

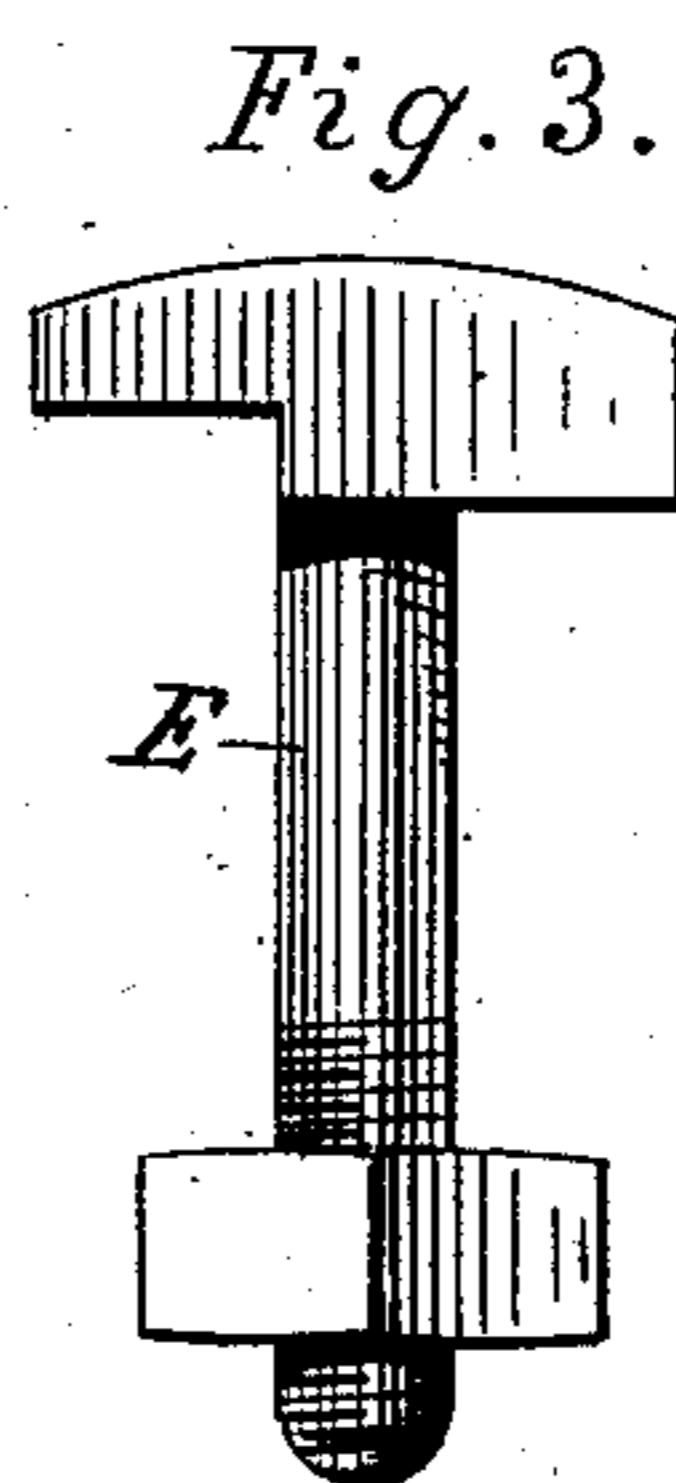
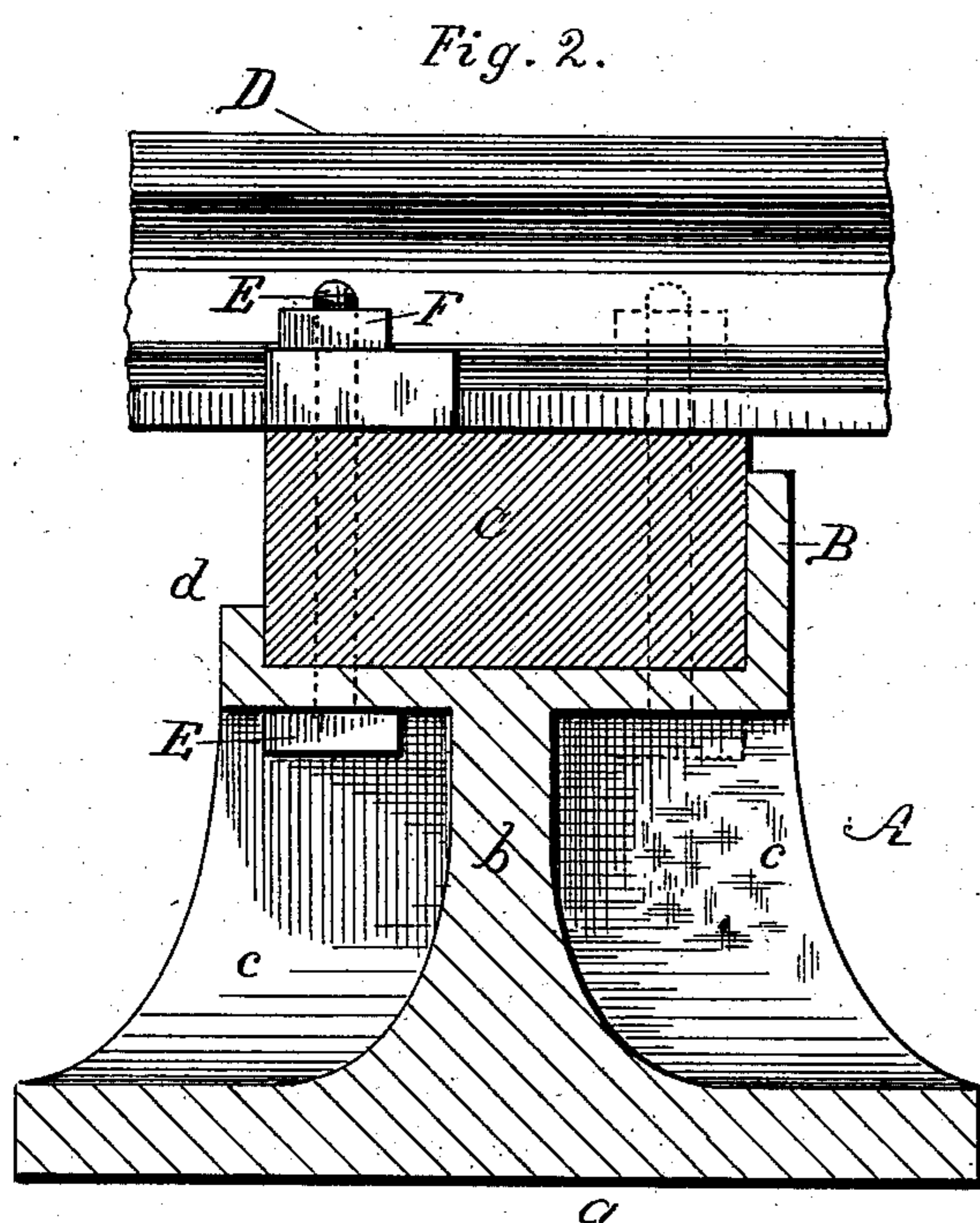
