No. 709,787. Patented Sept. 23, 1902.

S. LOVE.

COMBINED RAILWAY CROSS TIE AND CHAIR.

(Application filed May 29, 1902.)

(No Model.)

Fig. 1.

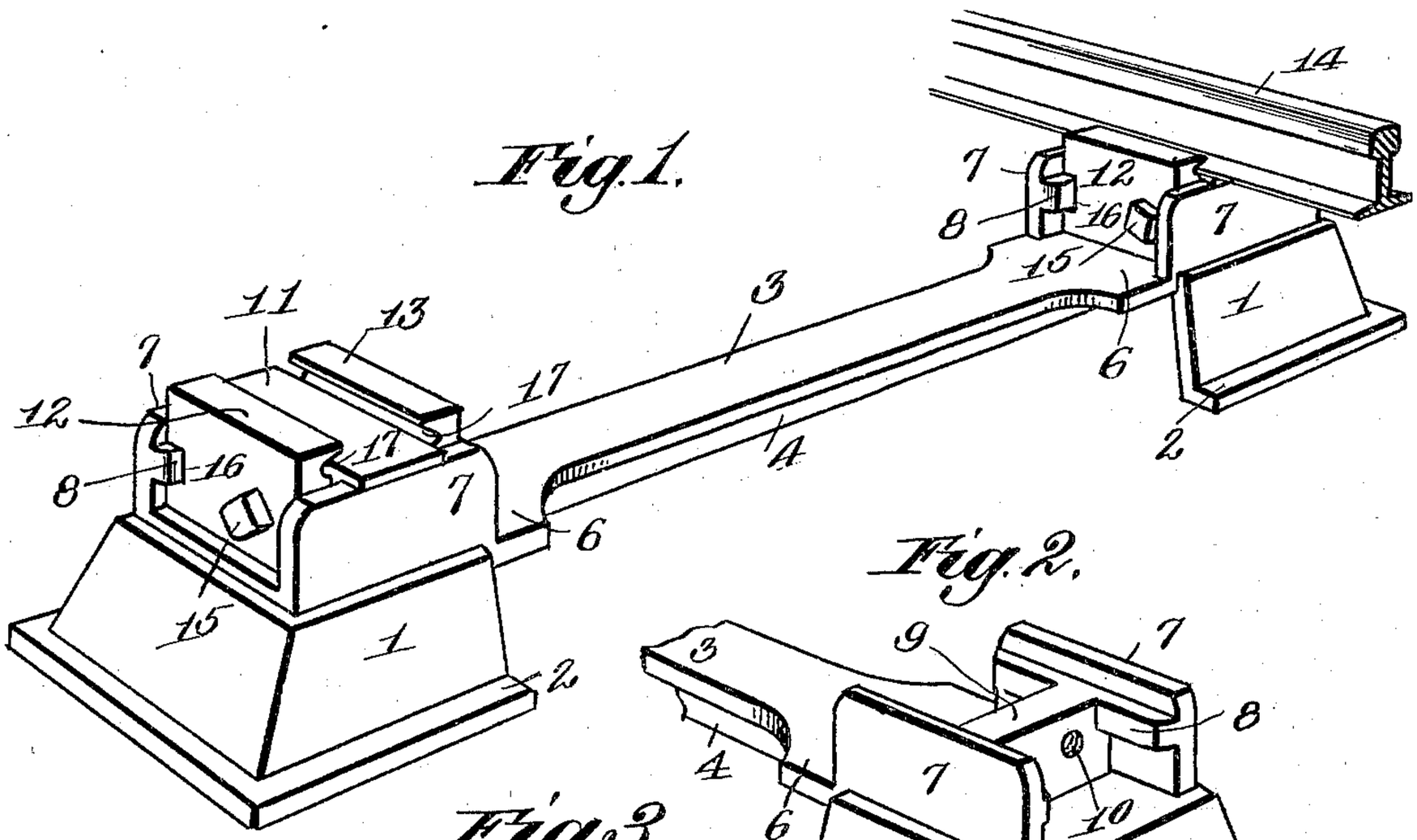


Fig. 2.

