

(No Model.)

M. E. LEWIS & C. A. DODGE.

RAIL JOINT.

No. 354,426.

Patented Dec. 14, 1886.

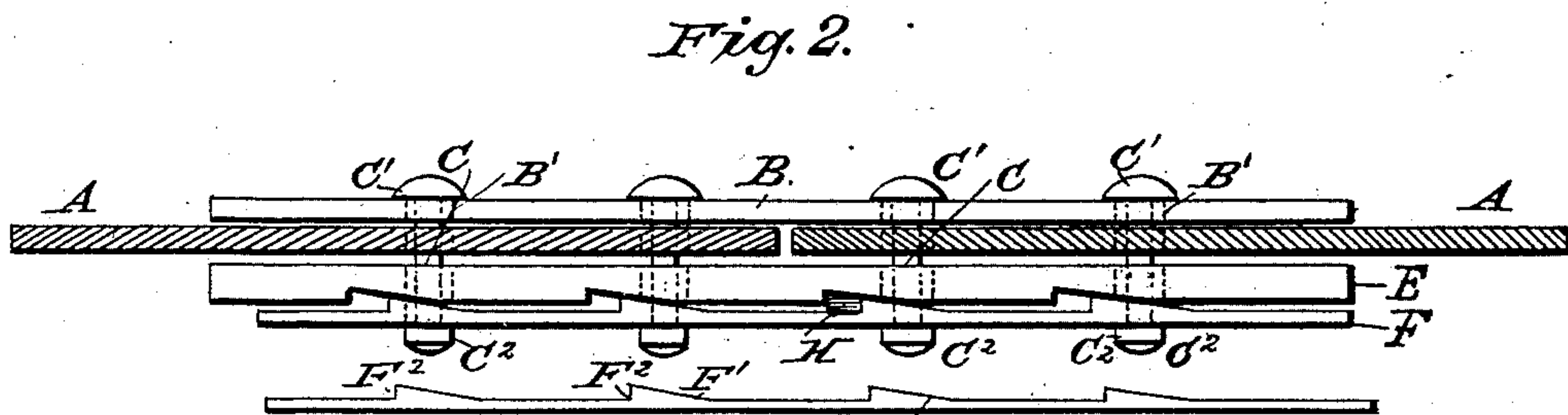
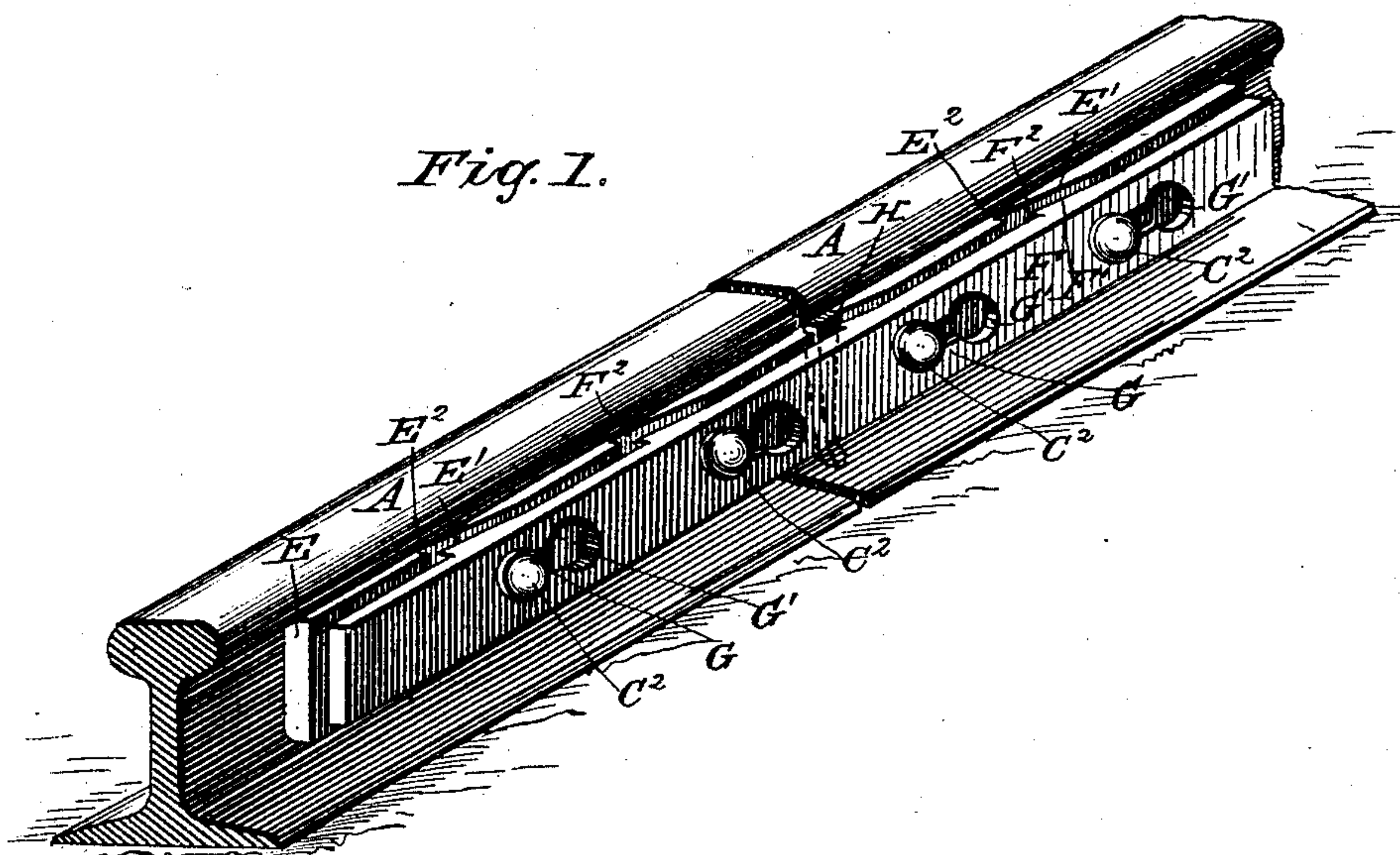