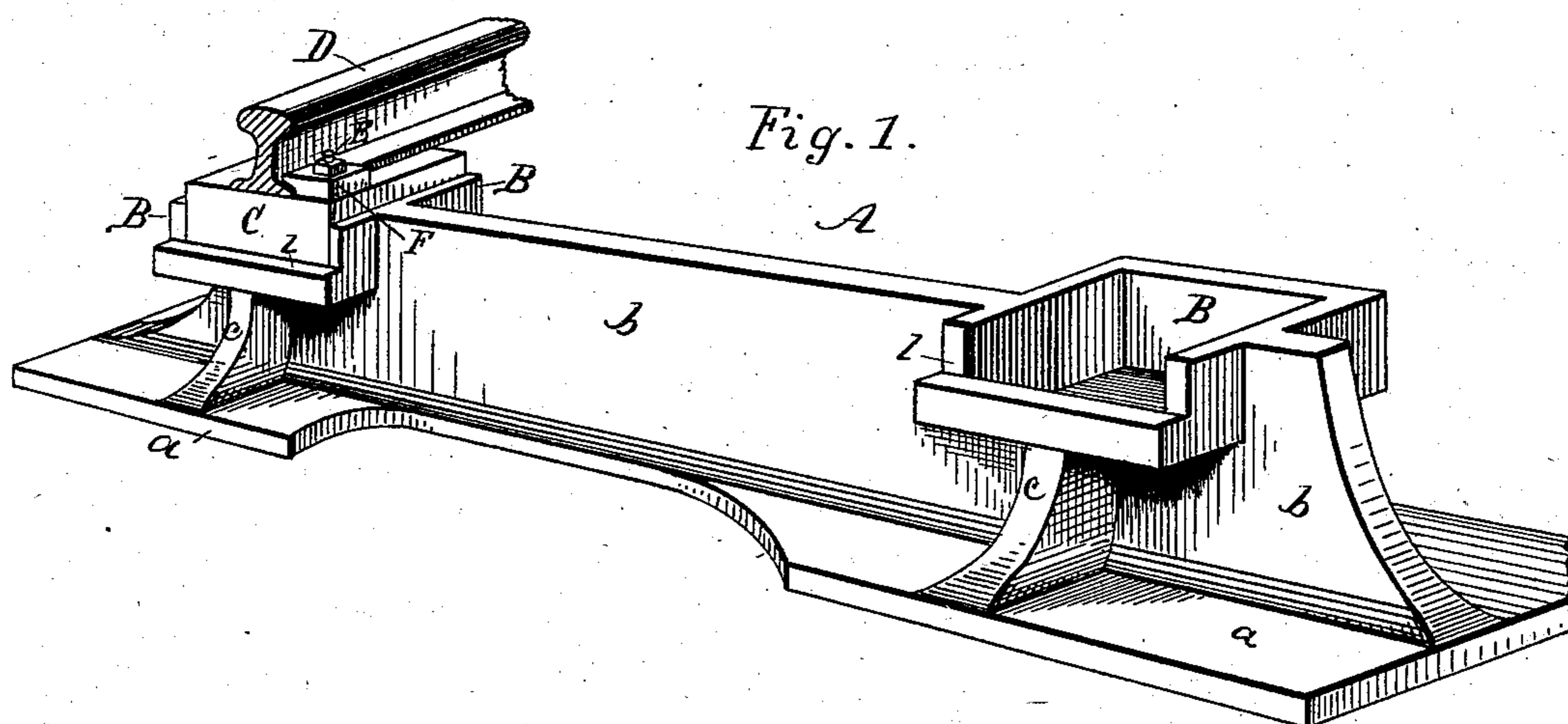
(No Model.)