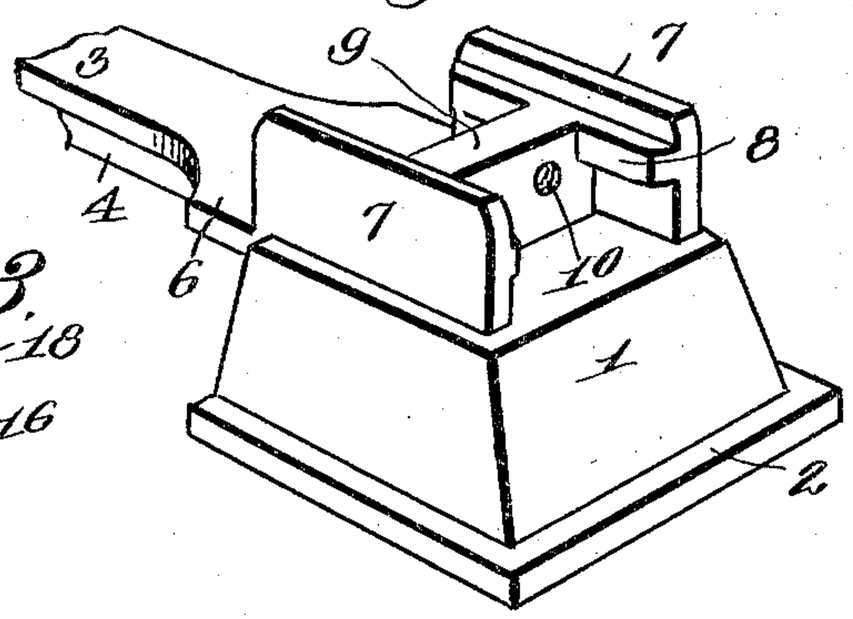


Fig. 3.

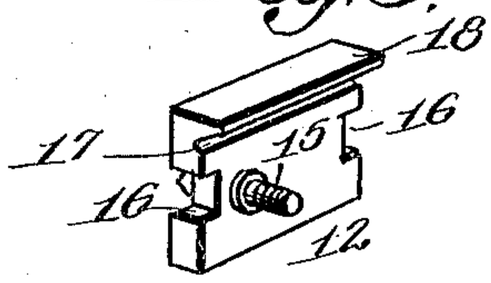


Fig. 4.

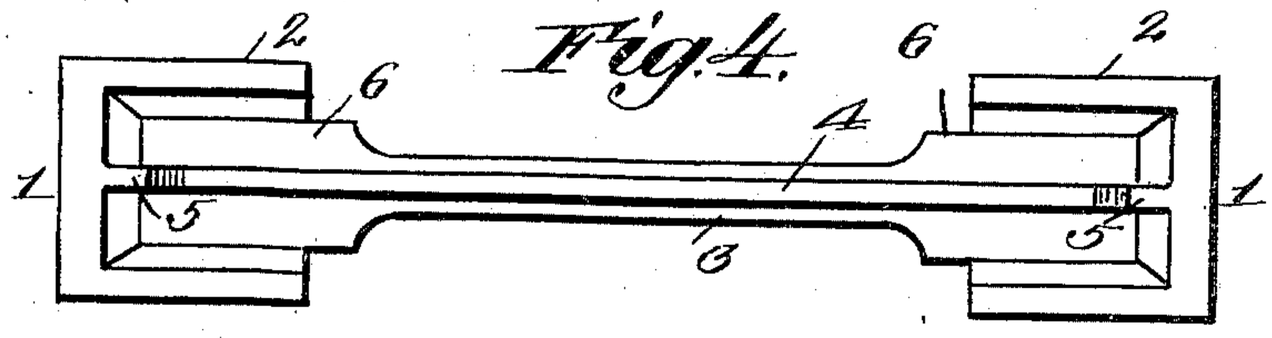


Fig. 5.

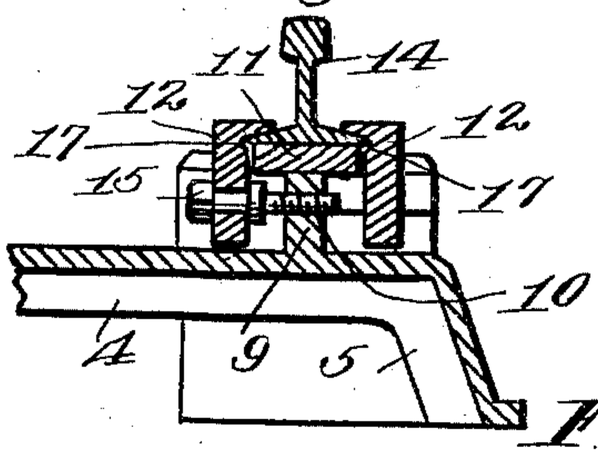


Fig. 6.

