(No Model.)

E. D. DE CLEMENTS.

METALLIC TIE FOR RAILWAYS.

No. 446,405. Patented Feb. 10, 1891.

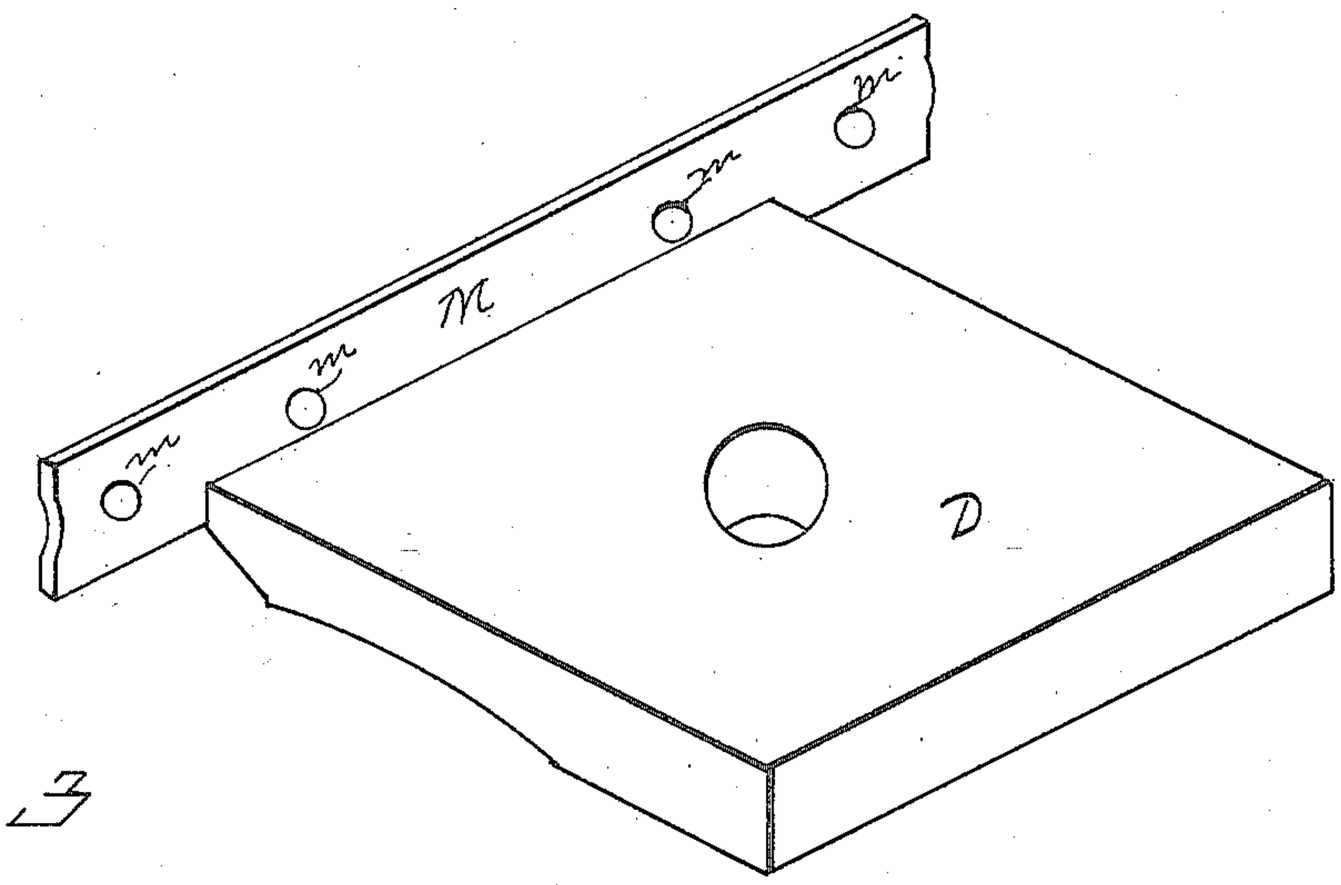

Fig. 3

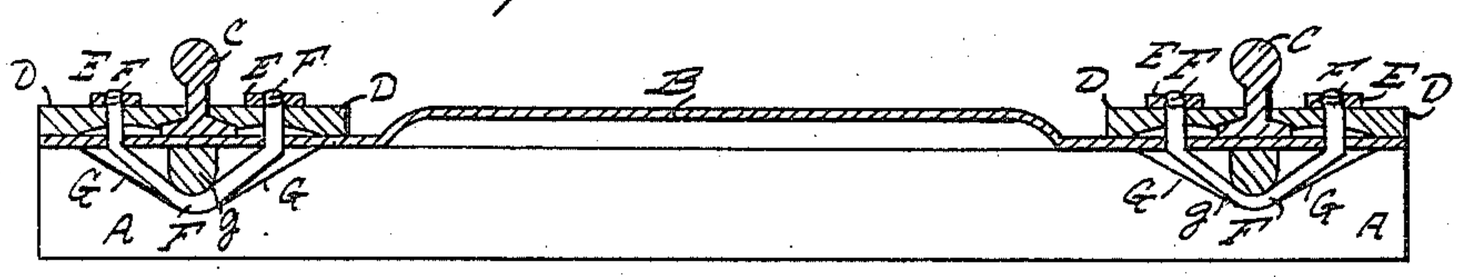

Fig. 2

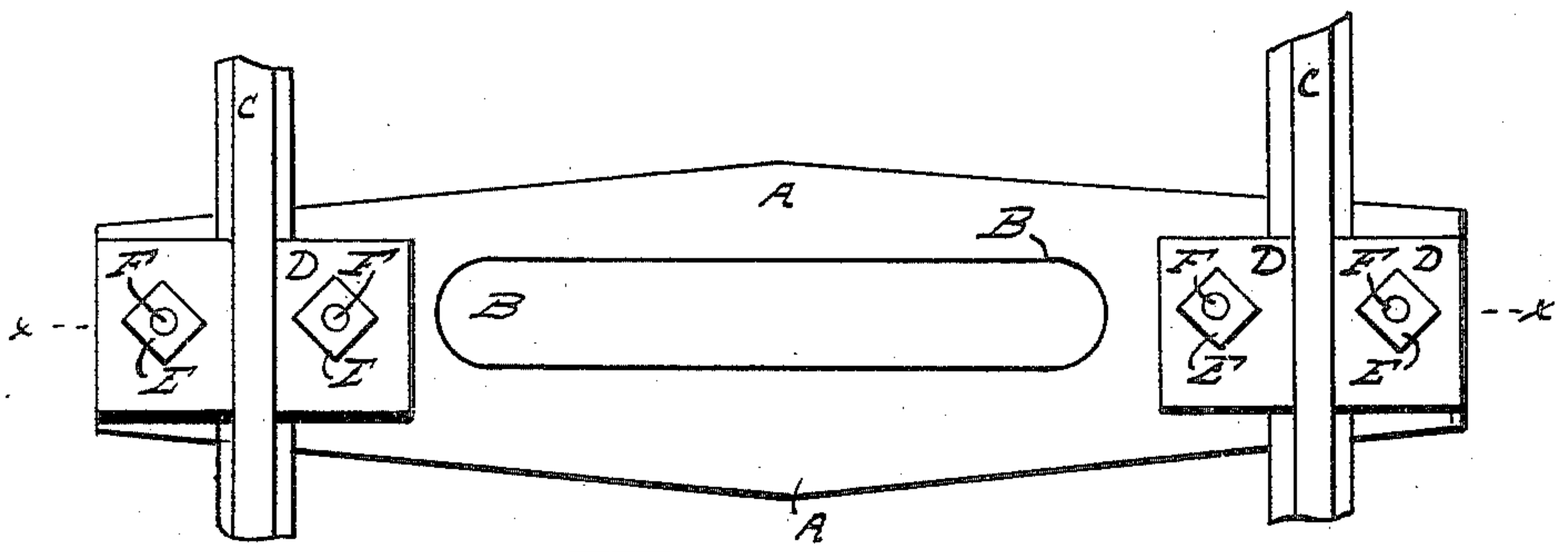

Fig. 1

Witnesses
Gertrude H. Anderson
Geo. St. Lothrop

Inventor
Elderslay D. De Clements

UNITED STATES PATENT OFFICE.

ELDERSLEY D. DE CLEMENTS, OF DETROIT, ASSIGNOR OF ONE-HALF TO HENRY P. GLOVER, OF YPSILANTI, MICHIGAN.

METALLIC TIE FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 446,405, dated February 10, 1891.

Application filed October 21, 1890. Serial No. 368,839. (No model.)

To all whom it may concern:

Be it known that I, ELDERSLEY D. DE CLEMENTS, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Metallic Ties for Railways, of which the following is a specification.

My invention consists in an improvement in metallic ties for railways, hereinafter fully described and claimed.

Figure 1 is a plan view of my improved tie. Fig. 2 is a vertical section on line *x x*, Fig. 1, and Fig. 3 is a perspective of some of the parts.

A represents the tie proper, made of a piece of sheet metal bent into a U shape and tapering on the sides from the center toward both ends, as clearly shown in Fig. 1. To impart additional stiffness to the tie, I strike up a portion of its center longitudinally, as shown at B, thus partially arching the top of the tie between the rails. This tapering form of the tie from the center toward both ends causes the earth, which fills the under side of the tie when in use, to hold the tie firmly against longitudinal displacement and gives the tie more stiffness than it would have if in uniform cross-section, while the part B, struck up in a reverse direction (approximately) from that of the flanges, adds materially to the strength of the tie.

C C represent the rails, which are secured to the tie by the following means:

G represents a block, whose upper side is adapted to fit the under side of the tie, and in which is formed a groove *g*, running in the longitudinal direction of the tie.

D D represent blocks, two to each rail, whose sides are beveled to fit over the rail-flange, and through which is a hole to permit the passage of a staple F. This staple lies in the groove *g* in block G, and has threaded ends to engage with nuts E, by means of which the staple F draws block G strongly against the upper side of the tie and draws blocks D strongly against the upper surface of the tie and the rail-flange, thus binding the rail firmly to the tie. The under side of block D, preferably, does not bear on the tie between staple F and the rail-flange, thus giving a stronger hold.

M represents a fish-plate, having the usual holes in it, and which may be formed integral with block D, thus increasing the rigidity of the rail-fastening.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A metallic railway-tie consisting of a U-shaped piece of sheet metal wider in the center than at its ends, substantially as and for the purposes set forth.

2. The combination, with tie A, of a rail C, block G, staple F, blocks D, and fish-plate M, formed integral with block D, substantially as shown and described.

ELDERSLEY D. DE CLEMENTS.

Witnesses:

JNO. F. MCKINLAY,

GERTRUDE H. ANDERSON.