A. L. STANFORD.

ONE PIECE RAIL JOINT.

APPLICATION FILED MAR 8, 1909.

951,383.

Patented Mar. 8, 1910.

Fig. 1.

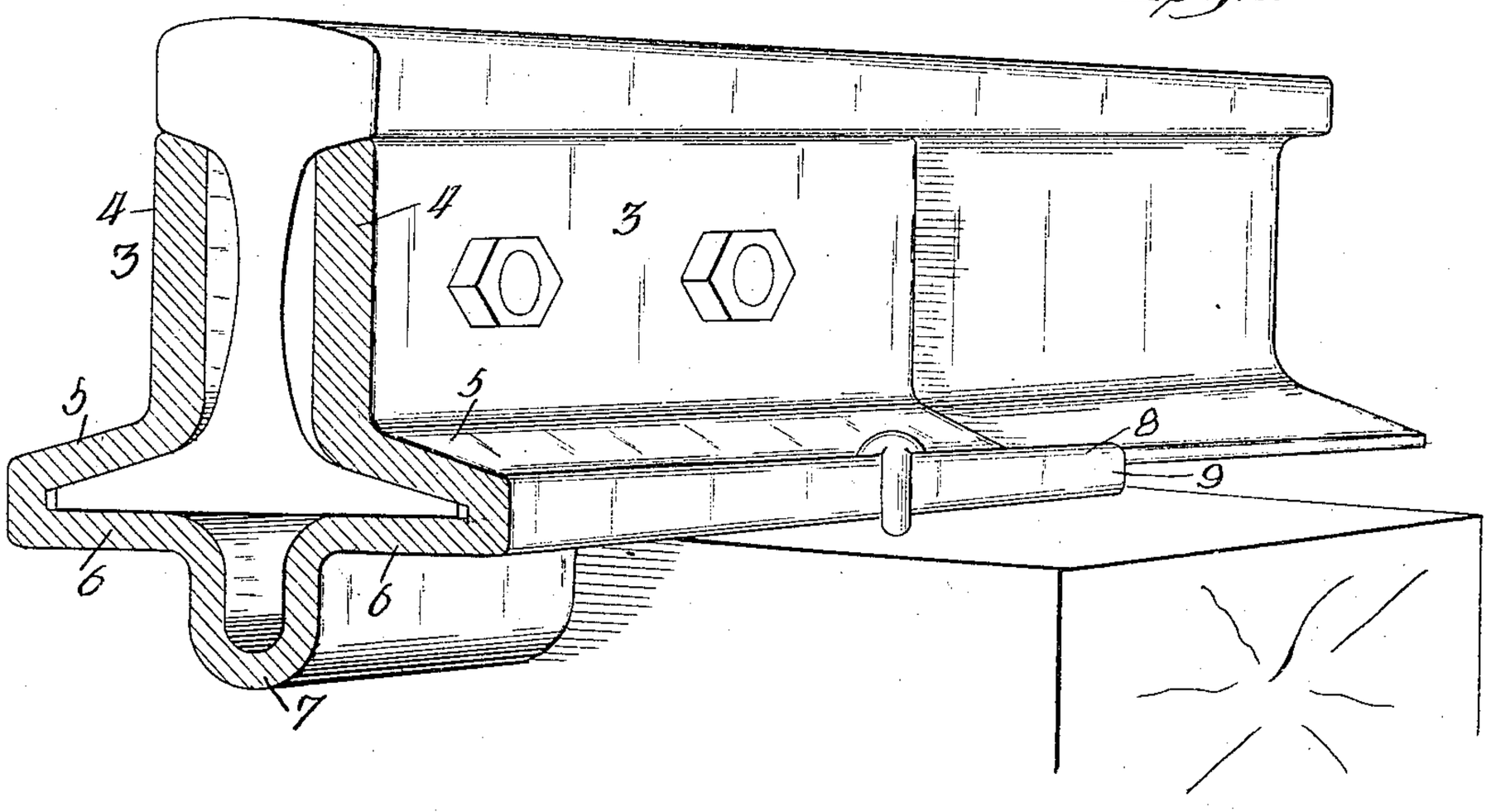


Fig. 2.

