(No Model.)

J. W. HOLLIN & T. B. SMITH.

RAILROAD TIE.

No. 444,439. Patented Jan. 13, 1891.

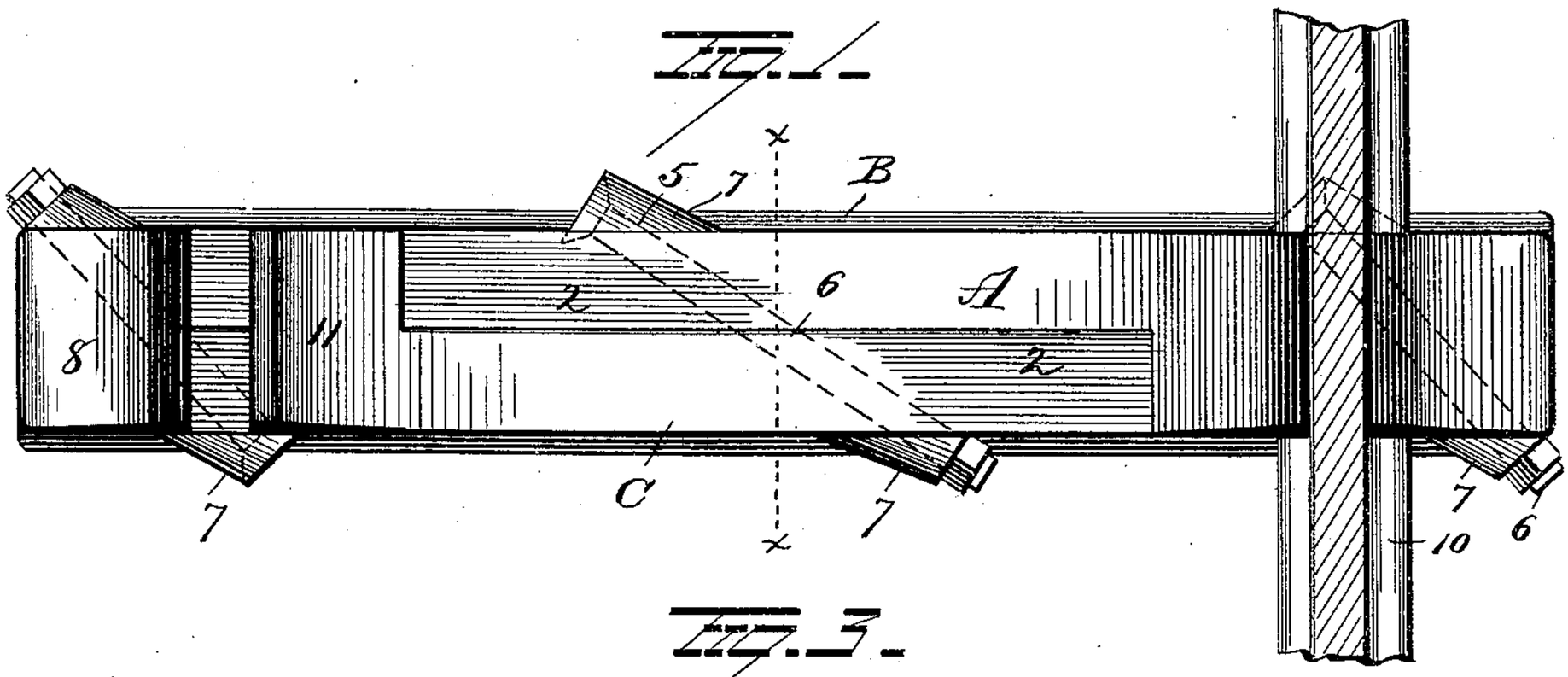


FIG. 3.

