No. 713,235. Patented Nov. 11, 1902.

T. J. MIDDLEBROOKS.

TIE STRUCTURE.

(Application filed June 26, 1902.)

(No Model.)

Fig. 1.

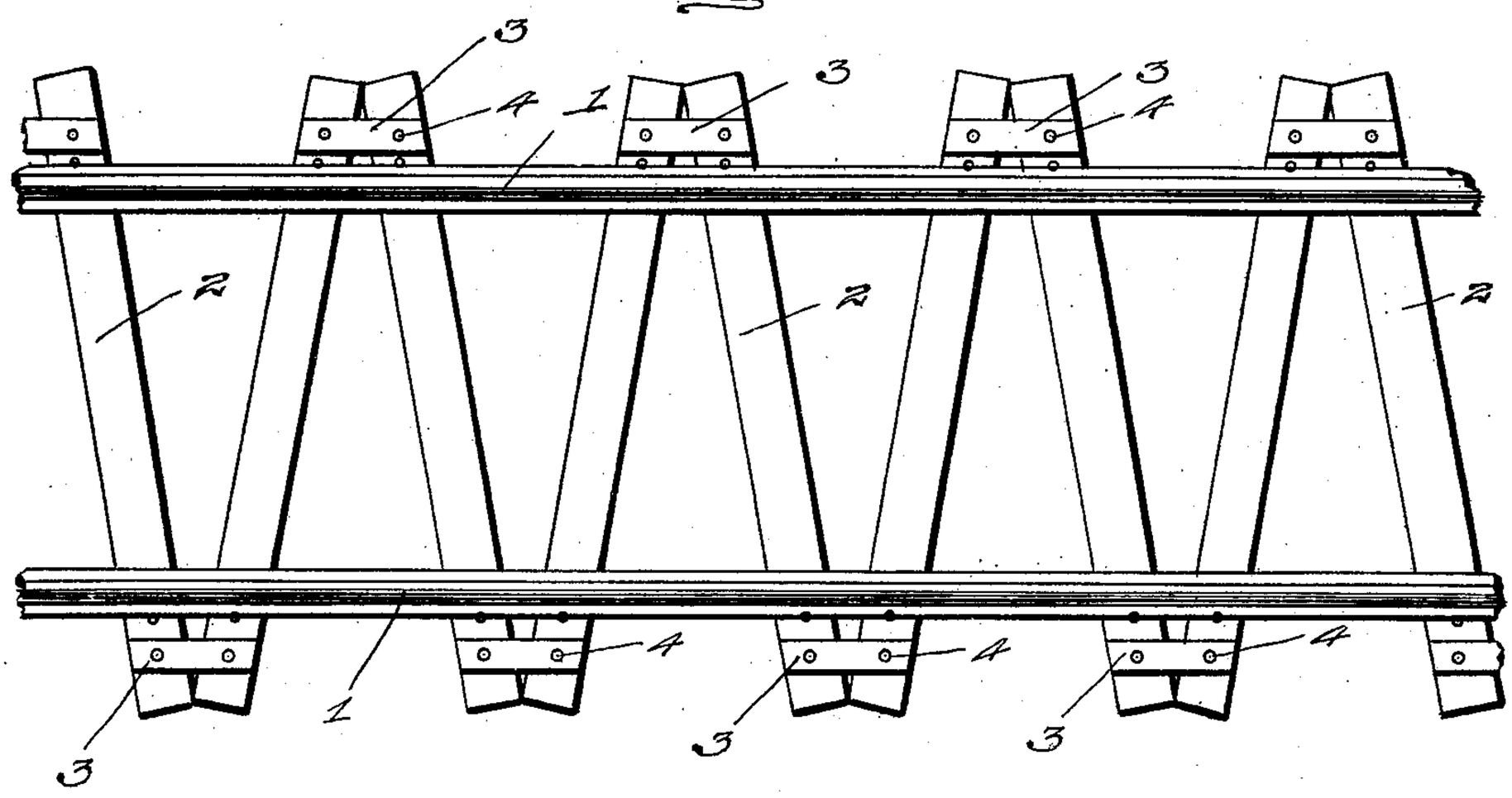
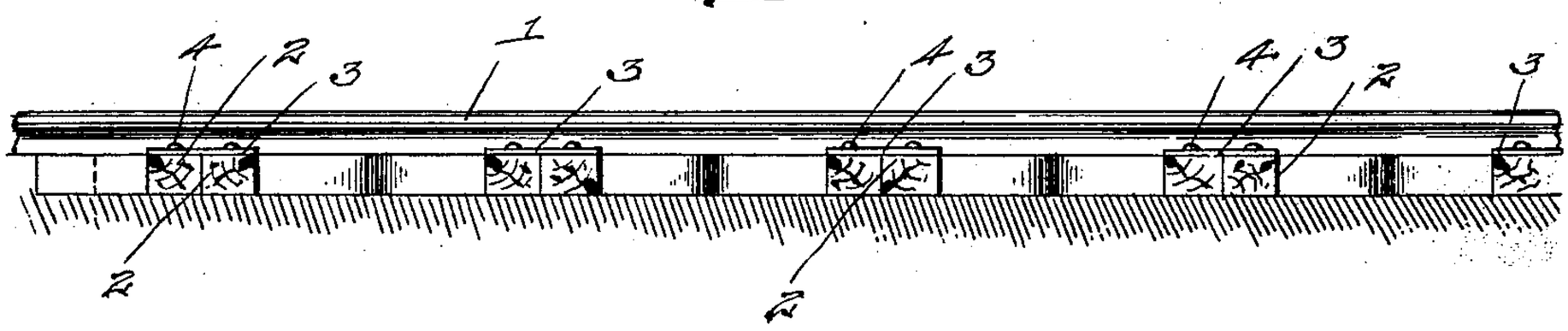


