No. 799,357. PATENTED SEPT. 12, 1905.

U. G. POTTS.

METALLIC RAILROAD TIE.

APPLICATION FILED MAY 26, 1905.

Fig. 1.

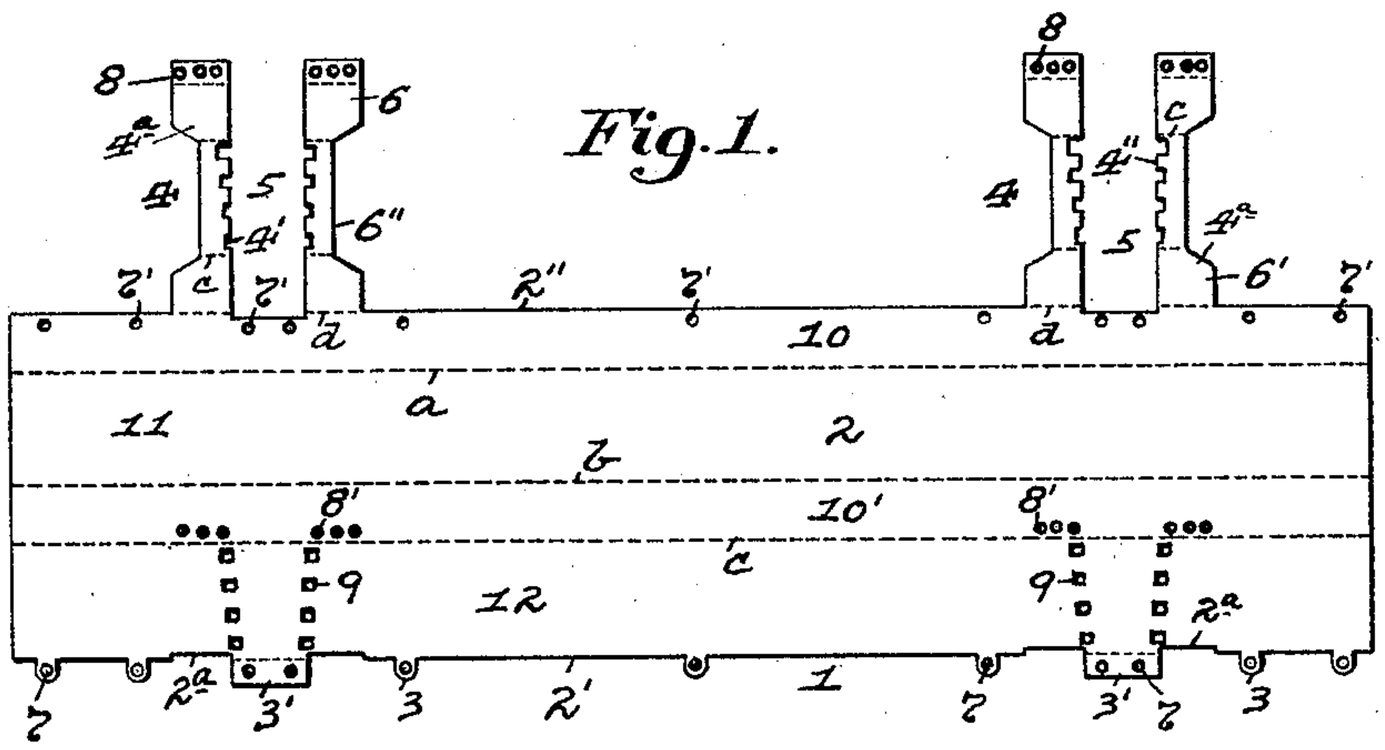


Fig. 2.

