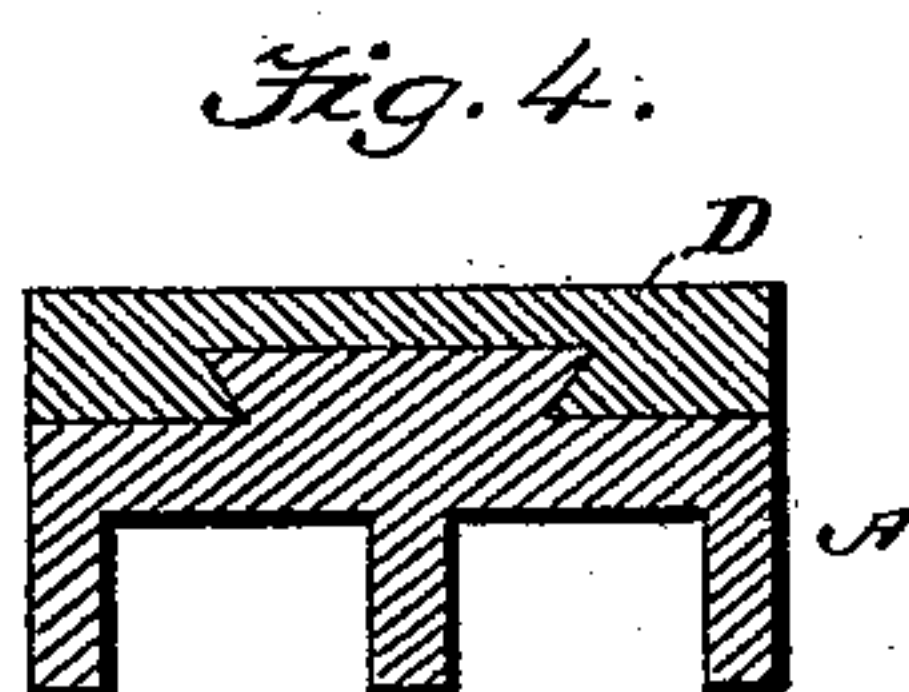
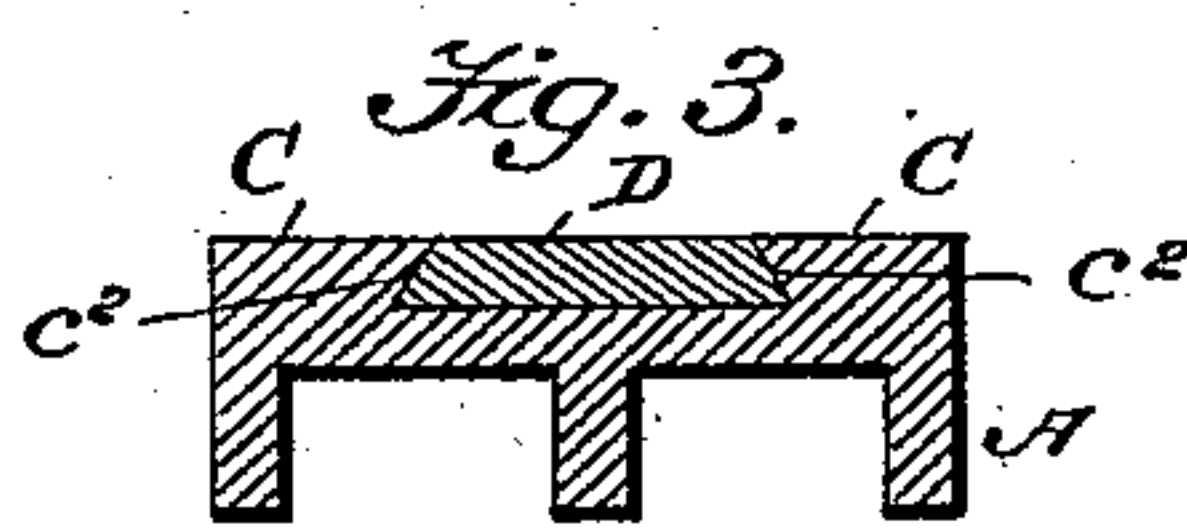