Fig. 4

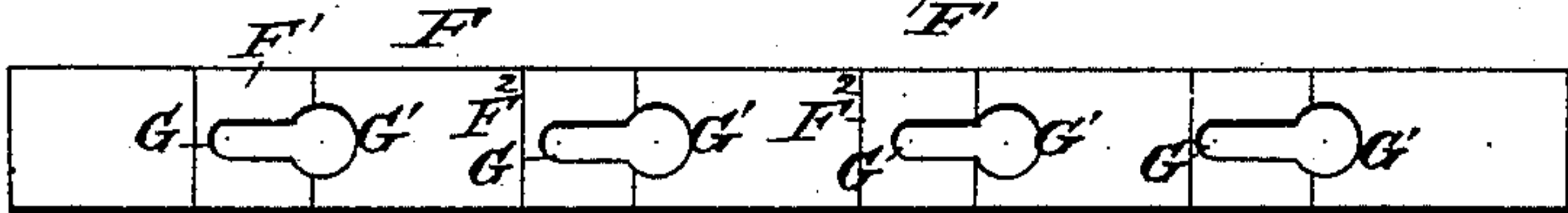
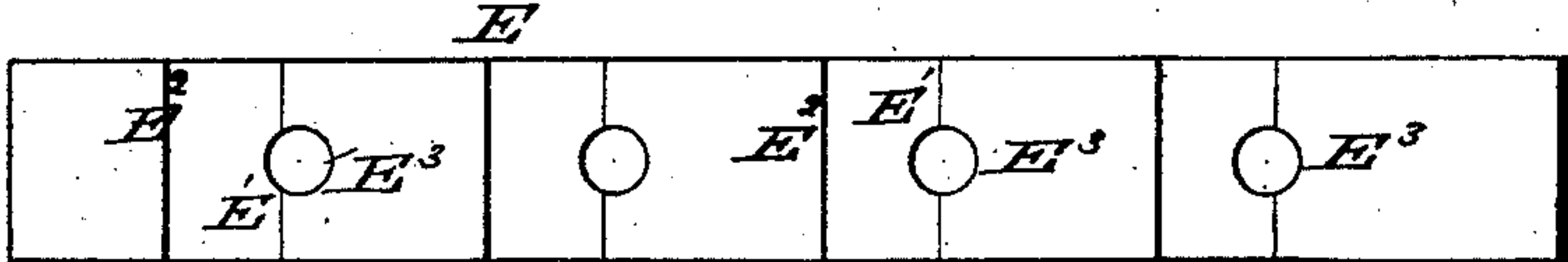


Fig. 3.



WITNESSES

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RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 354,426, dated December 14, 1886.