J. H. MEACHAM.

RAILROAD CROSS TIE.

No. 259,891.

Patented June 20, 1882.



WITNESSES:

Thos Houghton.  
Amos W. Hart

INVENTOR:

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# UNITED STATES PATENT OFFICE.

JAMES H. MEACHAM, OF PETERSBURG, VIRGINIA.

## RAILROAD CROSS-TIE.

SPECIFICATION forming part of Letters Patent No. 259,891, dated June 20, 1882.

Application filed February 9, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HUGH MEACHAM, of Petersburg, in the county of Dinwiddie and State of Virginia, have invented a new and  
5 useful Improvement in Railroad Cross-Ties; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention is an improvement in the class of iron railroad-ties having a flat base  
10 and vertical longitudinal web formed on the upper side of the latter.

The improvement is embodied in the construction and arrangement of parts as herein-  
after described and claimed, whereby I pro-  
15 duce a tie having maximum lightness and strength and other qualities that confer additional advantages in manufacture and practical use.

In the drawings, Figure 1 is a perspective  
20 view of my improved tie with a fragment of a rail, which is shown applied in position for use. Fig. 2 is a vertical cross-section. Fig. 3 is a side view of a fastening-bolt of modified construction.

25 The cross-tie A has a broad, flat, rectangular base, *a*, and a vertical central longitudinal web or flange, *b*, on its upper side, so that in cross section the tie has approximately the form of an inverted T. These parts *a b* are  
30 constructed as thin as consistent with the required strength of the tie.

Near each end vertical flanges *c* project laterally on opposite sides of the web *b*, and a rectangular box, B, is formed at the junction  
35 of said parts to receive a wooden block, C, that supports a rail, D. Such box or case B is cast in one piece with the body of the tie. Its edges rise on three sides to about the height of the web *b*, but the fourth side is cut away,  
40 as shown at *l*, to allow a prying-tool to be ap-

plied to the side of the block C, for the purpose of conveniently removing it when required. The rail D is secured by means of the two bolts E, that pass through block C and  
45 bottom of the box B, also through washers F, whose lateral flanges overlap and rest on the base of the rail, as shown. In place of using such washers, I may construct the bolt-head as shown in Fig. 3—that is to say, with a notch  
50 or recess on one side to receive the edge of the rail-flange.

The base *a* of the tie may be cut away in the middle, as shown in Fig. 1, the objects being  
55 not only to reduce the weight and cost of the tie, but chiefly to remove any liability of fracture of the tie in “soft” weather—that is to say, when the road-bed being wet becomes soft, and hence yields readily to the great pressure  
60 imposed on the ties by passing trains. In such case, the ends of the tie sinking lower than the middle, it is subjected to a great strain at that point; but by dispensing with the base-flanges in the middle portion of the tie such portion  
65 will cut down into the road-bed in the case above mentioned, and thus the danger of breaking the tie will be avoided.

What I claim is—

The improved iron railroad-tie composed of the thin, flat, horizontal base-piece *a*, cut out  
70 in its middle portion, as described, the thin vertical web *b*, extending the entire length of the base, the lateral vertical flanges *c c*, and the boxes B B, formed in one piece with said  
75 parts *b c c* at the intersection thereof, for receiving the wooden blocks C, all as shown and hereinbefore set forth.

JAMES HUGH MEACHAM.

Witnesses:

SAML. STEVENS,

R. J. J. SPRALLEY.