(No Model.)

J. M. STAMP.

RAIL JOINT.

No. 494,235. Patented Mar. 28, 1893.

Fig. 1.

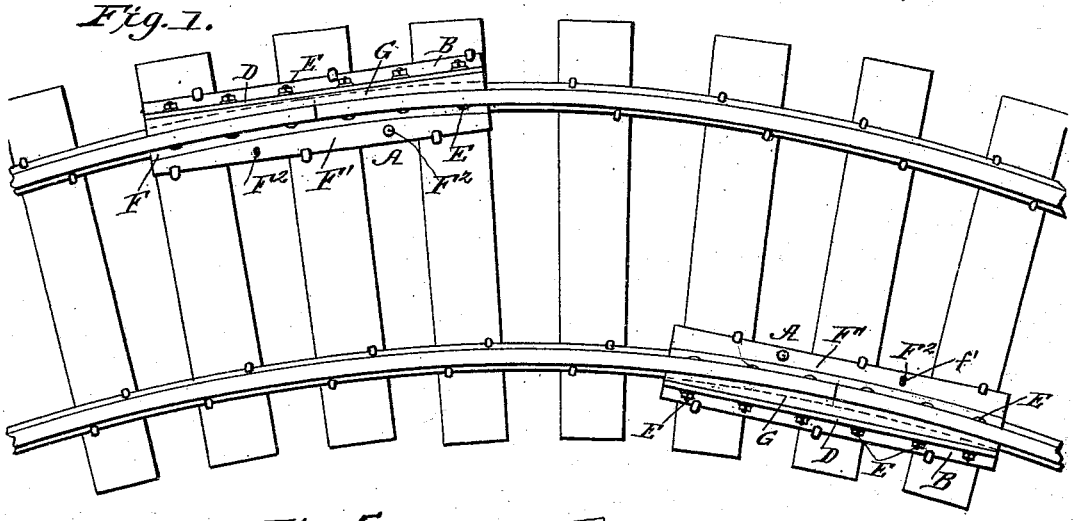


Fig. 5.

Fig. 2.

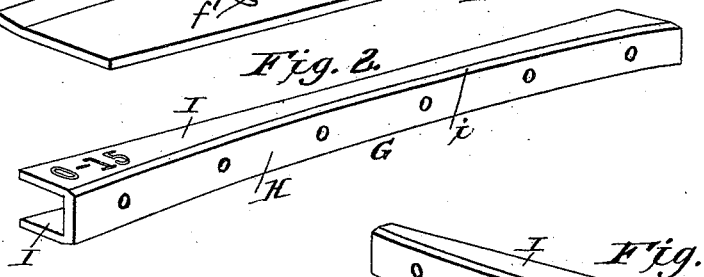


Fig. 3.

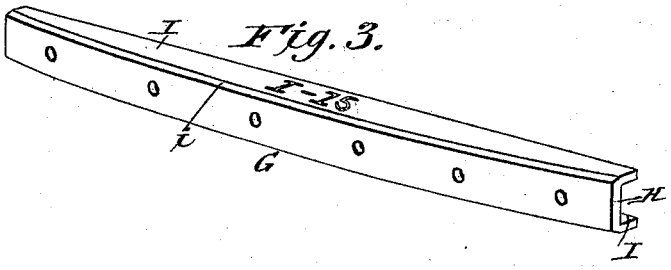
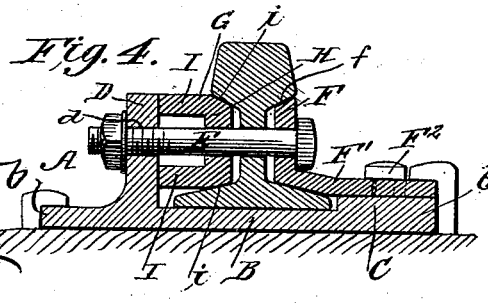


Fig. 4.



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JOHN M. STAMP, OF CARTERVILLE, MISSOURI.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 494,235, dated March 28, 1893.

Application filed April 2, 1892. Serial No. 427,556. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. STAMP, residing at Carterville, in the county of Jasper and State of Missouri, have invented a certain new and useful Improvement in Rail-Joints, of which the following is a specification.

My invention is an improved rail joint especially designed for jointing rails upon curves and seeking in such connection to secure a long joint or bridge over several ties and at the same time effect a joint that will firmly and snugly hold the rails.

The invention consists in the novel constructions and combinations of parts as will be hereinafter described and pointed out in the claims.

