

(No Model.)

E. W. LANCASTER & B. L. BITNER.
METALLIC RAILWAY TIE.

No. 582,296.

Patented May 11, 1897.

Fig. 1.

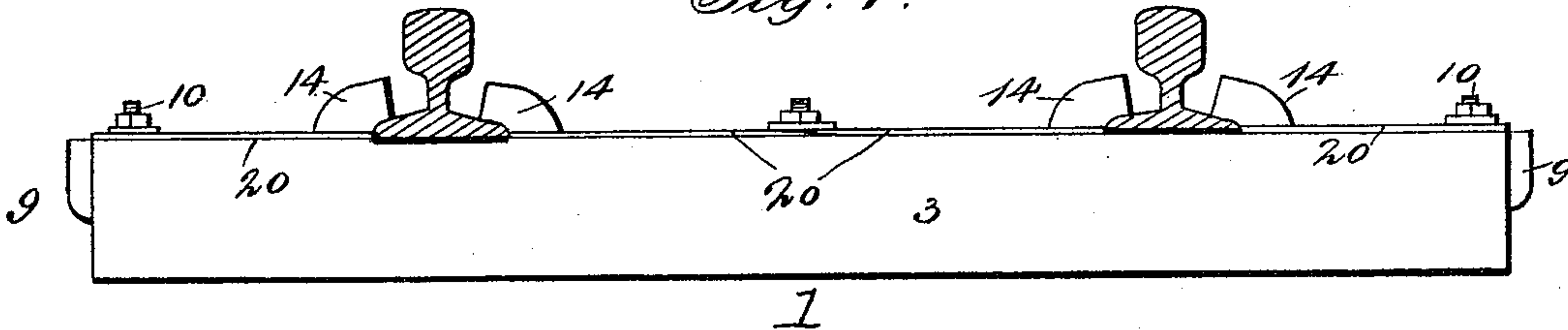


Fig. 2.

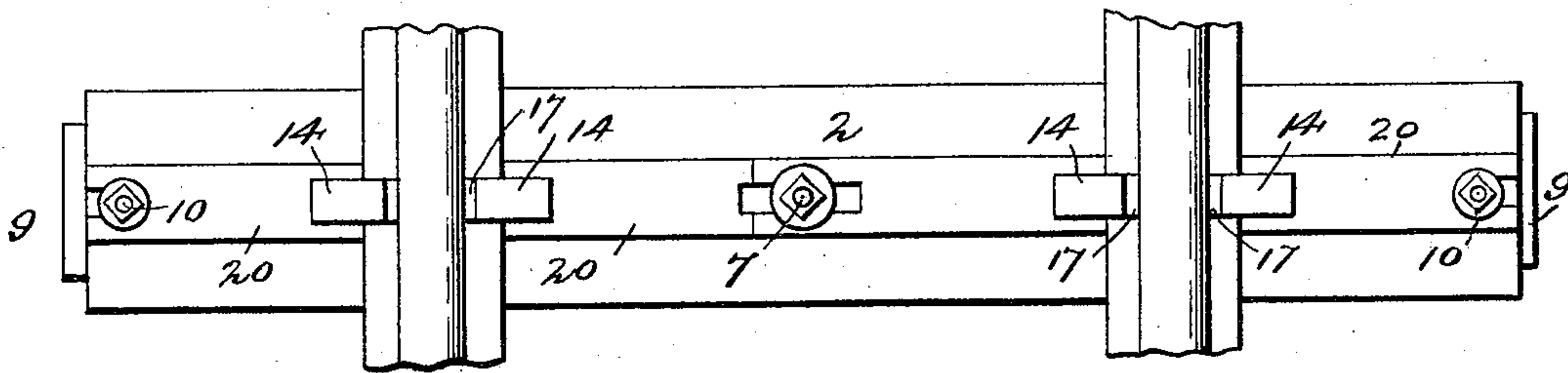


Fig. 3.

