

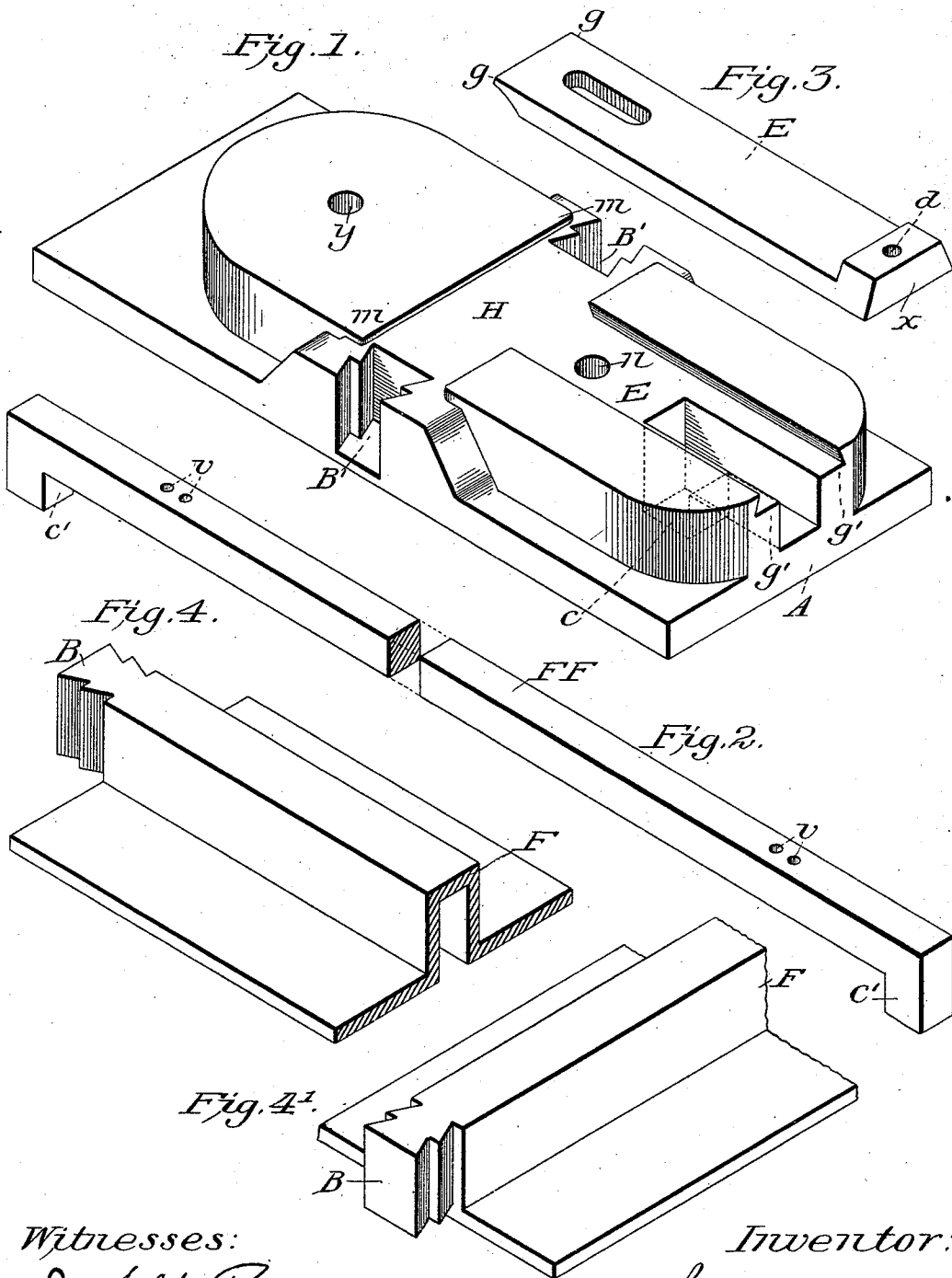
(No Model.)

2 Sheets—Sheet 1.

J. R. GREEN.
STEEL COMBINATION RAILROAD TIE.

No. 527,682.

Patented Oct. 16, 1894.