Application filed August 19, 1886. Serial No. 911,337. (No model.)

To all whom it may concern:

Be it known that we, MARIS E. LEWIS and CARLTON A. DODGE, of Orange City, in the county of Sioux and State of Iowa, have invented a new and useful Improvement in Rail-Joints, of which the following is a specification.

Our invention consists in an improved rail-joint, which will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective view showing our invention applied to the meeting ends of two rails of ordinary construction. Fig. 2 is a top plan view. Fig. 3 is a detail view of the inner section of the fish-plate, which forms an important feature of our invention; and Fig. 4 is a similar view of the outer section of the said fish-plate.

Referring to the several parts by letter, A A represent the rails, which are of the usual construction.

B indicates a plain fish-plate of the usual construction, which goes on the inner side of the meeting ends of the rails, and which is formed with the transverse apertures B', through which the bolts C pass.

C C indicate the double-headed bolts, each of which is constructed with a head at each of its ends, one of these heads, C², being less in diameter than the other head, C', as shown. The transverse apertures in the meeting ends of the rails and the plain fish-plate B are of sufficient size to admit of the passage through them of the smaller head, C², of the bolt, but not of the larger head thereof.

The double fish-plate, which forms the leading feature of our invention, is composed of the inner half or section, E, and the outer half or section, F. This inner half of the double fish-plate is formed with the transverse apertures E³, of sufficient size to admit of the passage through them of the smaller head of the bolts, and has its inner side made perfectly flat to fit against the side of the rails, while its outer side is formed with the inclined longitudinal planes or notches E', forming the abrupt shoulders E², while the inner face of the outer half or section, F, is formed with the longitudinal inclined projections F', forming the abrupt shoulders F², and the part F is further formed with the longitudinal slots G,

which are enlarged at one of their ends at G', to form nearly circular apertures, through which the smaller heads of the bolts may pass, the slots themselves being of less width than the diameter of the said heads.

In operation the plain fish-plate B is placed against the inner sides (or the outer sides, if desired) of the meeting ends of the rails, and the double fish-plate is placed against the other side of the ends of the rails, with the projections of the outer section thereof fitting closely in the inclined recesses of the inner section, in which position the apertures of the inner section and the enlargements of the slots of the outer section register, when the double-headed bolts are placed in position by passing their smaller heads through the several apertures of the fish-plates and the rails, the bolts being of such a length as to bring their smaller heads just on the outer side of the outer half of the double fish-plate, as shown. When the double-headed bolts have been thus inserted through the plates and rails, a metal wedge, H, of the form shown has its reduced lower end or point inserted between two adjacent shoulders of the inner and outer sections of the double fish-plate, as shown, and is driven down between the said shoulders, thereby forcing the shoulders, and consequently the two sections of the fish-plate, longitudinally apart, as clearly shown in Fig. 2 of the drawings, which movement, on account of the inclined planes of the recesses and projections of the said sections, forces the two halves of the fish-plate farther apart, and thus tightens the fish-plates on the rails, forming a more compact, tight, and solid joint than is possible by any other method, the slots G sliding along the bolts as the parts of the double fish-plate are forced longitudinally apart, so that the inner faces of the smaller heads bear firmly against the outer side of the outer part of the double fish-plate, as shown in Fig. 2 of the drawings. The lower end of the wedge is curved on its inner side, as shown in Fig. 1, so that as the wedge is driven down this curvature of its lower end will cause the said end to be bent or turned outward as it comes in contact with the curved lower portion of the rails, thus locking the wedge automatically, and firmly holding it in its operative position.

Having thus described our invention, what

we claim, and desire to secure by Letters Patent, is—

1. A rail-joint fastening consisting of a sectional fish-plate, one section being apertured
5 and provided with inclined recesses or notches, and the other provided with inclined projections and longitudinal slots having enlargements, a double-headed bolt having one head of greater diameter than the other, and a wedge,
10 substantially as herein shown and described.

2. The combination, with the meeting ends of the rails having the transverse apertures, of the double-headed bolts having one head of greater diameter than the other, the flat fish-
15 plate having the transverse apertures, the

double fish-plate composed of the sections having the inclined recesses and projections forming the abrupt shoulders, and formed, respectively, with the apertures and the longitudinal slots having the enlargements, and the 20 wedge having its lower reduced end curved on the inner side thereof, all constructed and arranged to operate in the manner and for the purpose herein set forth.

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Witnesses:

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