In the drawings, Figure 1 is a plan view of a section of a curved track showing my improvement as in use. Fig. 2 shows one of the side plates formed for use on an outside curve. Fig. 3 shows one of the side plates formed for use on an inside curve. Fig. 4 is a cross sectional view of the joint, and Fig. 5 is a detail view of the fish plate.

The chair A is formed with a base plate B, from which the upright plates C and D project. The plate D has openings *d* for the bolts E while the plate C is made short but of sufficient height to form an abutment for the base of the rail if at any time the joint should become loose. Lateral extensions or flanges *b* are provided outside the uprights C D for engagement by the spikes which fasten the chair to the ties. The uprights C and D by reason of their arrangement with respect to the rail may be termed the outer and inner uprights. The rails are seated in the chair and the joint is lapped on the inner side by a fish plate F which is shown in detail in Fig. 5. This fish plate F is beveled or sloped off at *f* to fit the under side of the tread, and also is beveled to fit the upper side of the base of the rail and is provided at its lower edge with an outwardly projecting flange F′ which inclines downward for a short distance and then extends straight out and rests upon the upright C against which it is drawn by the spikes as shown in Fig. 4 and to which it is further secured between the ties by the bolts F^2 shown in Fig. 1. These bolts pass through holes *f′* elongated laterally so that the fish plate F may be drawn into the rail to take up wear. On the other side the joint is lapped by the channeled fish plate G. This plate G is formed with the upright or web portion H and the wings I and is beveled or sloped off at *i* to fit the inclination of the under side of the head and the upper side of the base of the rails and so that as the parts wear the channeled fish plate may be pressed into the hollow of the rail to take up such wear. The wings I bear at their outer end against the inside of the upright D and the fastening bolts pass between these wings I through the web H through the rail and fish plate F, and the upright D and are secured by the nuts as shown. It will be seen that by tightening up the nuts on the bolts the fish plates may be drawn into the hollows of the rails and so take up wear from time to time. The wings I form a flat bearing for the upright D and enable the channeled fish plate to be set into the hollow of the rail equally at the top and bottom, the bolts passing between the wings as shown. These wings also serve to support the web H, and by exerting the lateral pressure thereagainst at both its upper and lower edges brace the same against crushing strains and operate to preserve the parts in the desired condition. The outer edges of the wings are preserved at all times in straight lines so that they will bear flat against the upright D no matter what the degree of the curve. On their inner faces the fish plates F and G are curved, either convex to fit the inside of the curve or concave to fit the outside according to the place where the joint is to be formed.

To suit the curves of different degrees I propose to manufacture the parts F and G in numbers or series with their inner faces curved either convex or concave, each part to be stamped for convenience "I—15" for "Inside fifteen degrees" or "O—15" for "Outside fifteen degrees" or as the case may be, the initial letter indicating the side of the curve for which the part is intended and the figures the degree of the curve. Manifestly the degree of curvature given the inner faces of the parts F and G may be that of any of the curves used on rail roads, the outer face of the said part G being always straight and bearing flat against the upright B as before described. This construction is of great im-

portance as it permits the use of the chair with straight sides on a curve and at the same time by curving the inner face of the part G permits the chair to extend over several ties forming a long strong joint as is desired. The part F being bolted by bolts F^2 to the chair and also spiked to the ties serves to co-operate with the bolts E in holding the rail securely in the chair.

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

1. In a rail joint substantially as described, the combination of the chair having an upright D, the fish plate F, the channeled fish plate G, curved on its inner face to conform to the curvature of the rails, and having the outer edges of its wings made straight to bear flat against the upright D and the fastening bolts all substantially as set forth.

2. The improved rail joint substantially as described comprising the adjacent rails curved at the desired degree, the chair receiving the said rails and provided with an upright D, the inner fish plate, the fish plate G formed with the wings I and having its inner face beveled at *i* and curved to fit the longitudinal curvature of the rails and the outer edges of its wings I made straight and arranged to bear against the upright D and the fastening bolts, such bolts being passed between the wings of the part G all substantially as and for the purpose set forth.

3. The improved rail joint herein described consisting of the adjacent rails curved at the desired degree the chair having uprights C and D, the inner fish plate F curved to fit the rails and provided at its lower edge with an outwardly projected flange to fit upon the base of the rail and extend over and rest upon the inner upright of the chair, the fish plate G curved at its inner face to fit the longitudinal curvature of the rails and having the wings I, made straight and arranged to bear against the upright D and the fastening bolts E all substantially as and for the purposes set forth.

4. The improved rail joint substantially as described comprising the chair having the longitudinally straight upright D, and the fish plate having its outer edge made straight to bear flat against the upright D, and its inner edge curved longitudinally to conform to the curvature of the rail against which it is clamped all substantially as and for the purposes set forth.

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