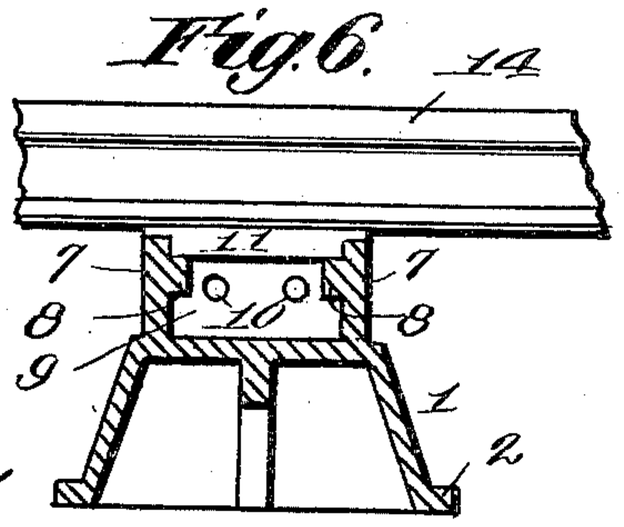
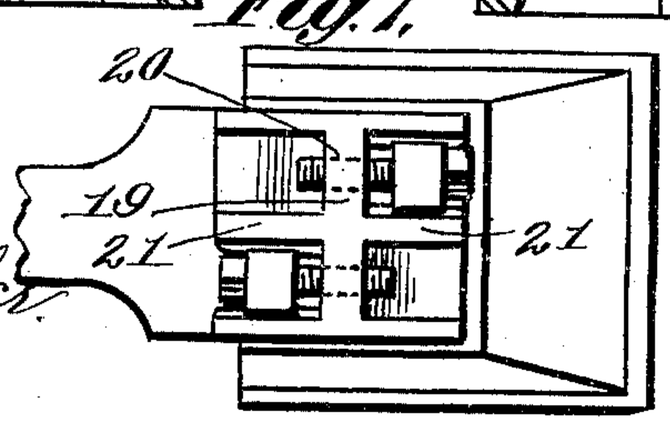


Fig. 7.



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UNITED STATES PATENT OFFICE.

SAMUEL LOVE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO MONROE L. SIMON.

COMBINED RAILWAY CROSS-TIE AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 709,787, dated September 23, 1902.

Application filed May 29, 1902. Serial No. 109,548. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL LOVE, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented new and useful Improvements in Railway Cross-Ties and Chairs, of which the following is a specification.

This invention relates to certain new and useful improvements in combined railway cross-ties and chairs.

The invention aims to construct a combined metallic railway cross-tie and chair not only for supporting track-rails, but so constructed as to provide means herein described for securing the track-rails thereon.

The invention further aims to construct a combined metallic railway cross-tie and chair which shall be simple in its construction, strong, durable, efficient in its use, and comparatively inexpensive to manufacture and set up; and to this end it consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, wherein like numerals of reference indicate corresponding parts throughout the several views, and in which—

Figure 1 is a perspective view of the combined cross-tie and chair. Fig. 2 is a perspective view of one end thereof. Fig. 3 is a detail of one of the clamping-plates. Fig. 4 is a bottom plan of the chair and tie. Figs. 5 and 6 are a longitudinal and a cross section, respectively, of one end of the combined chair and tie; and Fig. 7 is a top plan of one end of the combined chair and tie, showing a modified form of bearing and clamping plates.

Referring to the drawings by reference-numerals, 1 denotes the chairs, which are of shell conformation and provided at their lower end with an outwardly-extending flange 2. The chairs may be of any preferred form, but, as shown, are provided with the sides extending upwardly and inwardly at an inclination. Integral with the top of the chairs 2 is a cross-tie 3, having arranged centrally of its lower face a downwardly-extending strengthening-web 4, which extends the entire length of the cross-tie 3 and terminates into a strengthening-rib 5, integral with the inner face of one of the walls of the chair. The cross-tie 3 at each end is formed of a greater width than the remaining portion, as at 6, this wider portion being formed integral with the chairs 1, and is provided at each side with an upwardly-extending plate 7, each of which has its inner face formed with an integral rib 8. Arranged between as well as integral with each pair of plates 7 at each wider portion 6 of the cross-tie is a transversely-extending bearing-plate 9, provided with a pair of screw-threaded openings 10. The bearing-plate 9 does not extend to the top edge of the plate 7 but a suitable distance below the same, so that a cushioning device, preferably a block of wood 11, can be mounted between the plates 7.