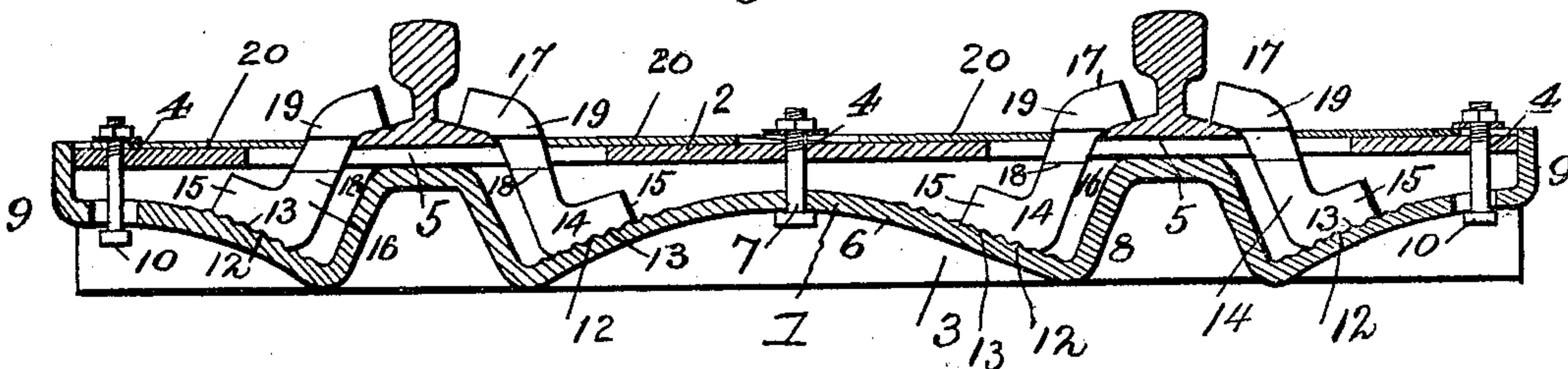
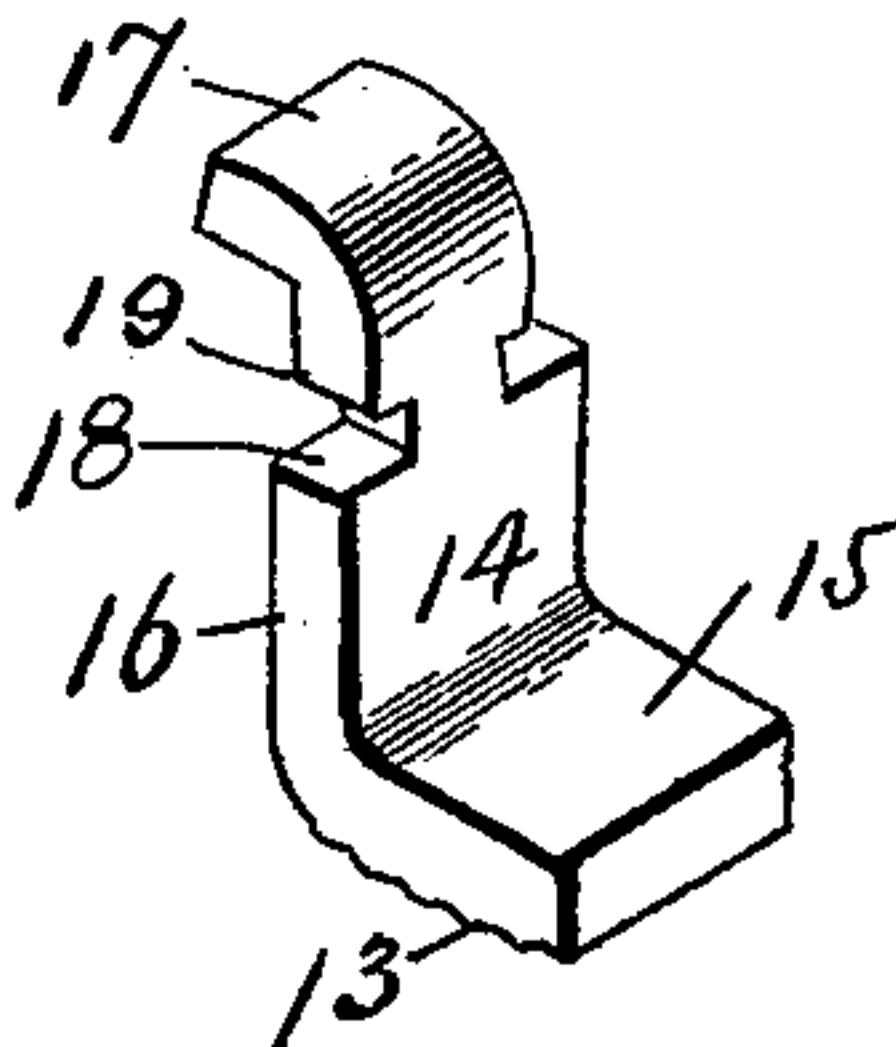


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWIN WILLOUGHBY LANCASTER AND BOYD LEE BITNER, OF GOSHEN,
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METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 582,296, dated May 11, 1897.

