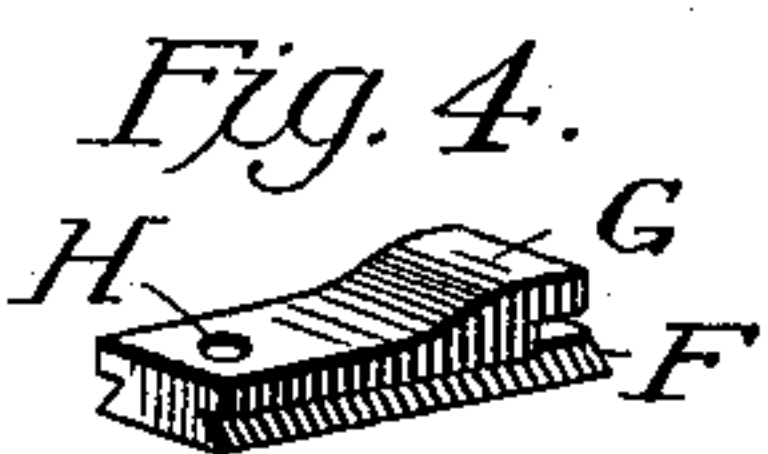
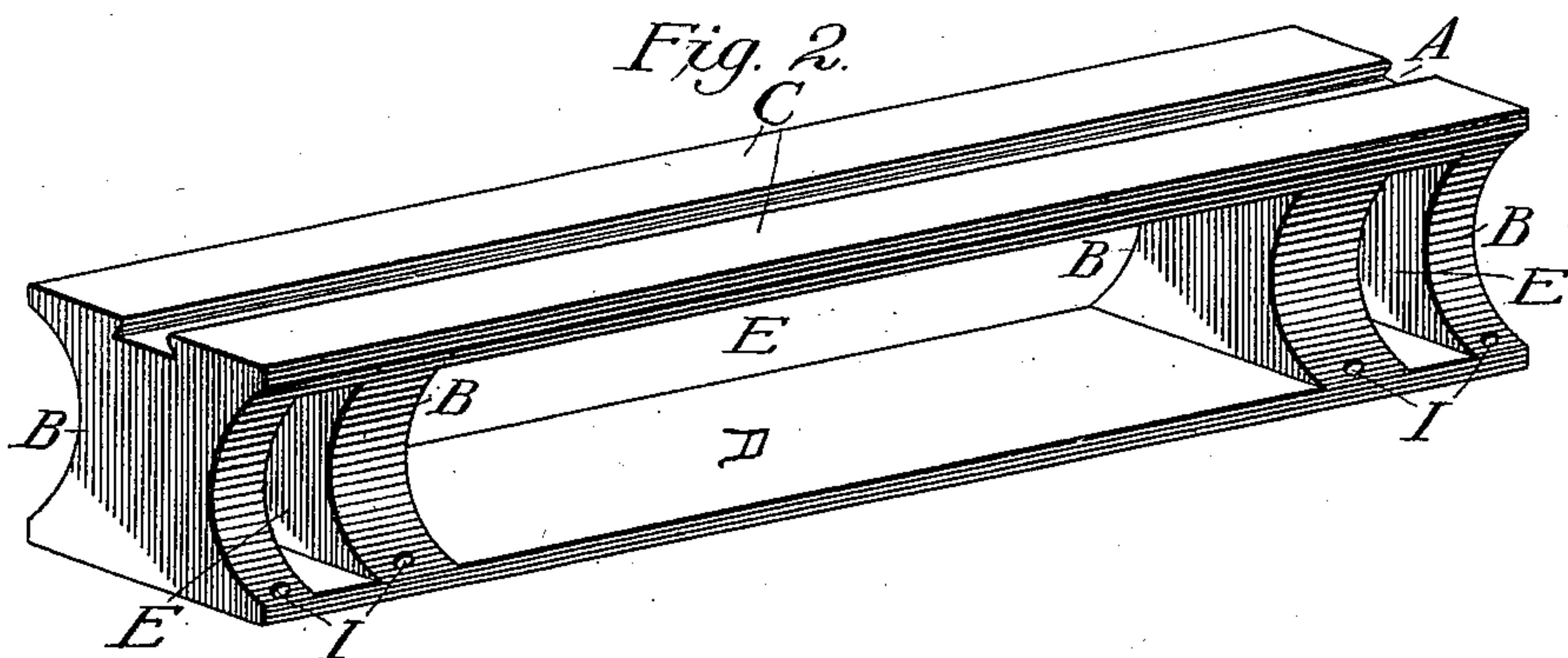
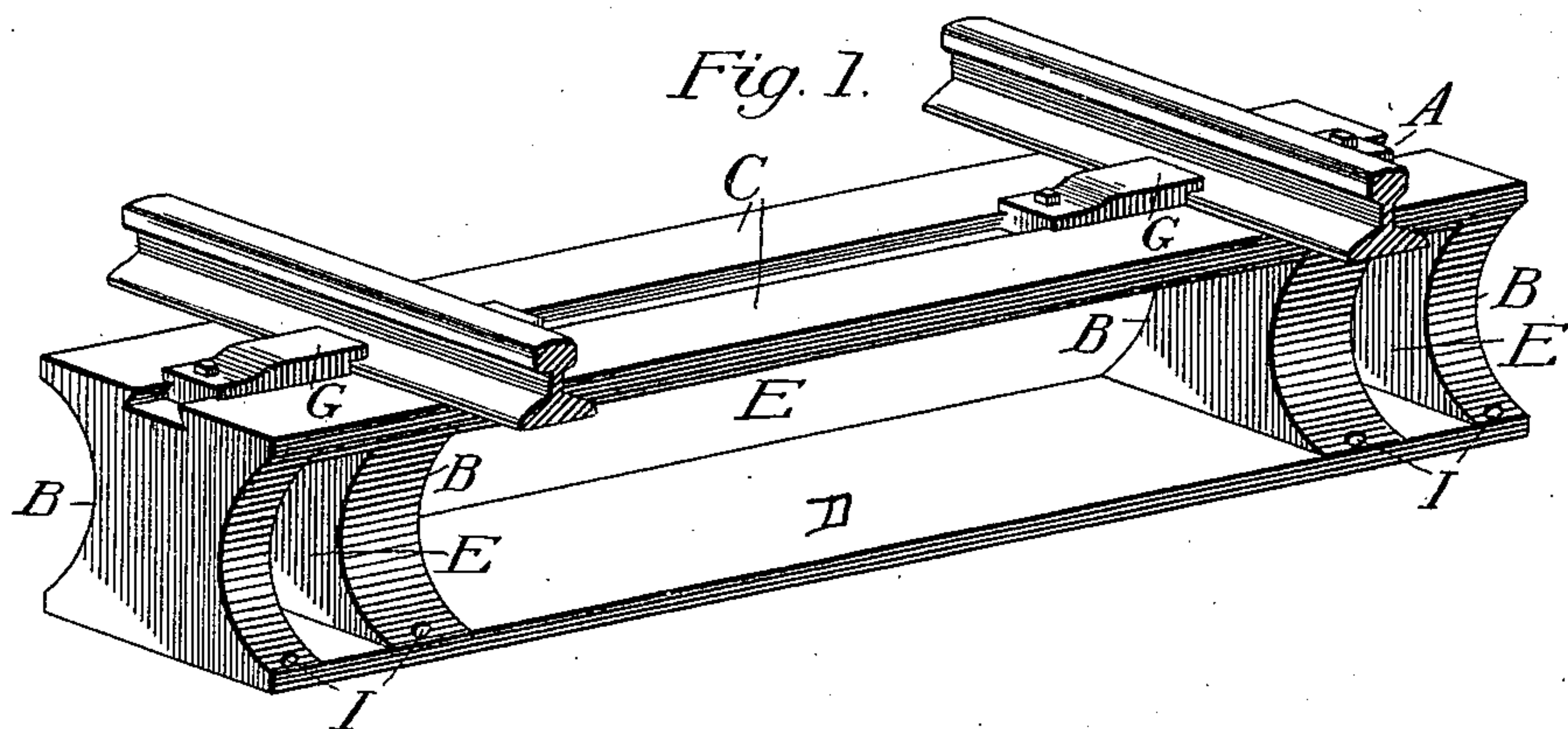