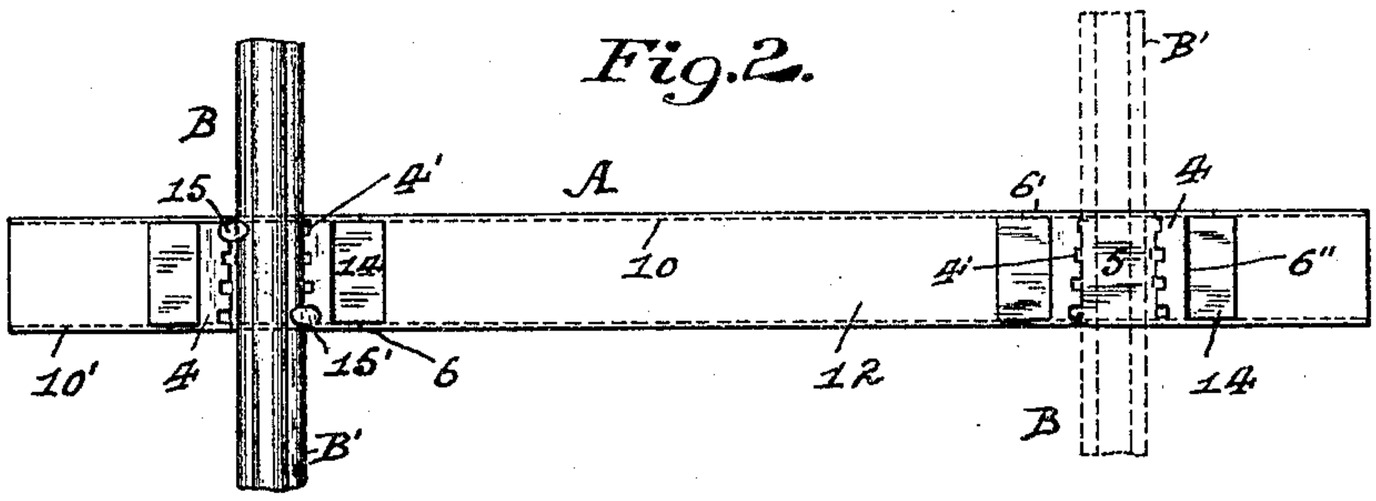


Fig. 3.

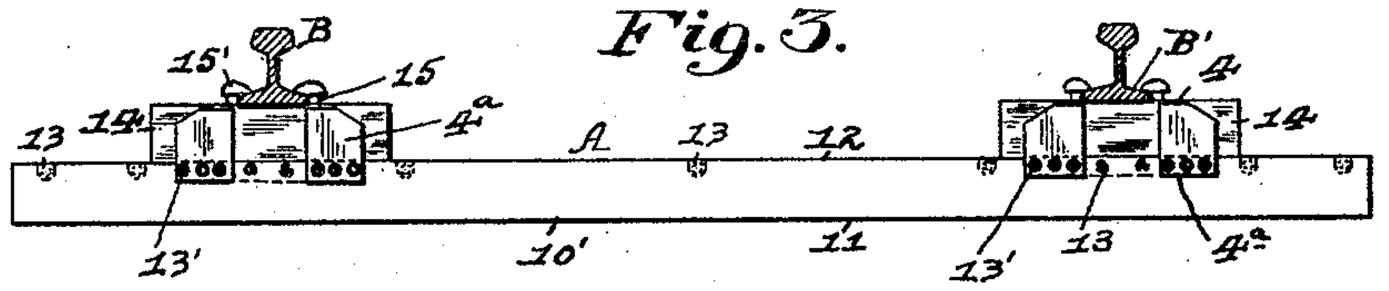


Fig. 4.

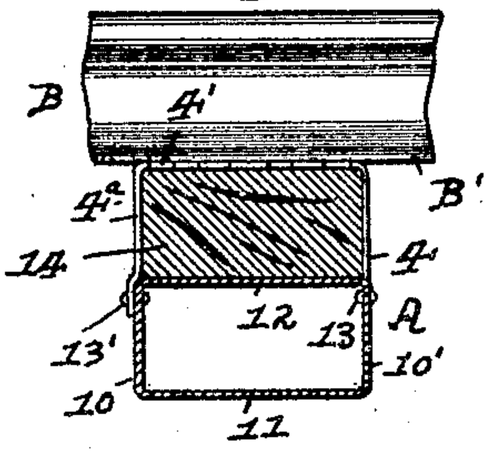


Fig. 5.

