

**No. 627,827.**

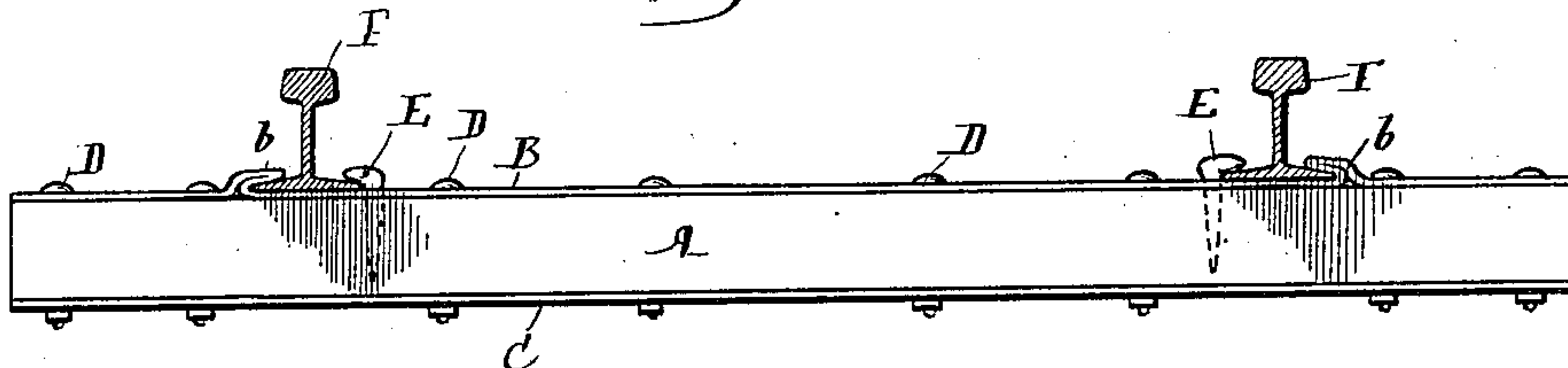
**Patented June 27, 1899.**

**J. MULVEY.  
RAILWAY TIE.**

(Application filed Jan. 13, 1899.)

(No Model.)

*Fig. 1.*



*Fig. 2.*

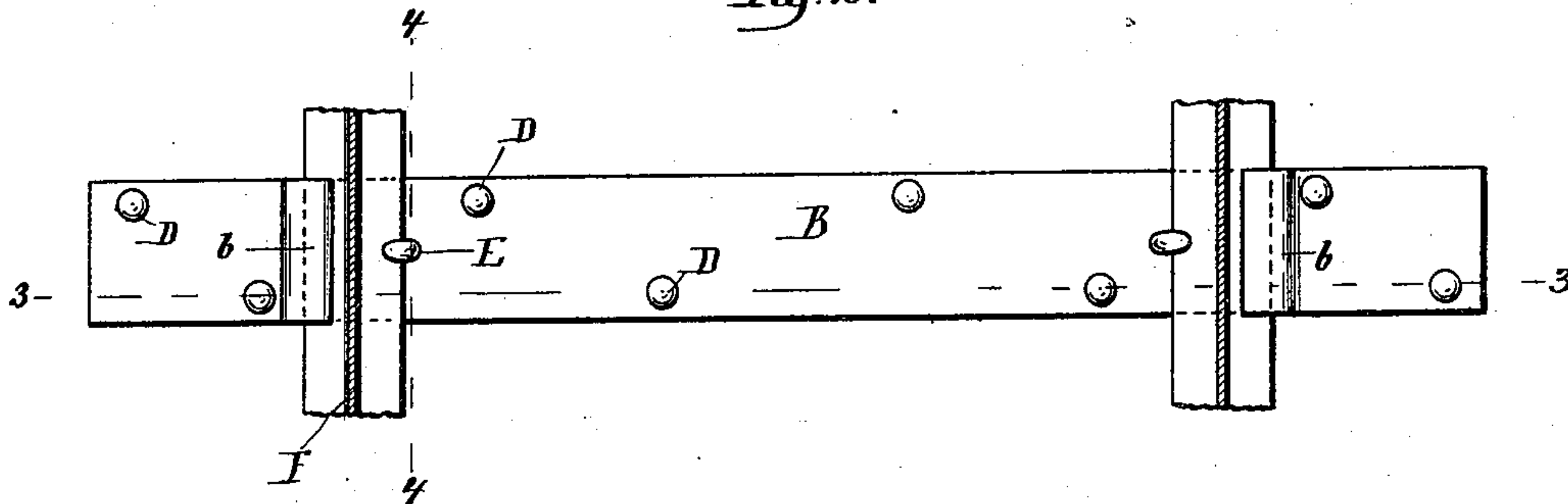


Fig. 3.

