

No. 662,773.

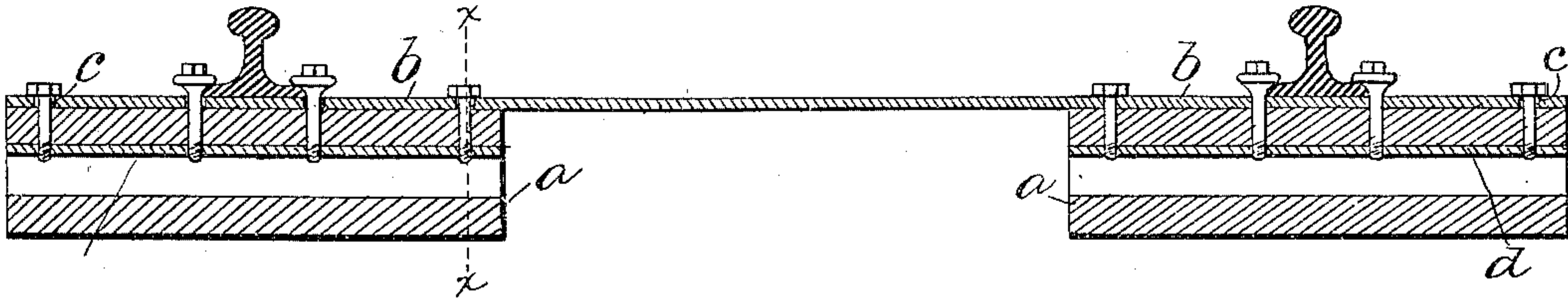
Patented Nov. 27, 1900.

E. DAVIS.  
RAILROAD TIE.

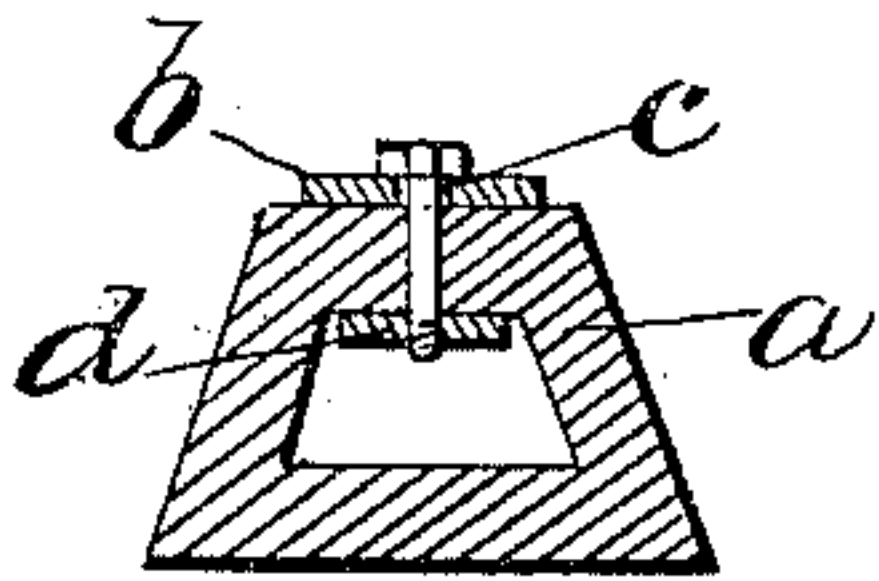
[Application filed Dec. 27, 1899.]

(No Model.)

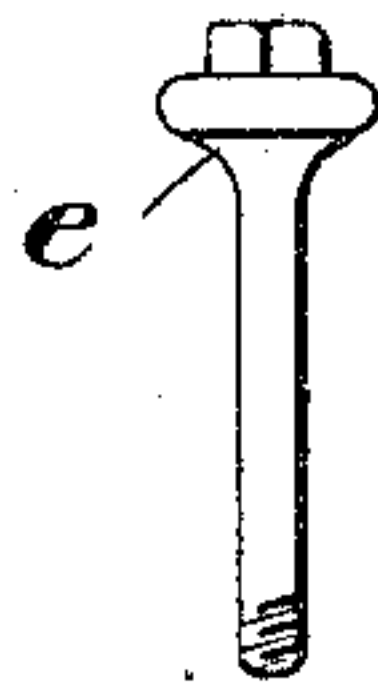
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

EDWARD DAVIS, OF BRAZIL, INDIANA.

## RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 662,773, dated November 27, 1900.

Application filed December 27, 1899. Serial No. 741,742. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD DAVIS, a citizen of the United States, residing at Brazil, in the county of Clay and State of Indiana, have invented a new and useful Railroad-Tie, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists of improvements in railroad-ties, being a combination of metallic plates, connecting-bolts, flanged bolts, and base-blocks; and the object of my improvement is to provide a simple and economical means of attaching the rails to a base block or blocks of clay, stone, wood, or other material, and especially to that form of hollow base-block hereinafter described. I attain this object in the tie illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal vertical section; Fig. 2, a vertical cross-section on line *xx* of Fig. 1, and Fig. 3 a vertical elevation of rail-bolt.

The base *a* is composed of clay, stone, wood, or other material. This base may be made hollow or solid in one or more sections; but the hollow form in two sections is preferred, as this form is both efficient and economical. The two sections of base *a* are preferably made with their side walls converging toward the top, as shown in Fig. 2, this being the form best adapted to give strength and durability, and therefore preferred, although other forms may be adopted. A tie-plate *b* is placed flat upon the top of the base or sections of the base through which said plate-holes *c*, registering with similar holes in the base, pass. Four of these holes *c* are grouped so as to bring one hole upon either side of and adjacent to the rails or the lower flanges of the rails. Other plates *d*, having threaded holes registering with the holes *c* in the plate *b*, are placed within the hollow of the base when the hollow form of base is employed.

Threaded bolts of ordinary construction are inserted in all of the holes in the tie-plate *b* excepting the four holes grouped about the rails, as above mentioned, and passed through

the base, engaging with threads in holes in plates *d*, which bolts being screwed up firmly clamp the base between the plates *b* and *d*. The tie-plate *b*, extending across the two sections, thus rigidly binds them together.

The rails are attached by means of the rail-bolts, a form of which is shown in Fig. 3, which are inserted in the four holes adjacent to the rails and engage threads in registering holes in plates *d*. These bolts are provided with a flange *e* just below the bolt-head, which when the bolt is screwed home engages the flange of the rail and holds it firmly to the tie, said bolts at the same time being an additional clamp between the plates and the base. The head of the flanged bolt above the flange *e* is identical with that of the ordinary bolt and may be made in any form to allow of the use of a wrench.

It is obvious that various changes in the details of construction may be made without departing from the spirit of the invention.

Having now described my invention, what I claim is—

1. In a railroad-tie, the combination with the rails and a hollow base-block, of a metallic plate disposed upon the upper surface of said base-block, a metallic plate disposed within the hollow of said base-block, a plurality of bolts connecting said plates and a plurality of flanged bolts, substantially as described.

2. In a railroad-tie, the combination with the rails and a hollow base consisting of a plurality of sections, of a metallic plate disposed upon the upper surfaces of said sections and connecting the same, a metallic plate within the hollow of each of said sections, a plurality of bolts connecting said upper plate and said plurality of plates, and a plurality of flanged bolts, substantially as described.

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

EDWARD DAVIS.

Witnesses:

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