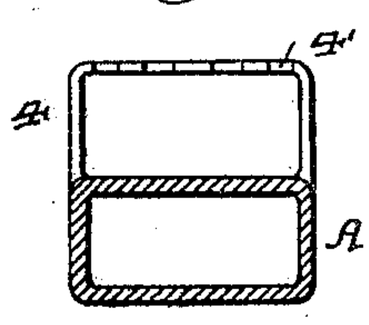
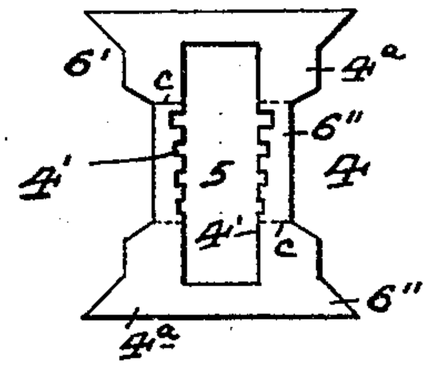


Fig. 6.



WITNESSES

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METALLIC RAILROAD-TIE.

No. 799,357. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed May 26, 1905. Serial No. 262,437.

To all whom it may concern:

Be it known that I, URIAH G. POTTS, a resident of Martinsburg, in the county of Berkeley and State of West Virginia, have invented a new and useful Improvement in Metallic Railroad-Ties; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to railroad-ties, and has special reference to such ties as are formed from or of metal.

The object of my invention is to provide a tie which will be simple and durable in its construction and by means of which the rails can be firmly clamped, easily adjusted or removed, as well as one which can also be cut or stamped from a single piece of sheet metal and bent and folded in such a manner as to form a complete and efficient tie for the purpose.

My invention consists, generally stated, in the novel arrangement, construction, and combination of parts, as hereinafter more specifically set forth and described, and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved metallic railroad-tie, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a plan view of the blank cut from a plate of sheet metal for forming my improved metallic railroad-tie. Fig. 2 is a top view of the tie in its completed form, showing one of the rails secured at one side of the same. Fig. 3 is a side view of the tie, showing both rails secured thereto and in cross-section. Fig. 4 is an enlarged cross-section taken through the rail-supporting block and at one side of the rail. Fig. 5 is a cross-section of another form of the tie, and Fig. 6 is a plan view of a blank for a bridge portion for use on another form of tie.

Like symbols of reference herein indicate like parts in each of the figures of the drawings.

As illustrated in the drawings, A represents my improved metallic railroad-tie, which is preferably formed from a sheet-metal blank 1 of the shape and size required, and such blank is cut or stamped from a plate of sheet metal to form the body portion 2, and from one of the side edges 2′ extend the securing-lugs 3 3′, while from the opposite side edges 2″ extend the bridge portions 4. The bridge portions 4 have the spaces 5 between them, and such portions are enlarged at their outer and inner ends, as at 6 and 6′, respectively, thereby forming the narrow central portions 6″ on said portions 4, and such central portions 6″ are provided with a series of notches 4′, which notches are preferably increased in their depth outward from the side edges 2″. After the blank 1 has been thus formed bolt or rivet holes 7 are punched or drilled through the lugs 3 3′, and like holes 7′ are punched or drilled through the body 2 of said blank, at the side edges 2″ thereof and opposite the holes 7 in the lugs 3 3′. Similar holes 8 are also punched or drilled through the enlarged ends 6 of the bridge portions 4, and like holes 8′ are also punched or drilled through the body 2 of the blank 1 opposite the holes 8, while holes 9 are punched in said body 2, which holes 9 extend for some distance from recesses 2^a, formed in the side edges 2′ of said body and adjacent to the lugs 3′, and are preferably formed in a line extending outwardly from said side edges 2′.

After the blank 1 has been formed as above described it can be bent in any suitable manner or by any suitable means upon the lines *a*, *b*, and *c* indicated on the body portion 2 of said blank, as shown in Fig. 1, which will form one side 10 of the hollow tie A between the line *a* and the side edges 2″, the bottom 11 of said tie between the lines *a* and *b*, the opposite side 10′ between the lines *b* and *c*, and the top 12 of the tie between the line *c* and the outer side edges 2′ of the blank. These parts for forming the tie A can now be secured together by bolts or rivets 13 passing through the holes 7 in the lugs 3 3′ and through the holes 7′ in the sides 10, after which the bridge portions 4 can be bent over the top 12 of the tie on the lines *d*, connecting the side edges 2, and on the line *c*, so that the enlarged ends 6 on said portions 4 can form the sides 4^a, and be secured within the recesses 2^a in the sides 10 of the tie by bolts or rivets 13′ passing through the holes 8 in said ends 6 and through the holes 8′ in the said sides 10′.