Application filed August 11, 1896. Serial No. 602,397. (No model.)

To all whom it may concern:

Be it known that we, EDWIN WILLOUGHBY LANCASTER and BOYD LEE BITNER, citizens of the United States, and residents of Goshen, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Metallic Railway-Ties; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Our invention relates to metallic railway-ties and to means for securing the rails thereto; and its object is to provide an improved construction of the same whereby we secure important advantages with respect to efficiency in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is an elevation of a metallic railway-tie and rail-fastener constructed in accordance with our invention. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view. Fig. 4 is a perspective view of one of the clips.

In the said drawings the reference-numeral 1 designates the metallic angle-tie, consisting of the horizontal portion 2, having each side turned downwardly at a right angle, forming flanges 3, which rest upon the road-bed. The said horizontal portion is formed with bolt-holes 4 and near each end with slots 5 for a purpose hereinafter described. Located underneath said horizontal portion is a spring-metal bar 6, having a central aperture for the passage of a screw-bolt 7, by which it is secured to the tie. Said bar from its center inclines downwardly toward its ends and is bent upwardly and then downwardly, forming a projection 8, which abuts against the under side of the tie just below the rail-seat. The ends of said bar are then extended horizontally outward and the extremities turn up at a right angle, forming lugs 9, which abut against the ends of the tie. Bolts 10 secure the bar near its ends to the tie. The upper side of said bar at each side of said projec-

tions is formed with a number of teeth 12, with which engage corresponding teeth 13 on the under side of clips 14. Each of these clips consists of the horizontal portion 15, on the under side of which the teeth are formed, and upwardly-extending inclined portion 16, cut away at its upper end, forming lugs 17 and shoulders 18, which lugs are also cut away, forming shoulders 19. There are four of these clips employed with the tie, two for each rail, and the lugs project up through the slots on the tie and engage with the base of the rail at opposite sides thereof. On the upper side of the rail are fastening-plates 20, having slots in the ends which engage with said lugs. They are also formed with slots at the opposite ends, with which the bolts which secure the spring-bar to the tie engage to hold the plates in place. The inner fastening-plates or those located between the rails have their inner or meeting ends beveled and overlapping each other and slotted for the passage of the central bolt 7, which also holds them in place.

A railway-tie and fastener constructed according to our invention will be very reliable and efficient in use, and the spring-bar seating on the road-bed at points underneath the rail-seat the weight of a train passing over the rails will tend to cause the clips to be more securely clamped to the rails, so as to hold the latter in place and prevent them from spreading. The clips can readily be engaged with and disengaged from the rails for repairs or other purposes.

Having thus described our invention, what we claim is—

1. The combination with a metallic angle railway-tie, of the spring-bar having a central aperture, and inclining downward from the center toward the ends and then bent upwardly and downwardly near each end forming projections abutting against the under side of the tie and the ends then extended outwardly and the extremities bent upward at right angles and the bolts for securing said bar to the tie, substantially as described.

2. The combination with a metallic angle railway-tie having slots near each end, the spring-bar secured thereto and formed with upward - extending projections abutting

against the tie, and the teeth on the inner side of said bar, of the clips engaging with the rail-base having teeth engaging with the teeth of said bar and means for fastening said clips in place, substantially as described.

3. The combination with a metallic railway-tie having slots near each end, the spring-bar secured thereto, having upwardly-extending projections near each end and the extremities bent up against the ends of the tie, and the teeth on the inner side of said bar, of the clips having teeth on their inner sides engaging

therewith and the upper ends cut away forming lugs and shoulders, and the slotted fastening-plates secured to the tie and engaging with said lugs, substantially as described.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

EDWIN WILLOUGHBY LANCASTER.
BOYD LEE BITNER.

Witnesses:

J. P. LANCASTER,
W. S. BITNER.