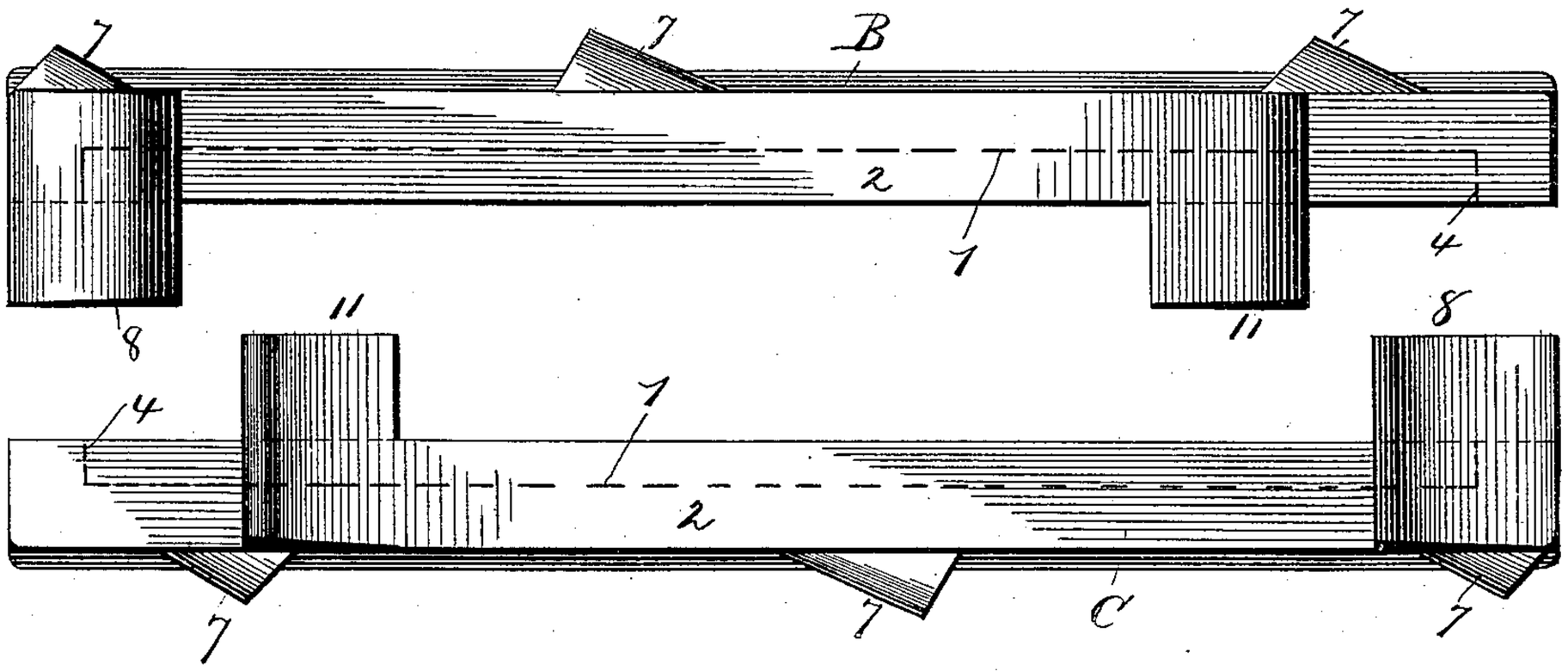
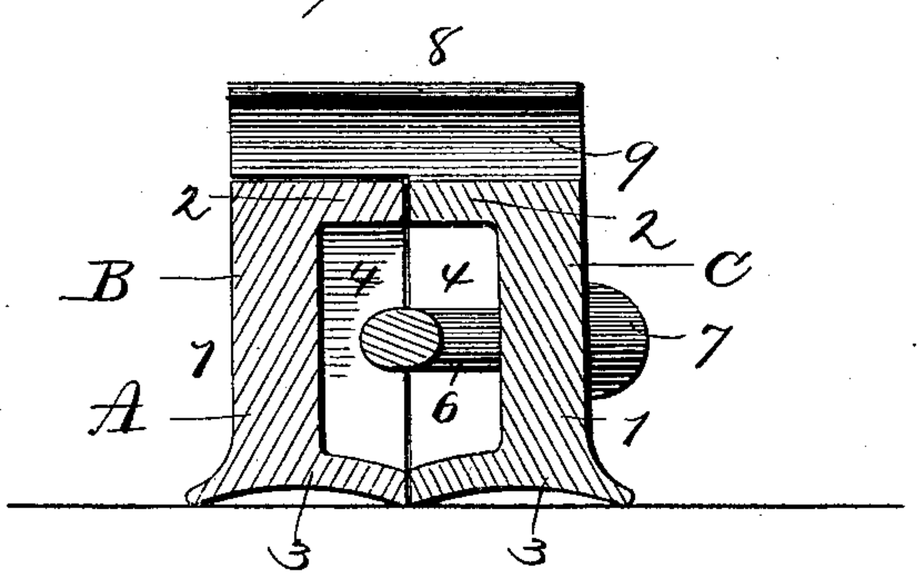


FIG. 2.



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UNITED STATES PATENT OFFICE.

JOHN W. HOLLIN AND THOMAS B. SMITH, OF NEW RICHMOND, INDIANA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 444,439, dated January 13, 1891.