The reference-numerals 12 13 denote the clamping-plates for the track-rail 14. Each of these clamping-plates carries a clamping-screw 15, which is adapted to extend through the screw-threaded opening in the bearing-plate 9. Each side of each of the clamping-plates is cut away to form a recess 16, in which is adapted to engage the rib 8 of its corresponding plate 7. The ribs 8 retain the clamping-plates between the plates 7, as well as to prevent any vertical movement of the clamping-plates 12 13 and also guide the clamping-plates in their movement. Each of the clamping-plates 13 has its inner face formed with an elongated groove 17, forming thereby a flange 18. The groove 17 is adapted to receive the edge of the base of the rail, and the flange is adapted to engage the upper face of the base of the track-rail, so that when the clamping-plates are arranged in their securing position the track-rail will be retained in position.

In the modified form of construction shown the reference-numeral 19 denotes a bearing-plate provided with screw-threaded openings 20 and a wing at each side, as at 21. The wings 21 and plate form a support for the cushioning device. The screw-threaded openings

in the plate 19 are arranged at each side of the wings 21, and the clamping-plates are cut away at their tops, as shown.

The track-rail 14 is secured in position in the following manner: Assuming that the combined cross-tie and chairs have been arranged in position, the clamping-plates 12 13 are separated or moved apart by the unscrewing of the clamping-screws 15. The cushioning device 11 is mounted upon the bearing-plate 9 or 19, the said cushioning device 11 being formed at each end with a flange, so it will also extend upon the plates 7. The track-rail is then mounted upon the cushioning device 11 and the clamping-plates adjusted so that the flanges 18 will engage both sides of the base of the track-rail and secure the track-rail in position. The clamping-plates 15 are adjusted to such position by means of the clamping-screws 15.

From the foregoing description, taken in connection with the accompanying drawings, it will be evident that the advantages of the combined cross-tie and chairs, therefore, are strength, durability, and cheapness and that a further advantage lies in the efficient manner in which the track-rail can be readily secured to the cross-tie as well as readily removed therefrom—that is, the track-rail, if it be desired. A further advantage is the strength of the tie and chair obtained by providing the former with the strengthening-web and the latter with the strengthening-rib, and it will also be evident from the foregoing that I have devised a simple and novel form of combined cross-tie and chair provided with means for attaching the track-rails thereto, and while the structural embodiment of the invention as herein described is what I at the present time consider the preferable it is evident that changes, variations, and modifications may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages, and I therefore do not wish to restrict myself to the details of construction hereinbefore described and as shown in the accompanying drawings, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

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

1. In a device of the character described, a pair of chairs, a cross-tie integral therewith, a strengthening-web integral with the cross-tie, a strengthening-rib integral with each of the chairs and terminating at its top in the said web, a pair of vertical plates integral at each end with the said cross-tie, a bearing-plate arranged between each pair of the said plates, a clamping-plate arranged at each side of the said bearing-plate, a clamping-screw for each of the said clamping-plates extending through the bearing-plates, and a cushioning device mounted upon each of the bearing-plates and engaging the said vertically-extending plates.

2. In a device of the character described, a pair of chairs, a cross-tie integral therewith, a pair of vertical plates at each end of the said cross-tie and provided on the inner face thereof with a rib, a bearing-plate arranged between and integral with said vertical plate, and a clamping device arranged between and engaging the ribs of said vertical plates and removably connected to said bearing-plates.

3. In a device of the character described, a pair of chairs, a cross-tie integral therewith, a pair of vertical plates at each end of the said cross-tie and provided on the inner face thereof with a rib, a bearing-plate arranged between and integral with said vertical plate, a clamping device arranged between and engaging the ribs of said vertical plates and removably connected to said bearing-plates, and a cushioning device arranged between and mounted upon said vertical plates.

4. In a device of the character described, a cross-tie provided on its inner face with a strengthening-web, means for supporting said tie, a pair of vertical plates connected to each end of the said tie, a bearing-plate integral with and arranged between the said vertical plates, a clamping device mounted within and retained upon each end of the tie by the said vertical and bearing plates, and a cushioning device mounted upon the said vertical and bearing plates.

5. In a device of the character described, a pair of chairs of shell-like formation, each of which is provided with a strengthening-rib on its inner face, a cross-tie integral with the said chairs and provided with a strengthening-web on its inner face terminating in the rib of the chairs, and a pair of clamping devices for track-rails mounted upon and connected with the said cross-tie.

6. In a device of the character described, a pair of chairs of shell-like formation, each of which is provided with a strengthening-rib, a cross-tie integral with the said chairs and provided with a strengthening-web terminating in the ribs of the chairs, a pair of vertical plates integral with the cross-tie at each end thereof and each of which is provided on its inner face with a rib, a clamping device arranged between each pair of plates and retained therein by means of the ribs of the plates, and a cushioning device mounted upon and extending between the said plates.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SAMUEL LOVE.

Witnesses:
GEO. W. REA,
JAMES JULIUS HOCHFELDER.