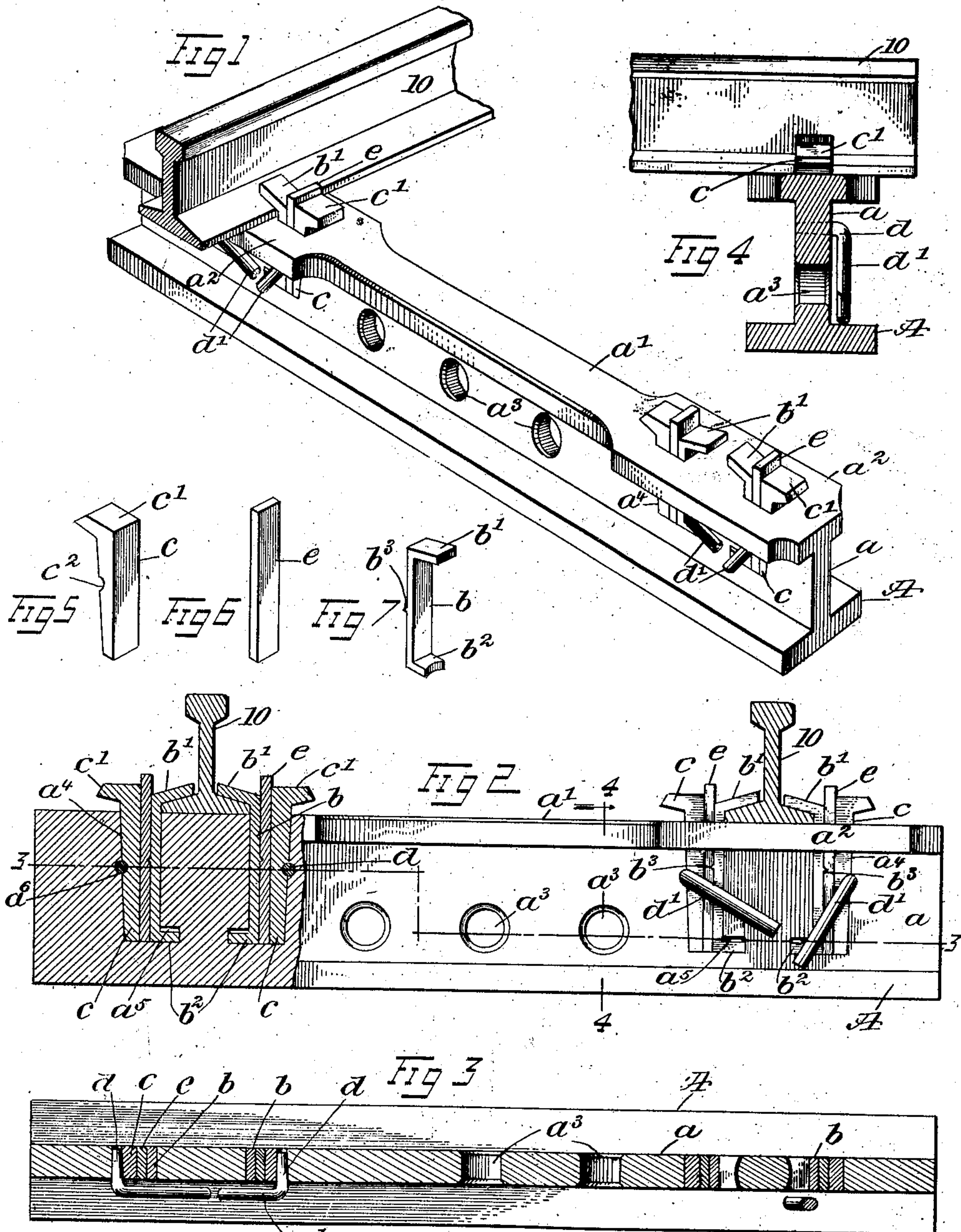
No. 768,448.

PATENTED AUG. 23, 1904.

J. T. GRIFFIN.
COMBINED RAILWAY TIE AND RAIL FASTENING DEVICE.

APPLICATION FILED FEB. 9, 1904.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN THOMAS GRIFFIN, OF WATERTOWN, TENNESSEE, ASSIGNOR OF
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COMBINED RAILWAY-TIE AND RAIL-FASTENING DEVICE.

SPECIFICATION forming part of Letters Patent No. 768,448, dated August 23, 1904.

Application filed February 9, 1904. Serial No. 192,758. (No model.)

To all whom it may concern:

Be it known that I, JOHN THOMAS GRIFFIN, a citizen of the United States, and a resident of Watertown, in the county of Wilson and State of Tennessee, have invented new and useful Improvements in a Combined Railway-Tie and Rail-Fastening Device, of which the following is a full, clear, and exact description.