The tie A is now complete and ready for use, and when set in position blocks 14, preferably formed of wood, are placed on the top 12 of the tie and under the bridge portions 4 thereon, so that the rails B can be placed on said blocks and within the spaces 5 of said bridge portions, after which said rails can be secured to said tie by means of the spikes 15

being driven down through the notches 4′ in said bridge portions 4 and through said blocks and holes 9 in the top 12 of said tie, so that the heads 15′ of said spikes will engage in the usual manner with the base B′ of said rails. When it is desired to overcome the use of rivets or bolts, my improved tie can be formed by a hollow metal casting, as in Figs. 5 and 6, in which case the bridge portions 4 can be formed separate from the tie and be cast within said tie when it is made, and when so used such bridge portions can be formed to shape in any manner, as by a casting, forging, or cutting and bending from a piece of sheet metal, as desired.

It will thus be seen that my improved hollow metallic tie when made from sheet metal can be formed to shape easily and quickly without the employment of skilled labor or complicated machinery, and being formed in one piece it will be evident that it will be strong and durable and will give sufficient resiliency when trains are passing over the same, while at the same time allowing for expansion and contraction of the tie and rails. It will also be seen that, if desired, concrete, cement, or other material can be placed within and around the tie in order to give the tracks formed by the rails a firm support on the tie, and by means of the graduated notches in the bridge portions of the tie it will be evident that the rails can be easily adjusted to the proper gage or reset when they have become worn.

It will be obvious that the spaces under the bridge portion of the tie for the reception of the blocks can be tapered slightly on their sides formed by the enlarged ends, so that such blocks can be wedged to place in case they should wear or become loosened from any cause, while various other modifications and changes in the design and construction of the tie may be resorted to without departing from the spirit of my invention or sacrificing any of its advantages.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A hollow metallic railroad-tie having bridge portions thereon and extending above the same, to form spaces thereunder, and blocks on the top of said tie fitting under said bridge portions and within said spaces for supporting the rails.

2. A hollow metallic railroad-tie having bridge portions above the same provided with notches therein, blocks on said tie and fitting under said bridge portions for supporting the rails, and spikes passing through said notches and into said blocks to engage the bases of said rails for holding said rails in place.

3. A hollow metallic railroad-tie having bridge portions above the same and provided with graduated notches therein, blocks on said tie and fitting under said bridge portions for supporting the rails, and spikes passing through said notches and into said blocks to engage the bases of said rails for holding said rails in place.

4. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent and folded, and lugs formed on the side edges of the side portions of said blank for securing the tie together when folded.

5. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent and folded, and lugs formed on the side edges of the side portions of said blank for being secured to the sides of said tie when folded.

6. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, bridge portions on said tie and secured thereto, and blocks on said tie and fitting under said bridge portions for supporting the rails.

7. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, bridge portions on and secured to said tie, and provided with notches therein, blocks on said tie and fitting under said bridge portions for supporting the rails, and spikes passing through said notches and into said blocks to engage the bases of said rails for holding said rails in place.

8. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, bridge portions on and secured to said tie, and provided with graduated notches therein, blocks on said tie and fitting under said bridge portions for supporting the rails, and spikes passing through said notches and into said blocks to engage the bases of said rails for holding said rails in place.

9. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, and bridge portions formed on said blank which are bent, folded and secured to said tie.

10. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, and bridge portions formed on said blank which are bent, folded and secured to the sides of said tie.

11. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, bridge portions formed on said blank which are bent, folded and secured to the tie, and blocks on said tie and fitting under said bridge portions for supporting the rails.

12. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, bridge portions formed on said blank which are bent, folded and secured to the tie, and are provided with openings or notches in the

same, blocks on said tie and fitting under said bridge portions for supporting the rails, and spikes passing through said notches and into said blocks to engage with the base of said rails for holding said rails in place.

13. A hollow metallic railroad-tie formed from a single piece or blank of sheet metal which is bent, folded and secured together, bridge portions formed on said blank which are bent, folded and secured to the tie and are provided with graduated notches in the same, and spikes passing through said notches and into said blocks to engage with the base of said rails for holding said rails in place.

In testimony whereof I, the said URIAH G. POTTS, have hereunto set my hand.

URIAH G. POTTS.

Witnesses:

J. N. COOKE,

WALTER FAMARISS.