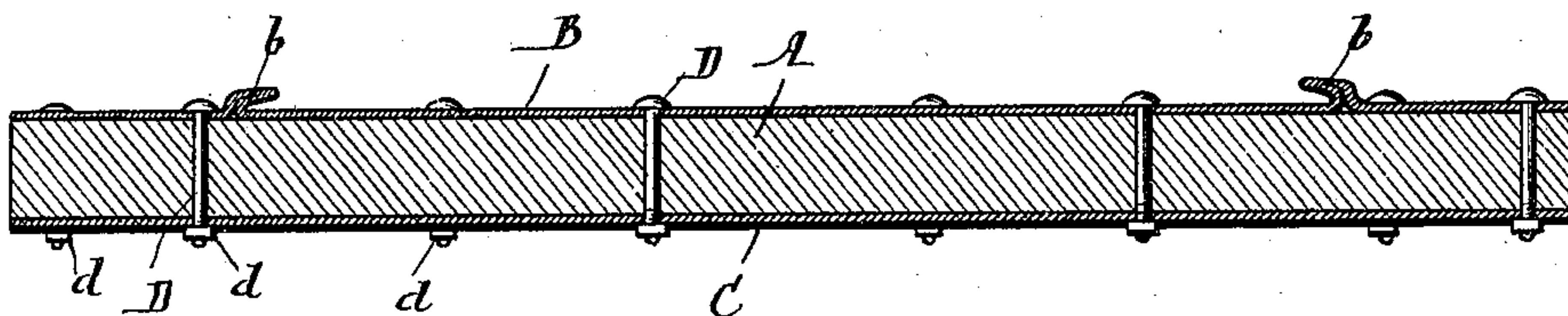
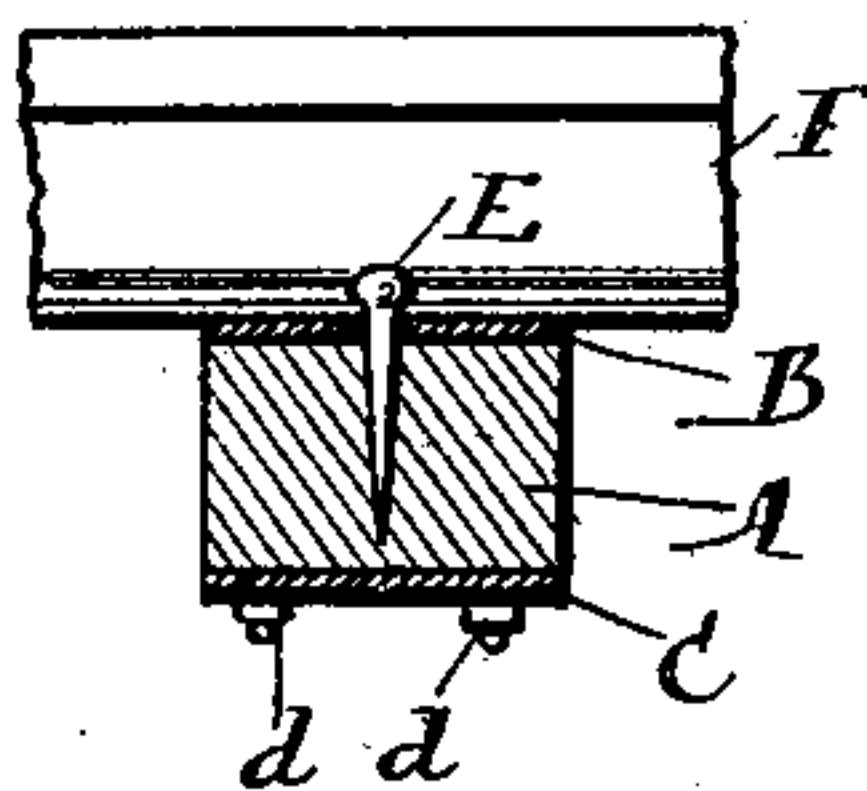


Fig. 4.