Application filed July 9, 1890. Serial No. 358,161. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. HOLLIN and THOMAS B. SMITH, of New Richmond, in the county of Montgomery and State of Indiana, have invented certain new and useful Improvements in Railroad-Ties; and we 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 appertains to make and use the same.

Our invention relates to an improvement in railroad-ties, and more particularly to metallic ties, its object being to produce a metallic railroad-tie which shall be comparatively light and yet substantial in construction.

A further object is to so construct a metallic railroad-tie that rails may be secured thereto without the employment of fastening devices passing through the flanges of said rails.

A further object is to produce a sectional railroad tie so constructed that it may be easily and quickly fastened together and at the same time secure the rails thereto.

A further object is to so construct a sectional railroad-tie that the parts thereof may be secured together and the rails secured to said tie by means of the same securing devices.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of our improved tie. Fig. 2 is a sectional view on the line *x x* of Fig. 1. Fig. 3 is a view illustrating the sections of the tie separated.

A represents the tie, preferably made of metal and in two parts or sections B C. Each section B C comprises a side plate 1, top and bottom plates 2 3, and end blocks 4. The top plate 2 projects laterally from the longitudinal upper edge of the side plate 1 and produces in effect a lateral flange on the side plate. The bottom plate or flange 3 projects laterally from the bottom longitudinal edge of the side plate 1 and parallel with the top face or flange 2. The bottom plate 3 of each section B C also projects slightly beyond the outer face of the side plate, as shown in Fig. 2, and said lower face of each section is made concave, so that when the two sections are placed together, as presently explained, the bottom of the tie will produce a double-concaved appearance. In forming the sections of the tie it is preferable to make the side plates 1 thicker than the top and bottom, as the major portion of the strain or weight will be upon these plates, and it is also advisable to make the end blocks 4 thicker than the side plates.

Each section of the tie is provided with a series of three or more perforations 5 made in the side plates 1, said perforations preferably being obliquely disposed and the perforations of one section adapted to align with the perforations of the other section. Securing-bolts 6 are passed through the perforations 5, and to produce bearings for the heads on one end of said bolts and the nuts at their other ends ears 7 are made integral with the side plates 1 and adapted to surround said perforations. Thus it will be seen that when the two sections are placed together and bolted as just described a tie in the form of a rectangular box will be formed, which tie will be comparatively light, but of very substantial construction.

At one end of the section B of the tie a flange 8 is made integral with or secured to the top plate 2, and made to project laterally from said top plate a distance sufficient to extend across the top face of the section C of the tie, said flange being beveled from the outer end of the tie and provided at its inner end with a recess 9, adapted to fit one flange of a rail 10 placed on the tie. The other flange of the rail 10 is adapted to be embraced by a flange 11, similar in all respects to the flange 8, the flange 11 being made integral with or secured to the section C of the tie and adapted to extend across the section B. At the other end of the tie the end flange 8 is made on the section C and the flange 11 on the section B. Thus when the sections B C are placed together the flanges 8 11 interlock.

In practice the rails will be placed upon the tie before it is secured together, the flanges of the rails being inserted between the flanges 8 11 on the tie. When the rails are thus placed and the flanges 8 11 made to closely embrace the flanges of the rail, the bolts 6 are

passed through the perforations 5 in the sides of the sections B C and said sections tightly bound together. By placing the bolts 6 obliquely to the longitudinal axis of the tie, longitudinal as well as lateral movements of the sections will be prevented and the rail will be securely held between the flanges 8 11 without the necessity of the employment of other fastening devices.

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

1. A sectional railway-tie having overlapping flanges on each section adapted to embrace opposite flanges of rails, and bolts adapted to pass obliquely through the sections of the rail, whereby the sections are drawn together and the overlapping flanges are tightened on the flanges of the rails, substantially as set forth.

2. A sectional railway-tie having oblique holes therein adapted to receive bolts, whereby the sections are drawn together when the nuts on the bolts are screwed up, substantially as set forth.

3. A railroad-tie made in two sections, diagonally-disposed bolts passing through said sections and securing them together, and flanges on said sections adapted to embrace the flanges of the rails, substantially as set forth.

4. A railroad-tie made in two sections secured together, the bottom of each section being concaved, bolts for securing the sections together, and flanges on the tops of said sections adapted to embrace the flanges of the rails, substantially as set forth.

5. A railroad-tie made in two sections, diagonally-disposed bolts passing through said sections, said bolts having heads at one end and nuts at the other end, and shoulders on the sections of the tie against which said nuts and heads are adapted to abut, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

JOHN W. HOLLIN.
THOS. B. SMITH.

Witnesses:
JOHN R. ROBINSON,
THOS. J. MUNHALL.