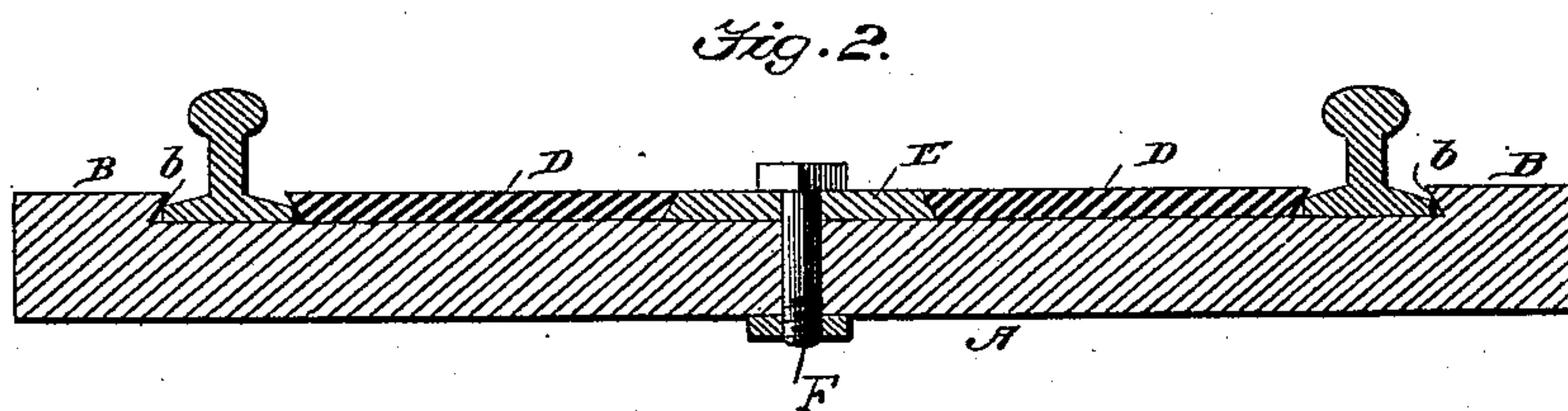
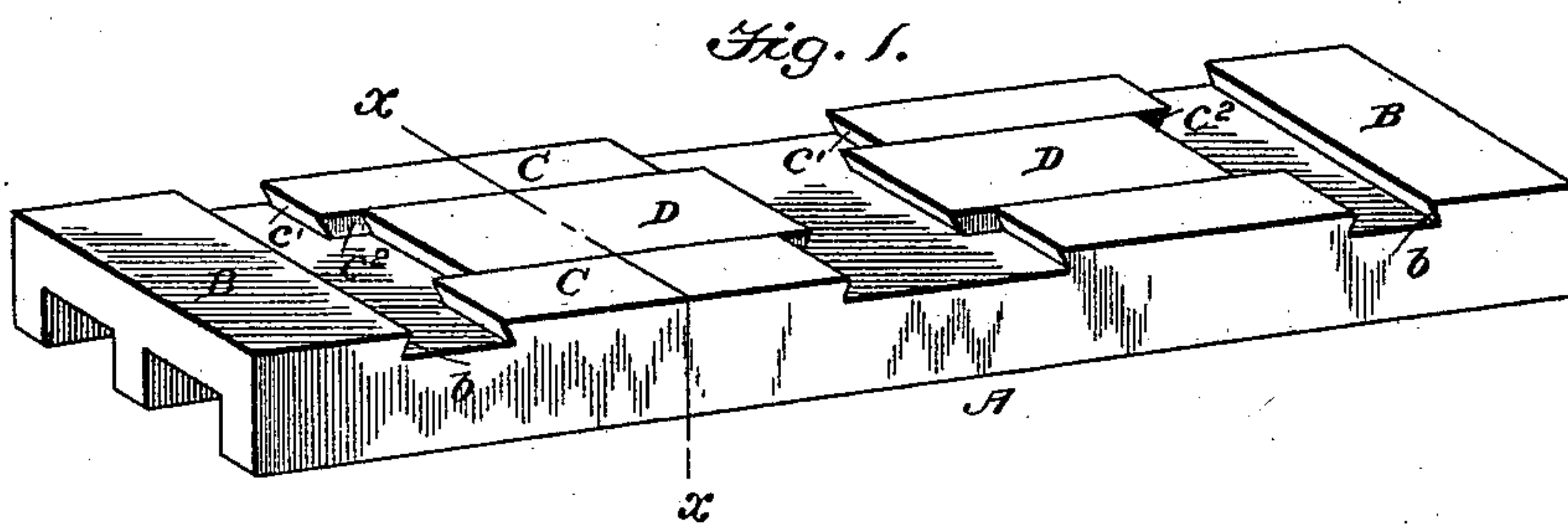


