

APPLICATION FILED SEPT. 6, 1910.

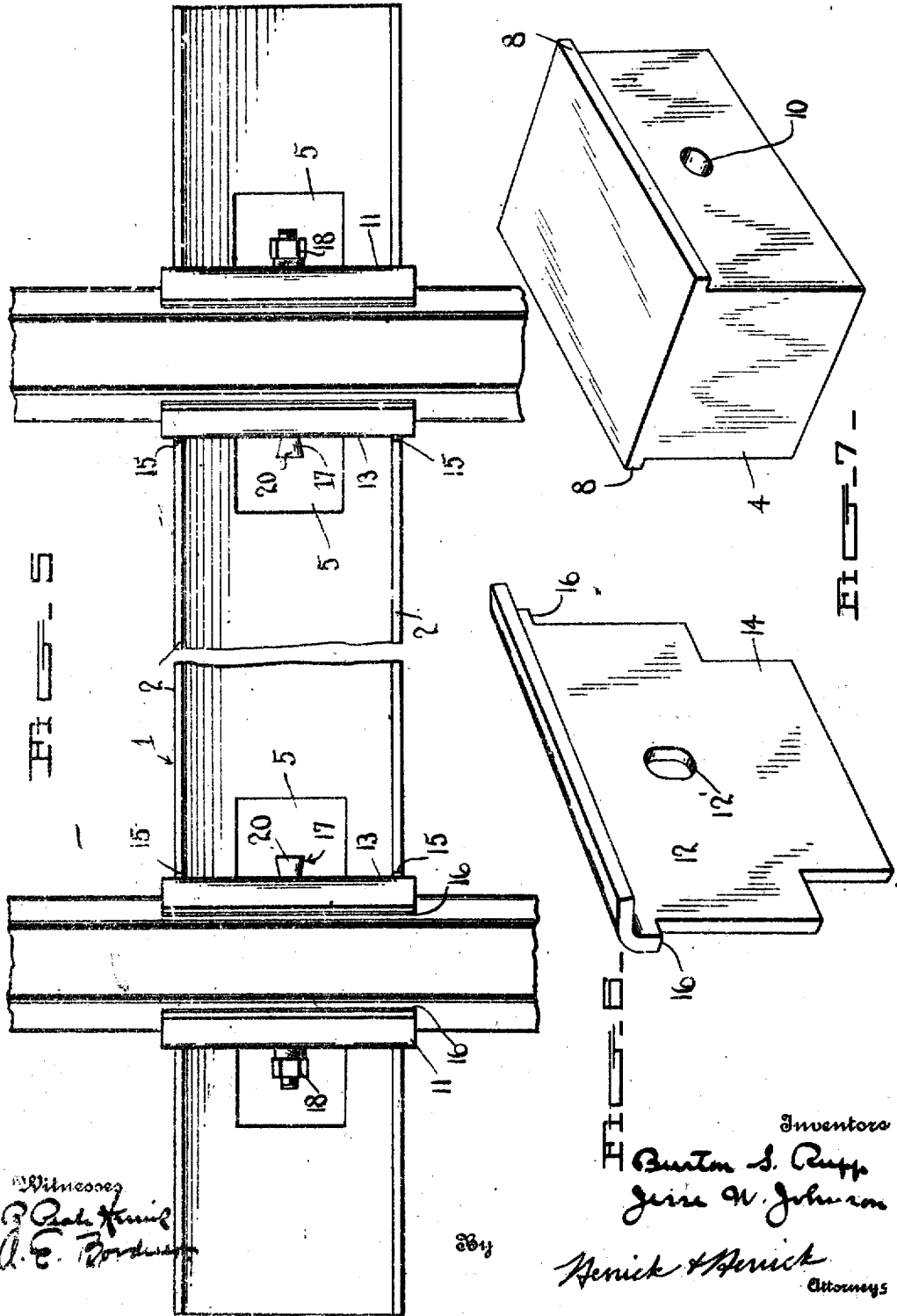
3 SHEETS--SHEET 1.



B. S. RUPP & J. W. JOHNSON.
METALLIC TIE.
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1,005,317.

Patented Oct. 10, 1911.
3 SHEETS—SHEET 2.