(No Model.)

W. GARNER.  
IRON RAILWAY TIE.

No. 545,687.

Patented Sept. 3, 1895.



Witnesses:  
C. W. Leamer.  
Fred Guhn, Jr.

Inventor.  
William Garner

# UNITED STATES PATENT OFFICE.

WILLIAM GARNER, OF AMERICA CITY, KANSAS.

## IRON RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 545,687, dated September 3, 1895.

Application filed April 6, 1895. Serial No. 544,820. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM GARNER, a citizen of the United States, residing at America City, in the county of Nemaha and State of Kansas, have invented a new Iron Railway-Tie, of which the following is a specification.

The objects of my invention are, first, to make a more substantial tie than the wooden tie; second, to make a stronger and more lasting tie and to keep the rails from spreading; third, to cause less track repairing. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of the iron tie and rails and fastenings; Fig. 2, the tie without the rails and fastenings. Fig. 3 shows the outside clamps. Fig. 4 shows the inside clamps. Fig. 5 is a fastening-screw.

A represents the dove-tail groove for the sliding clamp.

B B are the piers connecting the two plates, C the top plate, and D lower plate; E the open space between the piers and between the plates.

The length of the tie is seven feet and the width of tie seven inches, with the sides of the piers curved inward, making the center of the tie only five inches wide. The inside piers are six inches thick and the end piers three inches. The open space between the end and inside piers is nine inches, and the open space between the two inside piers is four feet. The open space between the two plates C and D is four inches. The plate C is two inches thick, and plate D one inch thick. A is the groove which extends the full length of the tie. The width at top is two inches, and one inch deep and three inches wide at the bottom.

Fig. 2 shows the tie made of one piece of iron.

Fig. 3 shows the outside clamp, F being the

dovetail slide that fits in the groove A. The clamp is six inches long; height of slide, one inch; width of bottom of the slide, three inches, and width of the top of slide two inches. G is the top of the clamp extending over plate C. It is gradually sloped upward to the thickness of two inches, clamping down on the foot of the rail. The total height of the clamp is three inches. H is a hole for a large steel screw I' to fasten the tie upon bridges, &c. The clamp is to be made of one piece of iron.

Fig. 4 shows the inside clamp precisely like the outside clamp shown in Fig. 3, except it is three-fourths of an inch wider, to clamp down on foot of the rail, making total height one and three-fourth inches.

Fig. 1 shows the iron tie complete with the rails fastened thereon.

Fig. 5 shows the steel screw I'. The screw should have a heavy thread.

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

1. The combination in a metallic railway tie, of two plates, united at each end by two piers, the uppermost plate being provided with a retaining groove adapted to receive the clasps for holding the rail in place, substantially as set forth.

2. In a metallic railway tie, the combination with the plates united at each end by two piers, the upper plate being thicker than the lower and provided with a dove-tail groove, of, the clasps G, fitted in said groove, and adapted to hold the rail in place, and secured by bolts, to the said plates, as and for the purpose set forth.

WILLIAM GARNER.

Witnesses:

C. W. LEAMER,  
FRED. GUHSE, Jr.