(No Model.)

J. W. HARDY & W. O. L. JEWETT.
METALLIC RAILWAY TIE.

No. 465,263.

Patented Dec. 15, 1891.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN W. HARDY AND WILLIAM O. L. JEWETT, OF SHELBY, MISSOURI.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 465,263, dated December 15, 1891.

Application filed August 25, 1891. Serial No. 403,677. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. HARDY and WILLIAM O. L. JEWETT, citizens of the United States, residing at Shelby, in the county of Shelby and State of Missouri, have invented certain new and useful Improvements in Metallic Railway-Ties; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in metal railway-ties; and it consists in the certain peculiar features of construction and arrangement of parts more fully hereinafter described, and definitely pointed out in the claims.

The object of our invention is to provide a metal tie for railways which will embody features rendering the adjustment and locking of the rails in the tie simple and inexpensive, and at the same time securely fastening the rails. This object we accomplish by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate like parts in the several views, and in which—

Figure 1 is a perspective view of our improved tie. Fig. 2 is a longitudinal vertical section. Fig. 3 is a cross-section through the line $x x$, Fig. 1; and Fig. 4 is a cross-sectional view of a modified form.

In the drawings, A represents a rectangular metal tie constructed with a hollow center having suitable bracing-ribs. The upper face of the tie is formed at each end with enlargements B, having an inclined recess b in its inner face or edge.

C represents integral flanges arranged longitudinally along the sides of the tie at a point slightly back from the enlargements B and extending to a point a short distance from the longitudinal center of the tie. These flanges are constructed with dovetailed or inclined ends and inner edges, as at c' and c'' . Between the respective flanges of the opposite ends of the tie is placed a sliding key D, having beveled edges constructed to closely fit beneath the projecting edges on the flanges. The ends of these keys—it being understood

that there are two keys, one in each end of the tie—are formed with downwardly and inwardly inclined portions corresponding to the inclination c' of the flanges. These keys are made of a length greater than the length of the flanges, so that the inner ends thereof will be parallel with the ends of the flanges when the rail is locked in place.

The central portion of the tie is occupied by a T-plate E, which is constructed of a width equal to the width of the tie and with beveled or inclined ends adapted to be dovetailed or forced under the projecting flanges on the flanges C and keys D. This plate has a central aperture therein, through which a suitable locking-bolt F is placed to prevent the same from being removed.

In operation the rail is placed in the space between the outer ends of the flanges C and the enlargements B, the flange of the rail extending into the recess in the enlargement. The key D is then forced up onto and above the opposite flange of the rail. The key E is then slipped into position and securely bolted in place. The rail is thus locked to the tie.

In Fig. 4 we have shown a modified form, in which case we use a single flange at each end of the tie and place the keys on opposite sides thereof, the key fitting over the flange.

We are aware that many minor changes in the construction and arrangement of the parts of our device may be made without in the least departing from the nature and principle of our invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a railroad-tie, the combination, with the metallic tie having a dovetailed extension on its opposite ends, and longitudinal flanges arranged on opposite sides between the extensions and center of the ties and formed with dovetailed recesses on their inner ends and sides, of keys fitted between the flanges, having dovetailed recesses in their opposite ends, and a dovetailed key fitting between the ends of the other keys and flanges, substantially as described.

2. In a metallic railway-tie, the combination, with a hollow tie, dovetailed extensions

on the end of the tie, and dovetailed flanges
arranged longitudinally between the center
and extensions on the tie, of keys secured by
said flanges and arranged to be moved longi-
5 tudinally, a lateral key between the ends of
the other keys and flanges, and means for
locking said lateral key in place, substantially
as described.

In testimony whereof we affix our signatures
in presence of two witnesses.

JOHN W. HARDY.

WILLIAM O. L. JEWETT.

Witnesses:

EMORY D. HOSELTON,

WILLIAM C. KEMP, Jr.