No. 847,130. PATENTED MAR. 12, 1907.

R. THATCHER & W. A. WEDDING.

RAIL JOINT.

APPLICATION FILED JULY 7, 1906.

Fig. 1.

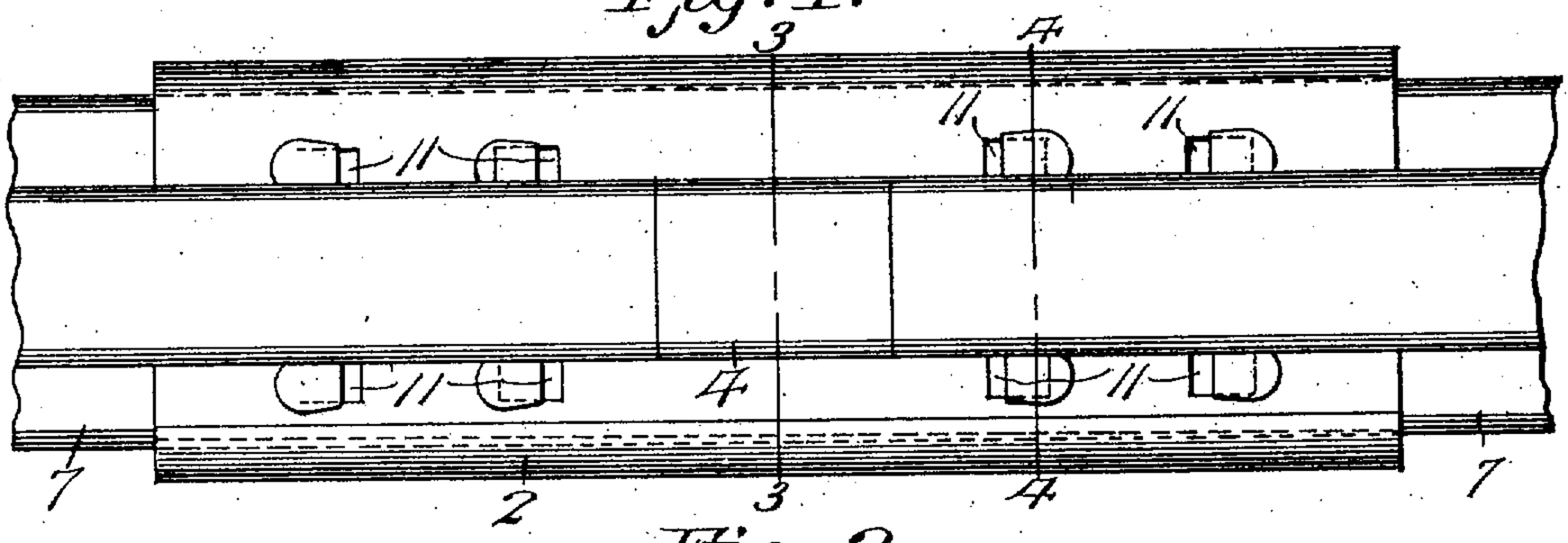


Fig. 2.

