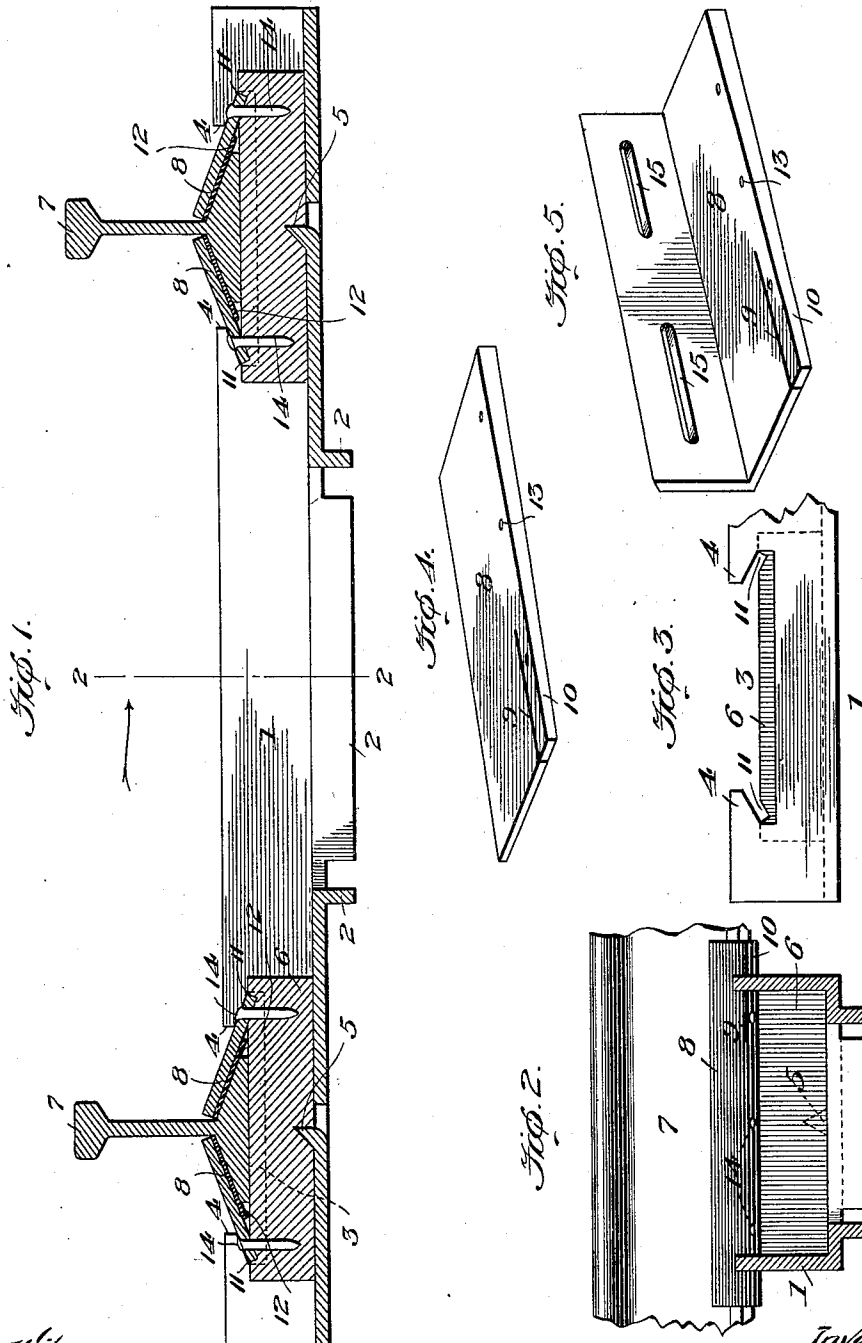


O. S. CLARK.
 COMBINED METALLIC TIE AND CHAIR.
 APPLICATION FILED FEB. 13, 1911.

1,007,337.

Patented Oct. 31, 1911.



Witnesses

[Signature]
[Signature]

Fig. 2.

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 Henry W. Giff
 his attorney

UNITED STATES PATENT OFFICE.

OSBORNE S. CLARK, OF PROVO, UTAH.

COMBINED METALLIC TIE AND CHAIR.

1,007,337.

Specification of Letters Patent.

Patented Oct. 31, 1911.

Application filed February 13, 1911. Serial No. 608,289.

To all whom it may concern:

Be it known that I, OSBORNE S. CLARK, a citizen of the United States, residing at Provo, county of Utah, and State of Utah, have invented certain new and useful Improvements in Combined Metallic Ties and Chairs, of which the following is a specification.

