(No Model.) 2 Sheets—Sheet 1.

E. S. MOFFAT & T. G. WOLF.

RAILROAD TIE.

No. 470,585. Patented Mar. 8, 1892.

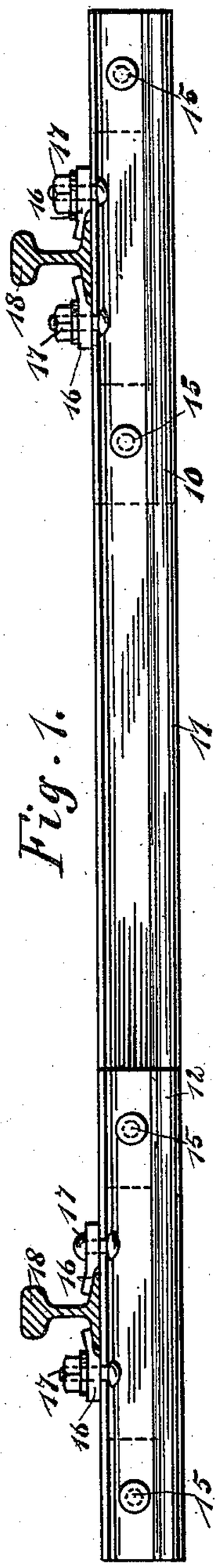

Fig. 1.

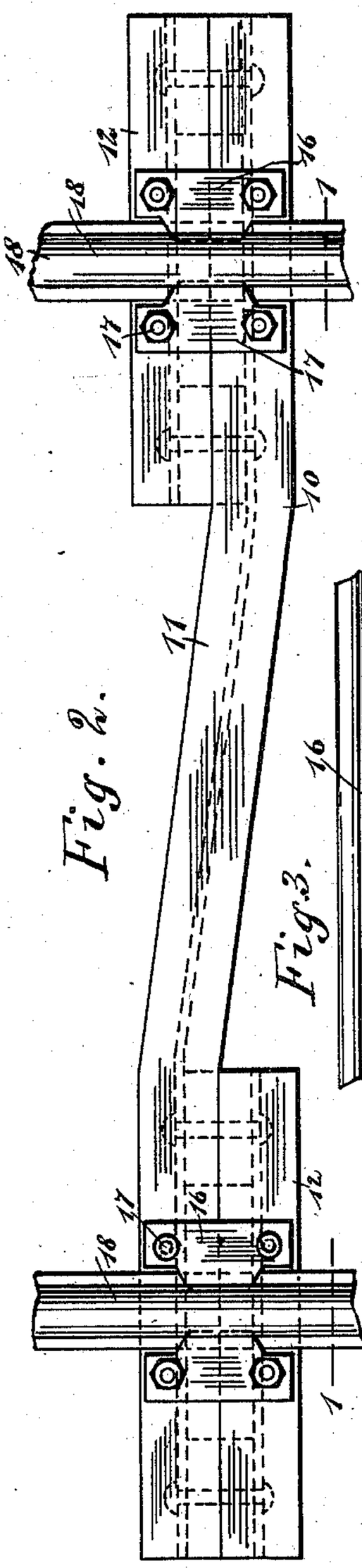

Fig. 2.

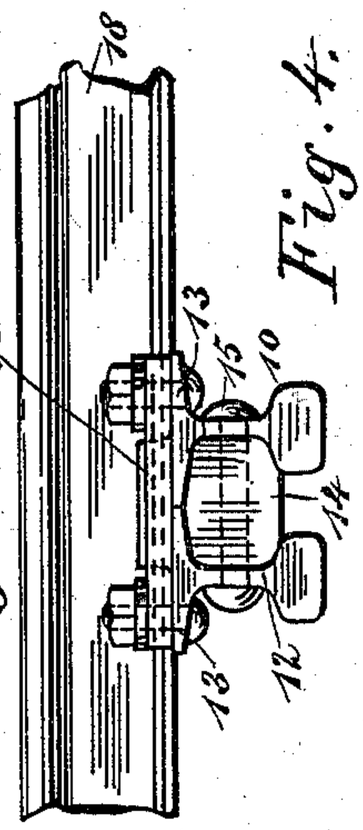

Fig. 3.