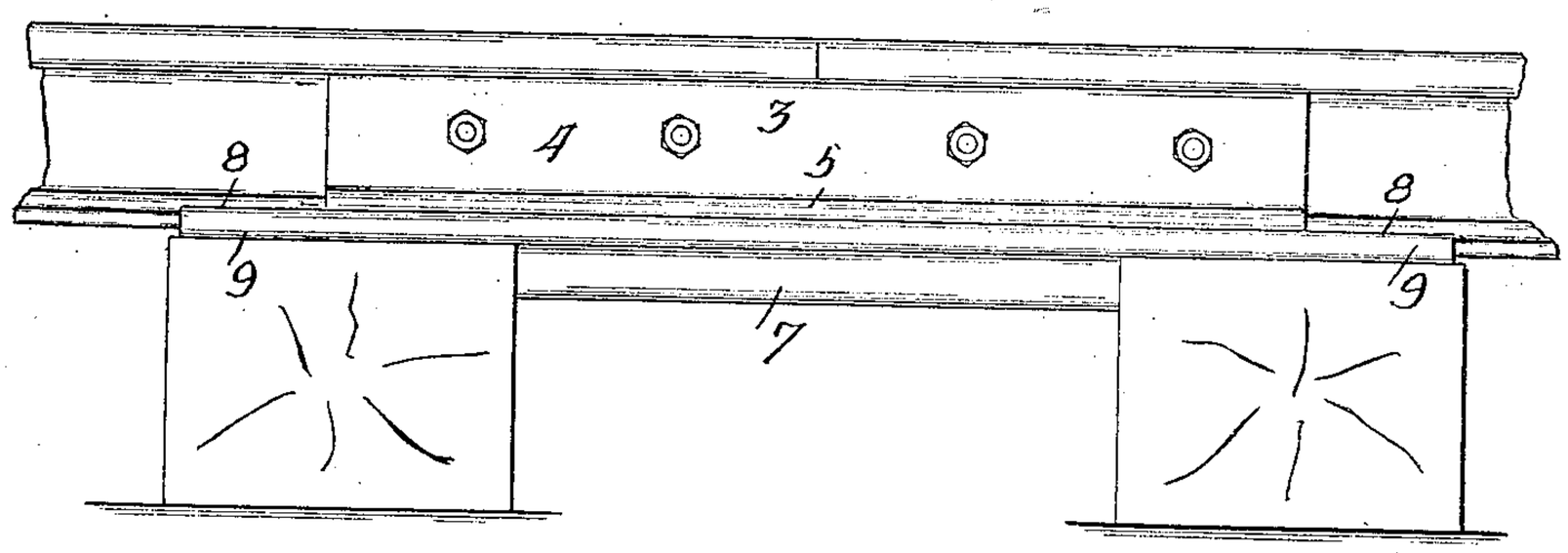
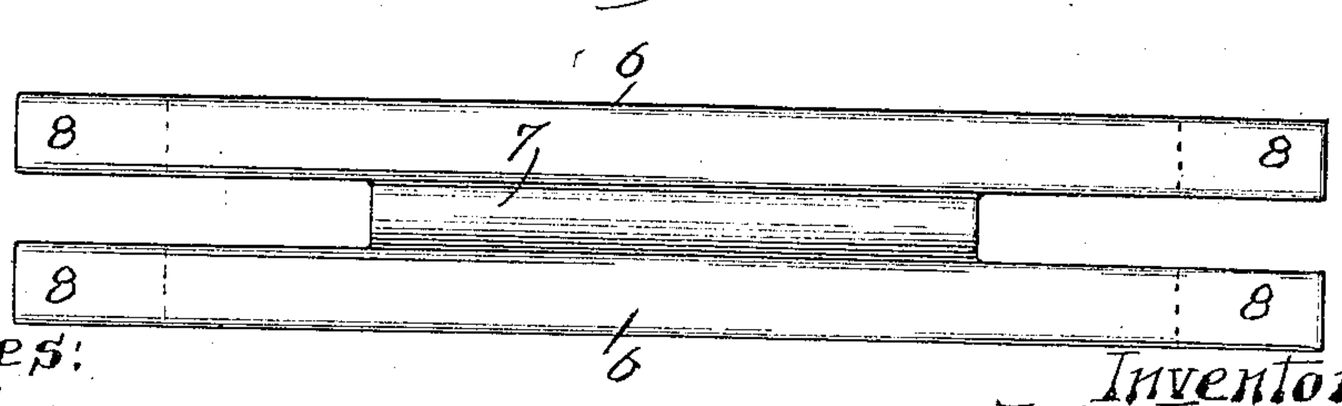


Fig. 3.