*Witnesses:*

Ernestula &  
Alberta Adamick

*Inventor:*

James Mulvey  
By Price & Fisher  
his Attorneys.



# UNITED STATES PATENT OFFICE.

JAMES MULVEY, OF HARVEY, ILLINOIS, ASSIGNOR OF ONE-HALF TO  
JAMES A. LAHEY, OF CHICAGO, ILLINOIS.

## RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 627,827, dated June 27, 1899.

Application filed January 13, 1899. Serial No. 702,045. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MULVEY, a resident of Harvey, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Railway-Ties, of which I do declare the following to be a full, clear, and exact description.

This invention has for its object to provide an improved railway-tie that shall have great durability, that shall have the desired degree of elasticity, and that shall render unnecessary gage measurements in laying the rails and whereby all danger of the spreading of the rails is avoided. This object of invention is accomplished by the novel construction of railway-tie hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claim at the end of this specification.

Figure 1 is a side view of a railway-tie embodying my invention, the rails thereon being shown in cross-section. Fig. 2 is a plan view of the tie, the rails thereon being shown in horizontal section. Fig. 3 is a view in vertical longitudinal section on line 3 3 of Fig. 2. Fig. 4 is a view in vertical cross-section on line 4 4 of Fig. 2.

My improved tie comprises a body A of wood, the top and bottom faces of which are covered, respectively, by the metal plates B and C. The plates B and C are connected to the body A of the tie by bolts D, that pass through the plates and the tie-body, these bolts D being fitted with retaining-nuts *d* upon their lower ends.

The body A of the tie will preferably be treated with some of the usual preservative compounds in order to prolong the life of the tie, and inasmuch as the top and bottom plates completely cover the corresponding faces of the tie it will be securely protected against wear at the most exposed points.

In order to prevent the necessity for gage measurements in the laying of the track, the top plate B of the tie is formed with rail-clips *b*, that are placed with exactness at predetermined points upon the plate B, and these clips *b* serve to overlap the outer base-flanges of the rails F, and thus properly position the rails without the necessity of gage measurements. The preferred manner of forming the rail-clips *b* is by upsetting and turning inwardly portions of the top plate B, as shown in the drawings. The top plate will be formed

with holes to receive the retaining-spikes E, the bodies of which pass through the top plate and into the wooden portion of the tie, while the heads overlap the inner base-flanges of the rails F. It will be understood, of course, that the top and bottom plates will be formed with the coincident holes to receive the through-bolts, corresponding holes being bored through the body A of the tie, and holes will also be bored in the top plate to receive the spikes E at suitable distances from the clips *d*, corresponding with the width of the base-flanges of the rails.

I am aware that various attempts have been heretofore made to produce a satisfactory substitute for the common wooden railway-tie, and in some instances metal ties have been used and in others the ties have been formed partially of wood and partially of metal. I do not believe, however, that any prior attempt has resulted in the production of the simple, cheap, and effective construction of tie that characterizes my invention. The metal plates B and C are preferably of iron or steel and of sufficient thickness not only to protect the surfaces of the tie, but also to strengthen the same, while at the same time the benefit of the elastic character of the wooden body A is preserved. The bottom plate C not only serves to protect the corresponding surface of the tie, but inasmuch as the through-bolts D pass through this bottom plate it serves to prevent any lateral movement of the top plate and the bolts D, which would be apt to occur if a top plate alone were employed.

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

A railway cross-tie comprising a body A of wood and metal top and bottom plates B and C that cover the top and bottom surfaces of said body, said plates being united to said body by through-bolts that pass through the wooden body at different points, said bolts being independent of the rail-securing devices, the top plate having thereon raised clips adapted to engage the base-flanges of the track-rails, and also having perforations to receive the rail-securing spikes.

JAMES MULVEY.

Witnesses:

GEO. P. FISHER, Jr.,  
ALBERTA ADAMICK.