This invention relates to combined metallic ties and chairs.

The object of the present invention is the provision of a novel box metallic railroad tie and chair having means for the anchoring of the tie in the road bed, new devices for supporting the rail and insulating it, together with improved means for holding said supporting devices, and novel insulated locking wedges for holding the rail in position and so formed that the support for the rail may be held by said locking wedges, all as more fully set forth hereinafter and recited in the appended claims.

In the accompanying drawings: Figure 1 is a longitudinal section; Fig. 2, a cross-section on the line 2—2, Fig. 1; Fig. 3, an elevation at the end of the tie showing the notches, lips, and grooves; Fig. 4, a detail perspective of one of the wedges or plates; and Fig. 5, a view of a modification where a fish plate is formed integral with the retaining plate.

The box tie 1 is provided with downwardly struck or turned, or cast integral flanges 2 at its central part by which it is held in the road bed. The walls of its end parts are cut out at 3, providing overhanging lips 4 and the bottom of the tie at each end is provided with struck up or cast integral flanges or points 5 on which is seated non-metallic, preferably wooden blocks or supports 6 which are of such size that they will fit easily between the walls of the tie and the points or flanges 5 are adapted to enter these supports and assist in securing them against movement lengthwise of the tie.

The rail 7, or the meeting ends of the rails, rests upon the support 6, and the rails are thus insulated from the tie and thus do not interfere with the usual electrical connections for signaling purposes. The wedges or retainers 8 are provided with a kerf 9 extending longitudinally thereof from one end, thus providing a spring key 10 which by its engagement with one of the

lips 4 as said plates or wedges are driven in under said lips, holds the rail clamped down upon the support 6. Preferably the supports 6 are provided with grooves 11 receiving the edges of the wedges 8. Interposed between the wedge or plate 8 and the rail base, in each instance, is an insulating member 12, which is preferably of fiber. The members 8 may be tapered and the disposition of the lips 4 being such that the action will be a wedging one as the members 8 are slid into position, in addition to the locking action caused by the key 10. The members 8 over-hang the outer edges of the base of the rail and are thereat provided with a plurality of holes or notches 13 for the reception of the spikes or fasteners 14 driven into the supports 6 which assist the points or members 5 in holding the support 6 against the longitudinal movement in the tie and also insure the retention of the members 8, once they have been driven under the lips 4 and the spikes 14 have been driven into the supports 6.

The members 8 may be formed independently of the fish plates or they may be made integral therewith as shown in Fig. 5, in which case longitudinal slots 15 are preferably provided through which the bolts to hold the fish plates pass. I wish it understood that both forms are to be considered as covered in the claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. The combination with a metallic railroad box tie having recessed side walls provided with overhanging lips, of rail supports located between the walls of the tie, securing plates engaged with the overhanging lips aforesaid which serve to hold the rail on the support, said plates being provided with longitudinally extending kerfs defining spring keys adapted to engage the lips to hold the plates in position.

2. The combination with a metallic railroad box tie having recessed side walls provided with overhanging lips, of rail supports located between the walls of the tie and which extend laterally beyond the edges of the rail base, securing plates engaged with the overhanging lips aforesaid which rest upon and serve to hold the rail on the support, said plates being provided with apertures or notches disposed above the rail sup-

port, and retaining members engaged with the notches or apertures and with the rail support.

3. The combination with a metallic railroad tie box having recessed side walls provided with overhanging lips, of rail supports located between the walls of the tie, securing plates engaged with the overhanging lips aforesaid which serve to hold the rail on the support, said plates being provided with apertures or notches, and retaining members engaged with the notches or apertures and with the support, the said plates being also provided with longitudinally extending kerfs which define spring keys adapted to engage the lips to hold the plates on the rail base.

4. The combination with a metallic box railroad tie having cut out side walls for the reception of the rail, said side walls be-

ing provided with overhanging lips, the bottom of the tie having upwardly extending members, of supports located between the sides of the tie and engaged with said upwardly extending members and adapted to support the rails, plates engaged by the lips and bearing upon the base of the rail, said plates being provided with longitudinally extending spring members adapted to engage the lips and also having notches or apertures disposed beyond the outer edges of the rails, and retaining members engaged with said notches or apertures and with the supports.

In testimony whereof, I hereunto affix my signature in presence of two witnesses.

OSBORNE S. CLARK.

Witnesses:

JAMES A. OLIVER,

JOHN T. CLARK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."