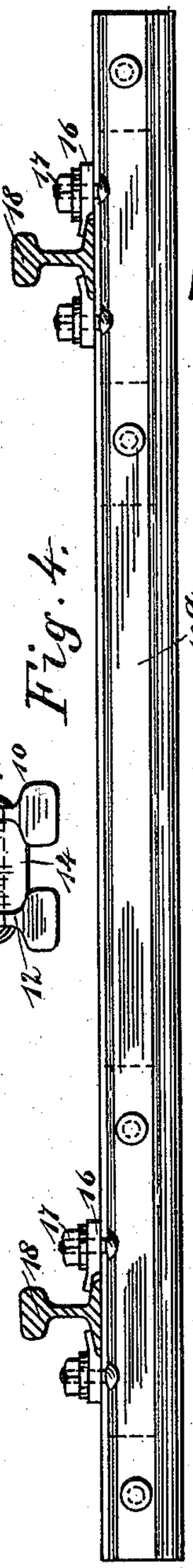

Fig. 4.

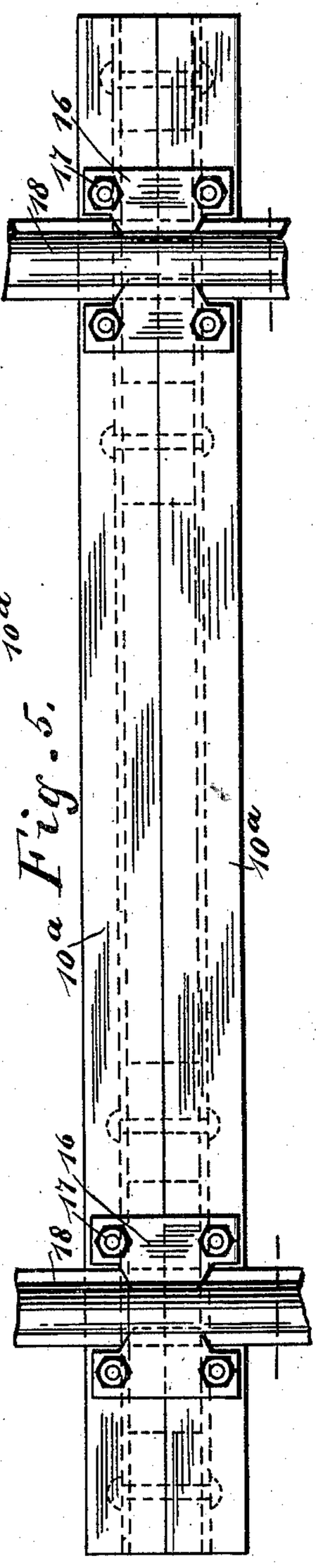

Fig. 5.

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(No Model.) 2 Sheets—Sheet 2.

E. S. MOFFAT & T. G. WOLF.

RAILROAD TIE.

No. 470,585. Patented Mar. 8, 1892.