Witnesses:

Dr. W. B. Ray sen
W. H. Miller

Inventor:

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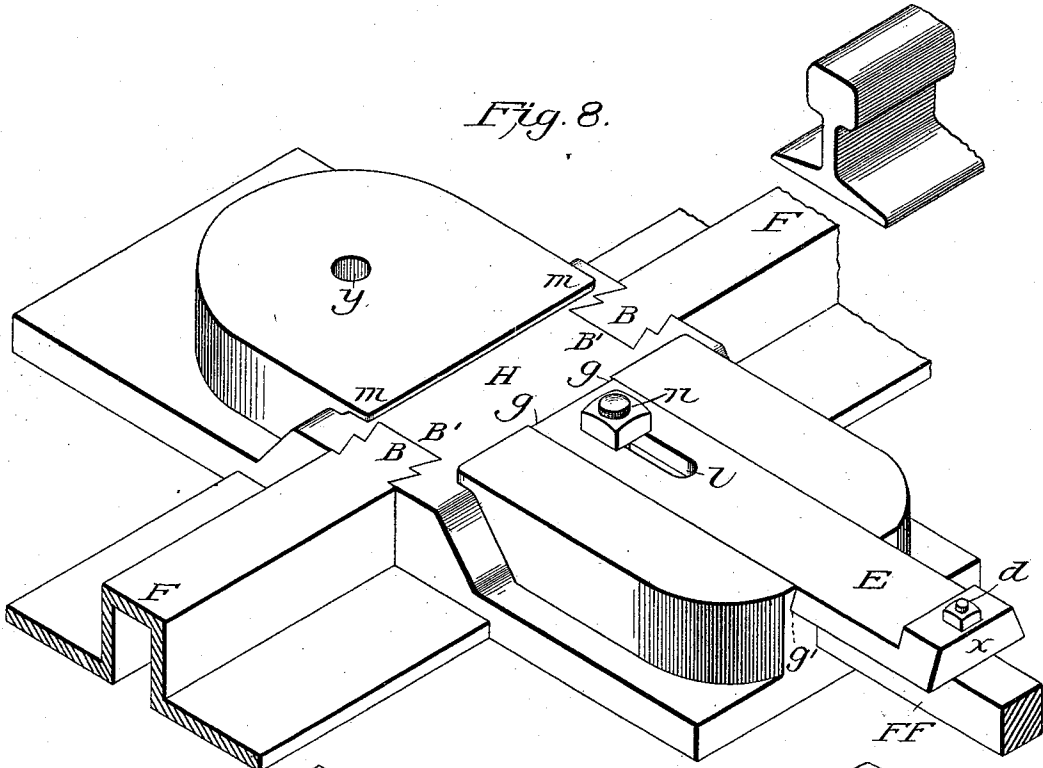


Fig. 6.

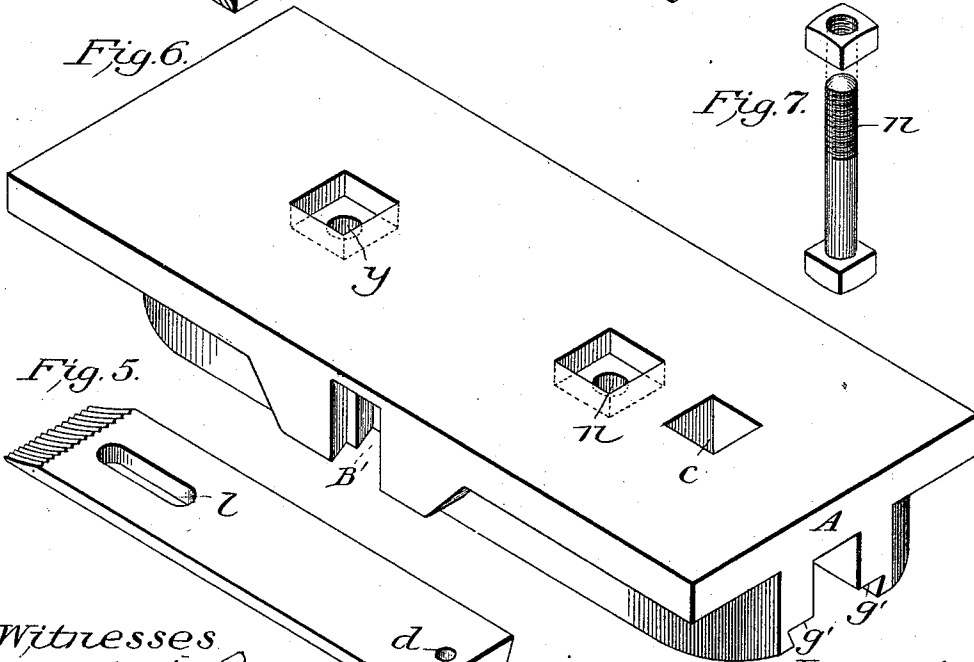
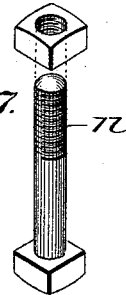


Fig. 5.

Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN R. GREEN, OF WOODSTOCK, ALABAMA.

STEEL COMBINATION RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 527,682, dated October 16, 1894.

Application filed January 13, 1891. Serial No. 377,679. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. GREEN, a citizen of the United States, residing at Woodstock, in the county of Bibb and State of Alabama, have invented a Steel Combination Railroad-Tie, for which I desire to secure Letters Patent in the United States, of which the following is a specification.

My invention relates to metallic combination rail-road ties, in which "tie bars" and "rail supports" are joined to "rail sleepers," and secured in position by "slot hole keys," and bolts operated in conjunction with the rails; and the object of my invention is, first, to provide a continuous "rail bearing" with facilities for proper adjustment in making curves; second, to afford a safe device for securely holding the rails, independent of spikes or wedges. These objects I attain by the mechanism illustrated in my drawings.

Figure 1, in my drawings, is a top side and near end view of one section of the sectional rail sleeper as it appears after the removal of all connecting parts; Fig. 2, the tie bar with the turned down ends, for the purpose of connecting the sectional rail sleepers. Fig. 3, is the top side of slot hole key, on cover plate, which enters key seat E in Fig. 1, on top of Fig. 2. Figs. 4, and 4' are top side views of the rail support and tie brace. Fig. 5, is the reverse side of Fig. 3. Fig. 6, is the reverse side of Fig. 1, which may be flat and solid, or hollowed out as desired; Fig. 7, bolt for hole *n*, in Fig. 1. Fig. 8, is a view of the parts in place, ready to receive the rail.

The sectional view of the "rail sleeper" shown in Fig. 1, is coupled to its duplicate section by the "tie bar," shown in Fig. 2, which lies directly across the road-bed in the same position as that of a wood-tie, each end of the "tie bar," *c'*, and *c'*, shown in Fig. 2, enters the groove *o*, and mortise *c*, in the end of each section of "rail sleepers" shown in Fig. 1. The ends B of the "rail supports" shown in Fig. 4, drop into the dove-tail notches B', on each side edge, of the "rail sleepers" shown in Fig. 1, the rail lying lengthwise on top of "rail supports" shown in Fig. 4, and directly across "rail sleepers" in seat, H, shown in Fig. 1, with outside flange of rail under lip *m, m*, on top of "rail sleeper" shown

in Fig. 1. The end *g, g*, of "slot hole key" shown in Fig. 3, enters end *g', g'* of key seat, E, of "rail sleepers" shown in Fig. 1, and is driven up on top of "tie bar" shown in Fig. 2, until it is tight on top of inside flange of rail—then by passing bolt shown in Fig. 7, up through hole *n*, in "rail sleeper" shown in Fig. 1, and on through the "slot hole key" of part, E, shown in Fig. 3, and the nut being 60 wrenched down tight on the bolt shown in Fig. 7, secures together my "combination tie" all parts of which may be made of steel, and the several parts being dependent upon each other, mutually contribute to produce the 65 combination claimed, and the slipping and sliding, usual to other ties, is consequently prevented.

Figs. 5, and 6, show the reverse sides of Fig. 3, and Fig. 1, and Fig. 8 is an illustration of one section of the "rail sleeper" shown in Fig. 1, with a broken section of the "connecting bar" shown in Fig. 2, and two broken sections of the "rail supports" shown in Fig. 4, all in connected position with "slot hole 75 key" shown in Fig. 3, driven up, to receive the rail. The hole, *y*, in outside end of "rail sleeper" shown in Fig. 1, is to receive a bolt only when the tie is laid on a bridge or trestle.

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a metallic railroad tie, of a sectional rail sleeper, said tie having a groove, *o*, a mortise, *c*, a key-seat, E, a rail-seat, H, a flange lip, *m, m*, two rail support 85 notches, B and B, and having bolt holes, *n* and *y*, all substantially as set forth.

2. The combination with the tie having the mortise and groove with the tie bar having the turned down ends fitting therein of the cover plate, E, for the purpose herein set forth. 90

3. The combination in a metallic railroad tie of a "rail support" having dove-tail notches on each end, B, and B, adjustable in dove-tail notches B', B' on "rail sleepers," adapted to 95 proper curvature of road, and solid rail bearing, and to prevent rail sleepers from slipping and sliding, all as substantially set forth.

JNO. R. GREEN.

Witnesses:

JAS. M. ROLEN,
JNO. H. MILOAM.