Fig. 2.



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UNITED STATES PATENT OFFICE.

THADDIUS JOSEPHUS MIDDLEBROOKS, OF PINCKARD, ALABAMA.

TIE STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 713,235, dated November 11, 1902.

Application filed June 26, 1902. Serial No. 113,296. (No model.)

To all whom it may concern:

Be it known that I, THADDIUS JOSEPHUS MIDDLEBROOKS, a citizen of the United States, residing at Pinckard, in the county of Dale and State of Alabama, have invented certain new and useful Improvements in Tie Structures; and I do 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 appertains to make and use the same.

My invention relates to the method of laying the ordinary wooden railroad-tie or cross-beam; and its object is to provide a supporting structure for the rails which will brace and hold them in line and prevent the road-bed from washing.

With the above and other objects in view, which will readily appear as the nature of the invention is better understood, said invention consists in certain novel features of construction and combination and arrangement of parts, which will be hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a railroad-track constructed in accordance with my invention. Fig. 2 is a side elevation thereof.

Referring now more particularly to the drawings, the numeral 1 denotes the rails, and 2 the ordinary wooden railroad cross ties or beams arranged diagonally to the length of the rails or in a zigzag manner, as shown in Fig. 1, so that they will in a measure brace each other and hold the rails in line. By this arrangement of the ties at angles other than ninety degrees to the length of the rail and zigzag or in alternate directions and at an angle to each other the road-bed will be prevented from washing and the liability of the rails spreading overcome.

By connecting the adjacent ends of the ties by the metallic cleats or plates 3, secured by spikes or bolts 4, the supporting structure will be greatly strengthened and the ties securely held together. This construction is particularly adapted for bridge and trestle work and for bad marshy places.

The angle at which the ties are laid is preferably between ten and twenty degrees; but I wish it understood that I do not limit myself to any particular angle.

It will be noticed that in my improved structure I use nothing but the ordinary cross ties or beams and metal plates or cleats, so that the same is very inexpensive of construction and durable in use.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, mode of operation, and advantages of my improved tie structure will be readily apparent without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

A rail-supporting structure comprising ordinary wooden ties with untrimmed ends arranged at angles to each other or in a zigzag or non-parallel manner with their ends converged and corners touching, and metallic plates arranged transversely across the upper surfaces of said converged ends and secured thereto by spikes or bolts, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

THADDIUS JOSEPHUS MIDDLEBROOKS.

Witnesses:
J. C. SILLS,
R. A. NEWMAN.