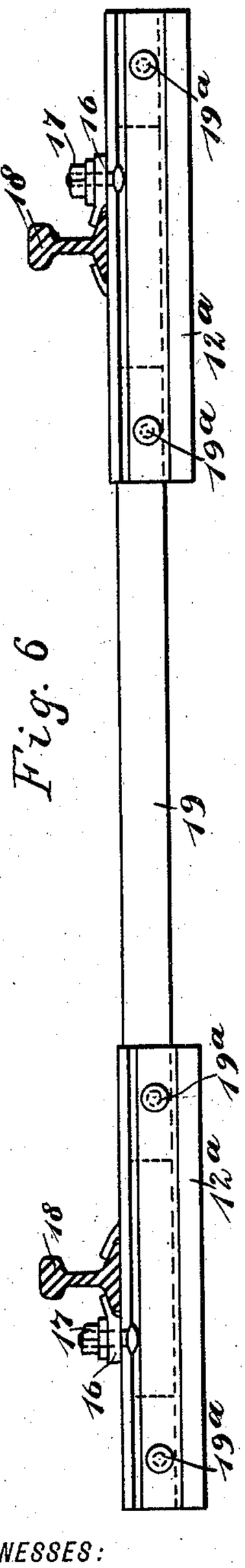

Fig. 6

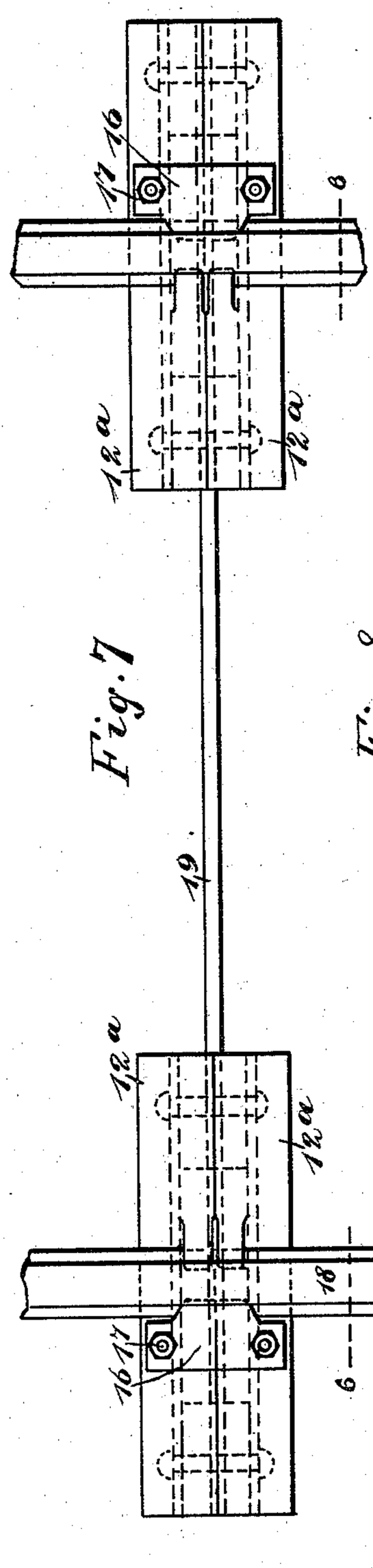

Fig. 7

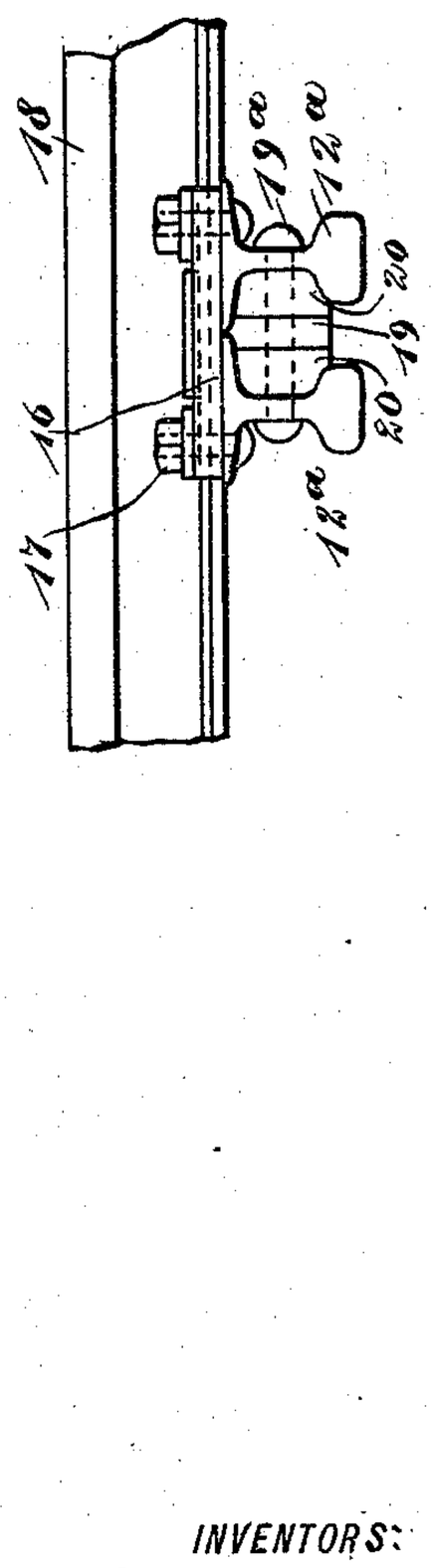

Fig. 8

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UNITED STATES PATENT OFFICE.

