

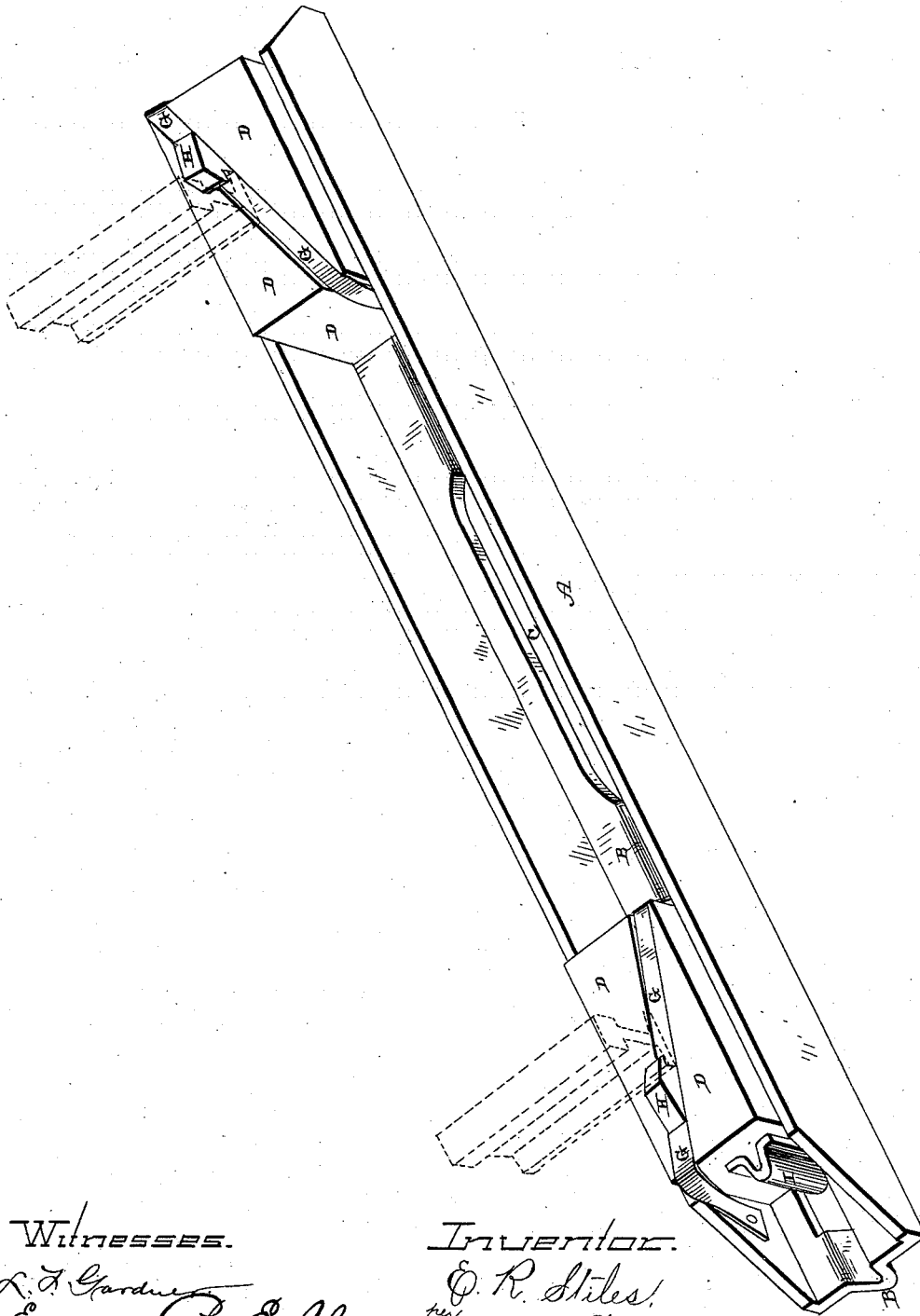
(No Model.)

E. R. STILES.

COMBINED METAL TIE AND FASTENING FOR RAILROADS.

No. 381,860.