My invention relates more particularly to metallic railway-ties; and the object of my invention is to provide an improved tie of this character of strong and simple construction and improved rail-fastening devices so formed and so arranged relatively to the tie as to effectively secure the rails and prevent the same from spreading.

The invention consists in the novel features hereinafter particularly described, and defined in the claims.

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

Figure 1 is a perspective view showing my invention as applied, including a section of a railway-rail. Fig. 2 is a side elevation, partly in longitudinal vertical section. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2. Fig. 4 is a transverse vertical section on the line 4 4 of Fig. 2, and Figs. 5, 6, and 7 are perspective views of devices making up my improved rail-fastening.

In constructing a tie A in accordance with my invention I give the same the general form of an I-beam, the top a' of which is broadened at the outer ends, as at a'' , to afford a proper seat for a rail 10, and in the web a of said tie openings a^3 may be produced to lessen the total weight. Extending through the broadened ends a'' and into the web a of the tie the vertical recesses a^4 are produced, said recesses being produced in pairs and separated a distance corresponding to the flange or base of the rail. In the inner walls of the recesses branches a^5 , extending inward in opposite directions and communicating with the recesses a^4 , are produced for receiving a portion of

rail-clamps b . The rail-clamps b lie against the inner walls of the recesses a^4 and are provided with heads b' , extending toward the rail to overlie the base or flange of the rail at opposite sides, as clearly shown in the drawings. The lower ends of the clamps are provided with inwardly-projecting members b^8 , that enter the branches a^5 , thereby preventing vertical displacement of the clamps. In connection with said clamps b and as a means of holding them in engagement with the rail I provide keys c of tapering or wedge form, the upper ends of which are formed with heads c' to give a broad and strong driving-surface. As a means of preventing vertical displacement of the keys locking devices d are provided, which extend transversely of the tie and fit partly in recesses c^2 in the keys c and corresponding recess a^6 in the web a of the tie. The keys and rail-clamps may be so proportioned as to completely fill the vertical recesses a^4 ; but I prefer to employ an additional device consisting of a plug or block e , of wood or other suitable elastic material, to take up any looseness that may occur from any cause between the key and clamp and the recess in which they are received. The locking devices d are formed with a bent end d' , against which any suitable tool may be placed in removing the locking device.

With the tie and fastening devices constructed as described the rails will be effectively prevented from spreading, and thereby numerous railway accidents due to the latter cause will be prevented.

It will be understood that the improved tie may be employed in connection with ordinary wooden ties at suitable intervals beneath the rail, the wooden ties in this case serving largely to support the rail, while the metallic ties, as described, will be relied upon to prevent the spreading of the rails. It will also be understood that the blocks e may be used or omitted, as may be desired. When it is designed to use these blocks, the clamps b are formed with a tooth or like projection b^8 on the back, whereby when the key c presses the

block toward the clamp the said tooth will be pressed into the block and prevent vertical displacement of the latter.

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

1. The combination with a railway-tie having a rail-seat and vertical recesses arranged on opposite sides of the rail-seat, of rail-clamps disposed in said recesses, securing-
10 keys inserted in said recesses from above to retain the clamps in position and means for positively locking said keys in position.

2. The combination with a railway-tie having a rail-seat and vertical recesses arranged
15 on opposite sides of the rail-seat, of rail-clamps disposed in said recesses, vertically-inserted tapered securing-keys disposed in said recesses to hold said rail-clamps in position and horizontally-disposed locking members engaging said keys.

3. The combination with a tie formed with a rail-seat and vertical recesses, said recesses having branches extending laterally therefrom beneath the rail-seat, of rail-clamps fitting the
25 recesses and having members entering said lateral branches, and means for preventing displacement of the clamps.

4. The combination with a tie formed with vertical recesses, said recesses having branches

extending laterally therefrom, of rail-clamps 30 fitting the recesses and having members entering said lateral branches, means for preventing displacement of the clamps, said means comprising tapering keys arranged vertically at the backs of the clamps, and locking devices extending transversely and engaging both the keys and the tie. 35

5. The combination with a tie having vertical recesses therein, of rail-clamps accommodated in said recesses, blocks of elastic material lying against the backs of said clamps, and keys serving to maintain the blocks against said clamps. 40

6. The combination with a tie having vertical recesses therein, of rail-clamps accommodated in said recesses, blocks lying against the backs of said clamps, and keys serving to maintain the blocks against said clamps, the said clamps being formed with projections on the backs thereof and engaging the said 50 blocks.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN THOMAS GRIFFIN.

Witnesses:

C. F. MIKLES,
C. C. DAVIS.