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UNITED STATES PATENT OFFICE.

ARTHUR L. STANFORD, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE RAIL JOINT COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ONE-PIECE RAIL-JOINT.

951,383. Specification of Letters Patent. **Patented Mar. 8, 1910.**

Application filed March 8, 1909. Serial No. 482,081.

To all whom it may concern:

Be it known that I, ARTHUR L. STANFORD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in One-Piece Rail-Joints, of which the following is a specification.

In the making of one-piece rail joints, it is necessary, in order to permit the rail ends to be inserted into the joint, that the gripping portions of the latter should be so connected as to permit of the necessary contraction of the jaws required to grip the rail ends and hold them firmly in position. In order to meet these requirements, it is necessary that a portion of the rail joint should be so constructed as to afford the bending or lateral movement required.

The object of the present invention is to construct a one-piece rail joint having a connecting bend or loop which will not only afford the necessary freedom of movement of the clamping jaws but will also afford a vertical reinforcement for the rail, and likewise serve as a rail anchor by reason of its engagement with the joint ties.

A further object of the invention is to so construct the joint that it can be easily rolled by ordinary rolling mill methods, and will also afford a maximum amount of bearing surface on the ties without necessitating the extension of the gripping jaws or members to the extreme edges of the joint ties.

Further objects will appear from a detailed description of the invention, which consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is a sectional perspective view of one-half of the joint, showing one of the abutting rail ends; Fig. 2 a side elevation of the same; and Fig. 3 an inverted plan view.

The joint is constructed of a single piece of metal rolled to afford jaw members 3, each of which is of the usual angle formation comprising a vertical body portion 4 and a laterally extending flange 5, which flange, at its outer edge, is bent or turned and connects with an underlying base flange 6. The arrangement of the flanges is of standard formation and is one which furnishes a groove or channel adapted to receive the rail flange in the usual manner. The base flanges are connected, at their inner edges, for substantially the center third of the entire joint, by a U-shaped bend or loop 7 of a length sufficient to lie between the companion joint ties, against which the ends of the connecting bend or loop are adapted to abut to prevent longitudinal creeping.

The lateral and base flanges and the connecting loop are all rolled of a less thickness and weight than the body portions, which affords the necessary spring or resiliency in the loop to permit the parts to be bent or sprung when the rail ends are inserted.

In order to secure a maximum bearing surface, and at the same time reduce the weight of the joint, the upper or gripping portions of the joint comprising the body portion 4 and the lateral flange 5 are cut away at the ends of the joints to leave the disconnected base flanges in the form of projecting tongues 8 having side flanges 9, which latter are merely the projected portions of the bends or folds connecting the lateral flanges with the base flanges.

In use, the abutting rail ends are entered between the gripping or clamping jaws of the joint, after which the latter are drawn or forced together by the action of a sledge or by the pull of the bolts, and this movement is afforded by the connecting bend or loop which underlies the rail sections at their meeting ends. The bend or loop, furthermore, affords a very substantial vertical reinforcement for the joint, and at the same time leaves the rail unsupported along its center and immediately beneath the web, which is desirable in that it affords the necessary resiliency of the joint to prevent pounding of the rail. The ends of the bend or loop afford a firm and rigid abutment adapted to engage the joint ties and hold the joint in position against longitudinal movement or creeping, thereby constituting a rail anchor for the joint. By cutting away the gripping portion of the joint in the manner specified, the gripping action of the joint is not impaired and a full bearing surface is secured by the contact of the projecting end or tongue portions of the base flanges, which being flanged along their edges possess ample rigidity to meet the requirements of actual usage.

What I regard as new and desire to secure by Letters Patent is:

An integrally formed, one-piece rail joint, comprising a body portion, lateral flanges, and base flanges inturned from and connected with the lateral flanges, and a depending bend or loop of less length than the base flanges and serving to connect the base flanges, and having substantially vertical ends adapted to abut against the joint ties, substantially as described.

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