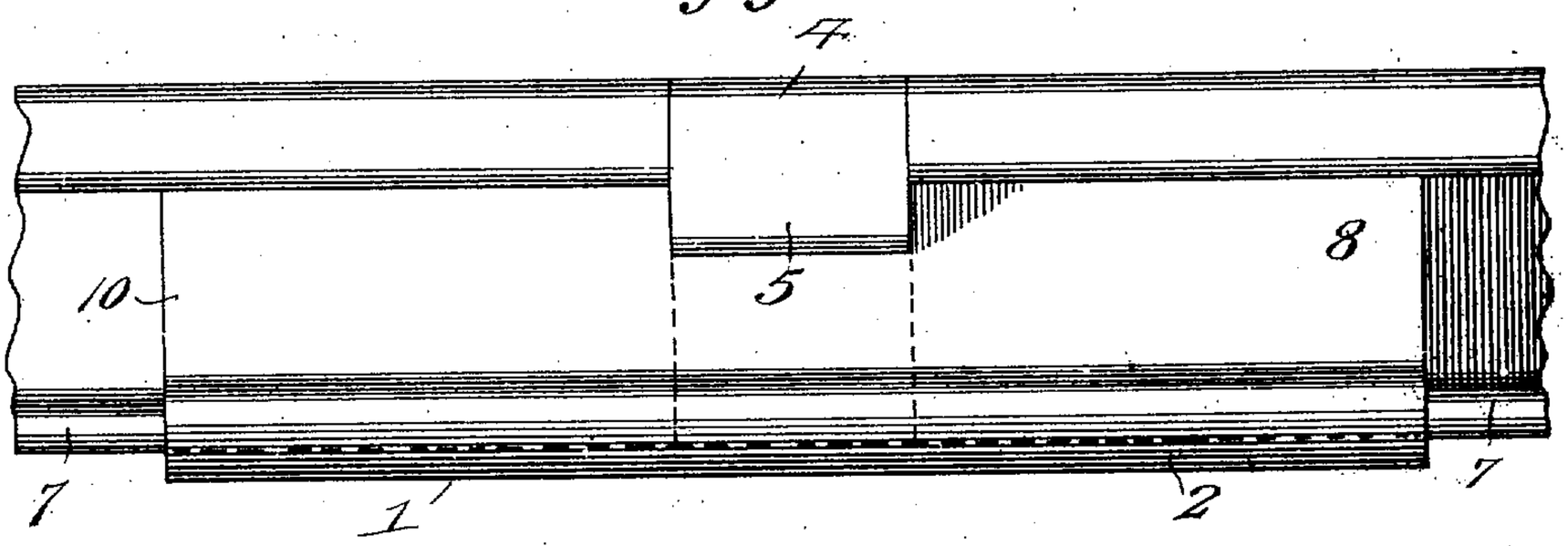


Fig. 3.

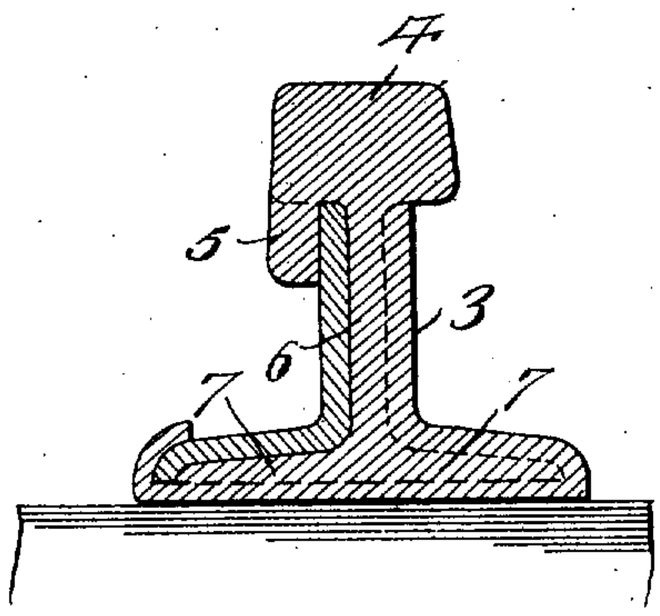
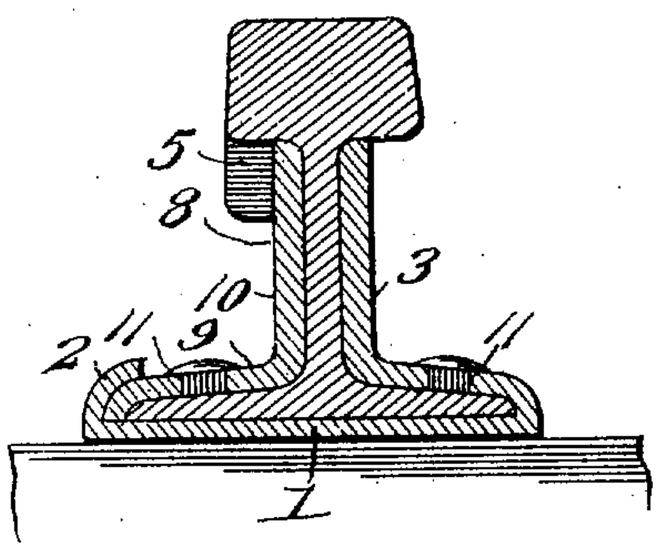


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT THATCHER AND WILLIAM A. WEDDING, OF CINCINNATI, OHIO.

RAIL-JOINT.

No. 847,130. Specification of Letters Patent. Patented March 12, 1907.

Application filed July 7, 1906. Serial No. 325,159.

To all whom it may concern:

Be it known that we, ROBERT THATCHER and WILLIAM A. WEDDING, citizens of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

The invention relates to an improvement in rail-joints, comprehending specifically a combined rail joint and chair particularly adapted for securing and supporting the meeting ends of railroad-rails.

The main object of the present invention is the production of a combined rail joint and chair designed to fixedly secure and support the meeting ends of railroad-rails against possibility of displacement, the construction providing for a secure fastening without the use of the ordinary fish-plates and also obviating the usual perforating of the rail-webs.

The invention will be described in the following specification, reference being had particularly to the accompanying drawings, in which—

Figure 1 is a plan illustrating the application of our improved rail-chair; Fig. 2, a side elevation of the same; Fig. 3, a section on line 3 3 of Fig. 1; Fig. 4, a section on line 4 4 of Fig. 1.