EDWARD S. MOFFAT AND THEODORE G. WOLF, OF SCRANTON, PENNSYLVANIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 470,585, dated March 8, 1892.

Application filed October 3, 1891. Serial No. 407,610. (No model.)

To all whom it may concern:

Be it known that we, EDWARD S. MOFFAT and THEODORE G. WOLF, both of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and Improved Railroad-Tie, of which the following is a full, clear, and exact description.

Our invention relates to improvements in railroad-ties; and the object of our invention is to produce a metallic tie containing comparatively little metal in proportion to its strength, which tie is extremely cheap, is durable and elastic, and may be easily applied to a railroad-track.

To this end our invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the railroad-tie embodying our invention, showing in section the track-rails supported thereon, the view being taken on the line 1 1 in Fig. 2. Fig. 2 is a plan view of the same. Fig. 3 is an end view of the same. Figs. 4 and 5 show in elevation and plan a modified form of the tie, and Figs. 6 and 7 show in plan and side elevation another modified form of tie, and Fig. 8 is an end view of the tie shown in Figs. 6 and 7.

The body portion 10 of the tie is formed of a section of an ordinary track-rail, which is bent in the middle, as shown at 11, the bent portion leaving the two end sections parallel, and the object of the bend is to prevent any possible shifting of the tie in the road-bed. The rail-section forming the body of the tie is placed with the flange uppermost, so as to form a good bearing-surface for the track-rails, and, moreover, this arrangement provides for tamping the tie easily, and exposes a thin surface to the action of the air, so that the tie will be affected but little by oxidation. The straight and parallel end portions of the tie are reinforced by short sections of rails 12, which are likewise arranged with their flanges 13 uppermost, and the two parts 10 and 12 are separated by space-blocks 14 and are firmly fastened together by bolts or rivets 15. The end portions of the section 10 and the reinforcing short sections 12 will thus form bearing-heads adapted to support the track-rails, and these heads are provided with clips 16, which are held thereon by bolts 17 and which are adapted to clasp the flanges of the track-rails 18; but, if desired, these clips may be struck up on the top surfaces of the bearing-head.

The construction above described is the preferred form of tie, as it contains but comparatively little metal; but, if desired, the tie may be formed of two parallel rail-sections 10^a, as shown in Figs. 4 and 5, which are fastened together in the same manner that the short sections 12 are secured to the section 10, and these parallel sections 10^a may be provided with suitable clips to hold the rails in the manner described.

Another modification is shown in Figs. 6 to 8, inclusive. In this case the bearing-heads upon which the rails rest have fastening-clips of the common kind and are formed of united short sections 12^a of rails which have their flanges uppermost and which are connected by a flat tie-bar 19. The tie-bar extends between the rail-sections of the heads and is held in place by bolts 19^a, which pass through the rail-sections and tie-bar and through space-blocks 20, which are placed between the rail-sections and tie-bar and which fit snugly against the inner sides of the rail-sections.

The tie constructed as described in this specification may be quickly and nicely adjusted in the usual way, and as the main portions of the ties are made from rail-sections old and worn rails may be utilized in making the ties, the rails being cut into sections of the right length. It is essential, however, that the rail-sections, when used as described, be placed in the road-bed with their flanges uppermost, as the flanges afford a secure bearing for the track-rails, and owing to the small amount of metal exposed the ties will not deteriorate rapidly through oxidation.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A railroad-tie comprising parallel sections of track-rails having their flanges uppermost and close together to form a broad flat bearing for the base of the track-rail, a spacing or filling within the space formed by bringing the rail-sections together, and bolts extending transversely through the webs of the rail-sections and the said filling, substantially as set forth.

2. A railroad-tie comprising a section of track-rail having a central bend therein and short rail-sections secured to the main section near the ends, the several rail-sections having their flanges uppermost, substantially as described.

3. A railroad-tie comprising connected pairs of parallel sections of track-rails with their bases or flanges uppermost and close together to form broad flat bearings directly on which the track-rails rest, the bases or flanges of the said rail-sections being apertured for the clip-bolts, a filling or spacing in the space formed between the two sections of each pair, and bolts passing therethrough and through the webs of the sections, substantially as set forth.

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