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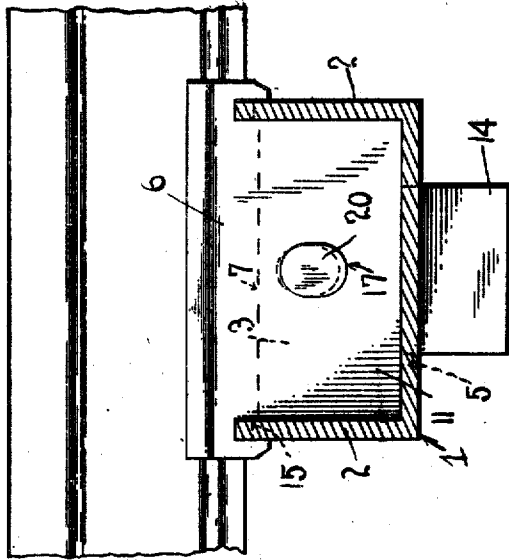


FIG. 11 -



FIG. 10 -

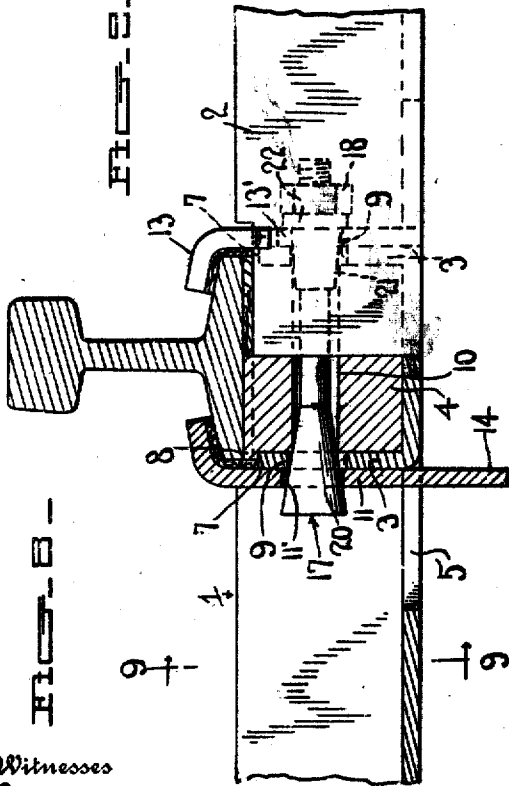
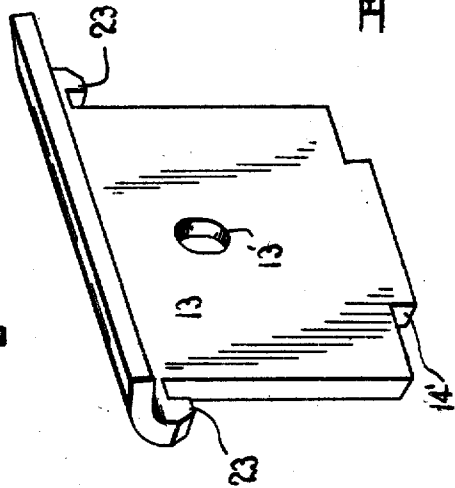


FIG. 12 -



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UNITED STATES PATENT OFFICE.

BURTON S. RUPP AND JESSE W. JOHNSON, OF SALT LAKE CITY, UTAH.

METALLIC TIE.

1,005,317.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed September 6, 1910. Serial No. 580,557.

To all whom it may concern:

Be it known that we, BURTON S. RUPP and JESSE W. JOHNSON, citizens of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Metallic Ties, of which the following is a specification.

This invention relates to metallic railway ties, and comprises a metallic cross-tie, bearing blocks for the rails seated in said tie, and clamping plates arranged to securely and readily fasten the rails in position on said bearing blocks.

The objects of our invention are to provide a railway tie of the class described, which is extremely simple in construction and inexpensive in manufacture, and one which, while comprising a plurality of parts can be readily assembled to clamp the rails in position without the use of the usual spikes.

Another object of our invention is to provide a railway tie having clamping means and bearing blocks which can be readily replaced without the removal of the cross tie or disturbance of the rails.

With these and other objects in view, our invention comprises a hollow metallic tie, bearing blocks arranged at suitable distances therein, clamping plates adapted to be fastened to said blocks and to secure the rails thereon, and fastening means for securely but detachably holding said clamping plates in position on said block.

In the accompanying drawings, Figure 1 is a side elevation of one form of our invention, showing the rails in section; Fig. 2 is a perspective view of a clamping plate used on the outside of the rails; Fig. 3 is a sectional view of the coned sleeve used on the locking bolt; Fig. 4 shows an end elevation thereof; Fig. 5 illustrates a top plan view; Fig. 6 shows a perspective view of another form of outside clamping plate; Fig. 7 is a perspective view of the bearing block; Fig. 8 shows a view, partly in section and partly in elevation, illustrating the method of securing the clamping plates and the rails to the bearing block; Fig. 9 is a transverse section on line 9—9 of Fig. 8, looking in the direction indicated by the arrows; Fig. 10 shows a perspective view of the inside clamping plate, and Fig. 11 is a side elevation of the packing material or wearing plate used between the rails and the bearing blocks.