Referring to the drawings, our improved chair is made in two sections, a supporting-section and a locking-section, each formed integral and arranged for coöperation to secure the meeting ends of the rails in alined position. The supporting-section comprises a base-plate 1, formed near one edge with a relatively narrow lip 2, designed to receive the locking-section, as hereinafter described. On the opposite edge the base-plate 1 is provided with a side plate 3, spaced from the base-plate to conform to the shape of one side of the rail, being for this purpose projected inwardly from the edge of the base-plate approximately parallel therewith to provide a space for snugly receiving the flange of the rail and extended vertically to engage the web of the rail when in place, the upper edge of the plate 3 terminating beneath and in contact with the ball of the rail. Midway of its length the side plate 3 of the supporting-section is formed with a projecting head 4, shaped to exactly conform to the ball of the rail and provided on the edge opposite the plate 3 with a depending lip 5, extending in spaced relation with the plate 2. As the head 4 is designed to be interposed between the meeting ends of the rails proper, the plate 3 is thickened throughout the length of the head to provide an extension 6, conforming to the thickness of the web of the rail and providing an abutment against which the ends of the web bear.

The locking-section of the chair comprises an angle-plate 8, shaped to correspond with one side of the rail and including a plate 9, designed to rest upon the base-flange, and an extension 10, projecting from the edge of the plate 9 and designed to bear against the web of the rails. The free edge of the plate 9 is turned slightly downward and curved on its upper surface to conform with the curvature of the lip 2 of the supporting-section, the base-plate 1 of the supporting-section being of sufficient width to permit the downturned edge of the plate to rest between the lip 2 and the approximate edge of the rail-flange.

In assembling the parts the rails are placed in position on the supporting-section with their flanges resting beneath the plate 3 and their ends abutting the head 4. The locking-section is then inserted above the opposite base-flange, the outer edge of the plate 9 of said section resting beneath the lip 2 of the supporting-section and the free edge of the extension 10 of the locking-section bearing against the webs of the rails and held against outward movement by the lip 5 of the head 4, it being understood that said lip is so spaced as to snugly receive the upper edge of the extension 10.

Preferably the relatively horizontal portion of the plate 3, the plate 9 of the locking-section, and the base-plate 1 of the supporting-section are formed with spike-openings 11, designed to be alined when the parts are assembled with similar openings in the base-flanges of the rails whereby to permit the introduction of spikes for securing the parts to the ties.

The locking-section, if preferred, may be slightly wedge-shaped longitudinally, with the coöperating portion of the supporting-section similarly shaped, whereby the connection may be tightened by simply driving the locking-section into wedge relation with the supporting-section.

The combined joint and chair described provides for positively locking the rails against possibility of lateral or vertical movement, dispenses with the use of the ordinary fish-plates, and avoids the necessity of form-

ing both openings in the webs of the rails. The meeting ends of the rails are securely fastened and supported relative to each other to provide, in effect, a continuous rail, the head 4 of the supporting-section being provided to avoid a joint including the ends of the rails proper, as said head is an integral part of the chair, and therefore necessarily fixed with relation to the chair. This construction avoids the usual pounding incident to the travel of the wheels over the joint formed of the meeting ends of the rails.

It is preferred that the respective sections of the chair be integrally formed in order to provide necessary stability and rigidity, though it is to be understood that, if desired, the respective parts may be separately formed and secured together in any preferred manner.

Having thus described the invention, what is claimed as new is—

1. A railroad-chair comprising a supporting-section designed to underlie the base-flanges of the rails, and a locking-section designed to overlie the base-flange of the rail and engage the supporting-section, and means formed on the supporting-section for engaging the upper edge of the locking-section.

2. A rail-chair comprising a supporting-section including a base-plate designed to underlie the base-flange of the rails and formed on one edge with an upwardly-extending lip, a plate projecting from the opposite edge of the base-plate and designed to overlie the base-flange of the rails and engage the webs thereof, a head formed on the supporting-section and conforming in contour and size to the rail, a locking-section designed to embrace the opposite side of the rail and engage beneath the lip of the supporting-section, and means formed on the head to engage the upper edge of the locking-section.

3. A rail-chair comprising a supporting-section including a base-plate designed to underlie the base-flanges of the rails and formed on one edge with an upwardly-extending lip, a plate projecting from the opposite edge of the base-plate and designed to overlie the base-flange of the rails and engage the webs thereof, a head formed on the supporting-section and conforming in contour and size to the rail, a locking-section designed to embrace the opposite side of the rail and engage beneath the lip of the supporting-section, and a lip depending from the head to engage the upper edge of the locking-section.

4. A rail-chair comprising a supporting-section including a base-plate designed to underlie the base-flanges of the rails and formed on one edge with an upwardly-extending lip, a plate projecting from the opposite edge of the base-plate and designed to overlie the base-flange of the rails and engage the webs thereof, a head formed on the supporting-section and conforming in contour and size to the rail, a locking-section designed to embrace the opposite side of the rail and engage beneath the lip of the supporting-section, a lip depending from the head to engage the upper edge of the locking-section, the supporting-section and locking-section being formed with spike-openings to register with spike-openings formed in the base-flanges of the rails.

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

ROBERT THATCHER.
WILLIAM A. WEDDING.

Witnesses:
FRANK H. KINNEY,
IDA M. SHUMARD.