Patented Apr. 24, 1888.



Witnesses.

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UNITED STATES PATENT OFFICE.

EDWARD R. STILES, OF LITCHFIELD, ILLINOIS.

COMBINED METAL TIE AND FASTENING FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 381,860, dated April 24, 1888.

Application filed December 31, 1887. Serial No. 259,514. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. STILES, of Litchfield, in the county of Montgomery and State of Illinois, have invented certain new and useful Improvements in a Combined Metal Tie and Fastening for Railroads; and I 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 pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in combined metal ties and fastenings for railroads; and it consists in the combination of a metal tie which is made U-shaped or hollow upon its upper side, so as to receive the wooden blocks or bearings for the rails and the ballasting material for the road-bed, with a metal band having one of the fastening devices for the rail formed as a part thereof, and which holds the wooden block in position in the tie, as will be more fully described hereinafter.

The object of my invention is to provide a metallic tie for railroads, and to use in connection therewith a wooden block as a bearing for the rail, the block being secured to the rail by one of the fastenings used to keep the rail in position.

The accompanying drawing represents a perspective of a tie and fastening which embodies my invention.

A represents the tie, which is rolled or cast in one single piece, and which is made U-shaped or hollow upon its top, so as to receive not only the blocks or bearings upon which the rails rest, but a portion of the ballasting material for the road-bed, so as to keep the tie firmly in position. The width and depth of the tie, the thickness of the metal, or the kind of metal employed in making the ties is a matter of choice and can be varied at will without departing from the spirit of my invention.

In order to give the tie the requisite strength vertically, and at the same time form a drain to carry away the moisture which may be caught by the tie, a suitable groove, B, of U shape or form, is formed along the center of the bottom of the tie, as shown. This groove acts as a brace for the tie at this point and gives it the requisite amount of strength to

resist strains of all kinds. Through the center of the bottom of the tie is formed an opening, C, of suitable length, and through which the ballasting material passes, so as to make connection with the earth and thus prevent any danger of the tie becoming displaced from the movement of the trains over it.

In each end of the tie is placed a wooden block, D, which forms a bearing for the rails and which is secured to the tie by means of bolts or spikes, which pass horizontally through them. Extending diagonally across the top of each of the blocks D is a groove which is deeper at its inner than its outer edge, and fitting in this groove is a rolled iron or steel band or strap, G, which has the fastening H for the outside of the rail formed as a part of it. The ends of this strap or band are secured to opposite sides of the tie in any suitable manner. This strap or band serves to secure the block in position, to assist to hold the rail in place, and as a bearing for the outside edge of the rail. The inside edge of the rail bears directly upon the block itself, while the outside edge bears upon the strap or band, and thus the outside edge of the rail is prevented from cutting into the block, thus causing or permitting the rails to turn outward from the weight of the trains upon them. The inside edge bearing directly upon the wooden blocks forms a cushion by which the noise or sound of the trains passing over is very materially deadened. The blocks need only be long or thick enough to form a solid bearing for the rails and spiking, and can be readily removed or replaced at any time in case they become injured from any cause.

In order to prevent any possibility of the blocks moving outward in the metal ties and thus getting the rails out of gage, there is stamped or punched up from the bottom of the tie A a lip or projection, I, which serves as a bearing for the outer end of the block, as shown. The rail can be spiked to the block on the outside in addition to the fastening on the strap.

Having thus described my invention, I claim—

1. The combination of a metallic U-shaped tie with the blocks and the diagonal bands which extend across their tops and are secured at opposite ends to vertical sides of the tie,

each of the bands having a fastening for one side of the rails formed as a part thereof, substantially as set forth.

2. The combination of the U-shaped tie; the
5 blocks placed therein and having grooves cut in their tops which are deeper in their inner than at their outer ends, and the metallic bands or ties which extend across the blocks and having their ends fastened to opposite sides of the
10 tie, the rails being made to bear directly upon

the bands at their outer edges and upon the blocks at their inner edges, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD R. STILES.

Witnesses:

JOHN M. FERGUSON,
THEO. LOESCHER.