Referring to the drawings, 1 represents the metallic tie, having the up-turned sides 2, and forming a shell-like structure. Stamped from the bottom of the tie are flanges 3 integral therewith and bent up in such manner as to serve for retaining the bearing block 4. This block is preferably of wood and serves to support and cushion the rail. These flanges leave holes, designated at 5, in the bottom of said tie, which holes serve to receive extensions of the clamping plates, as hereinafter described. The flanges 3 and bearing block 4 are provided with holes 9 and 10 respectively for the reception and retention of locking means hereinafter described, the flanges 3 fitting against the sides of the block and their respective holes registering. The upper edges 7 of the flanges terminate just short of the edges or projections 8 at the top of the bearing block.

For securing the rails to the tie and to the bearing blocks, we use the clamping plates 11, 12, and 13, which are provided with openings 11', 12', and 13' respectively, corresponding to the holes 9 and 10 in the flanges and bearing blocks. The outside plate 11 has the extension 14 which fits into the opening 5, and which is embedded in the ground beneath the tie and thus serves to prevent longitudinal movement or creeping thereof. The extension 14' of the inside clamping plate fits into the opening 5 between the rails and the clamping plate as a whole is held against movement longitudinally of the tie by its engagement against the edges 15. The upper edges of the sides of the tie are cut away where the clamping plates are secured, as indicated at 15, and the extensions 16 of the clamping plate fit therein.

To assemble the several parts of our invention and secure the rail to the tie, the block 4 is placed between the flanges 3 and the wearing plate 16' is inserted between the rail and the bearing block, as shown in Figs. 1 and 8. Plate 11 is then driven into the ground until the rail is securely fastened to the block and the opening 11' registers with the holes 9 and 10 of the flanges and bearing block. The bolt 17 is now inserted through the plate, flange and block, and the inside plate 13 is placed in position. The nut 18 is then tightened until the several parts are securely locked together. Bolt 17 is provided with the coned head 20, elliptical in cross section, and the sleeve 21 having the flange

22. The conical portion of the sleeve enters the holes 9 of the flanges, said holes conforming substantially to the shape of the head 20 and sleeve 21, and is prevented from turning therein by the elliptical shape of the sleeve and head.

It will be noted that the clamping plates shown in Figs. 2 and 10 differ slightly from the clamping plate shown in Fig. 6. In these Figs. 2 and 10 the lugs 16 and 23 are provided at the ends of the clamping plate, said lugs being arranged to fit over the sides 2 of the tie. When this form of clamping plate is used, it is not necessary to have the sides 2 cut away as at 15, but ordinarily this may be done regardless of the form of clamping plate used.

From the above it will be seen that we have provided an extremely simple and durable tie, and one to which the rails may be fastened without the use of the usual spike. The tie may be readily taken apart to insert new packing material or wearing plates or to replace a worn-out portion. Ordinarily we propose to manufacture our tie of rolled steel, but stamped metal may be used for the several parts.

What we claim is:—

1. A metallic railway tie comprising a body portion, clamping means for the rail, which directly engage the rail and an extension on said clamping means adapted to be embedded in the earth.

2. A metallic railway tie comprising a body portion, clamping means for the rail which directly engage the rail, and an integral extension on said clamping means adapted to be embedded in the earth below the level of said tie.

3. A railway tie comprising a metallic shell of substantially U-shape, a bearing block for the rail and clamping plates provided with inturned upper portions adapted to engage the base flanges of a rail, said clamping plates having downwardly extending lugs adapted to hook over the upper edges of the said metallic shell, and a bolt passing through said clamping plates and through upstanding members of said shell, said bolt having a non-circular head, and a non-circular sleeve slidable thereon, said head and sleeve engaging non-circular openings in said shell.

4. A railway tie comprising a metallic shell of substantially U-shape, a bearing block for the rail, and clamping plates provided with inturned upper portions for engagement with the base flanges of the rail, said clamping plates having downwardly extending lugs adapted to hook over the upper edges of said metallic shell, integral upturned members struck from the bottom of the metallic shell which lie inside of said clamping plates, and a fastening device traversing said bearing block, said upturned members and said clamping plates binding all of said members together, one of said clamping plates having a downward extension which projects below the shell for engagement with the ground beneath said shell.

In testimony whereof we affix our signatures in presence of two witnesses.

BURTON S. RUPP.
JESSE W. JOHNSON.

Witnesses:

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