

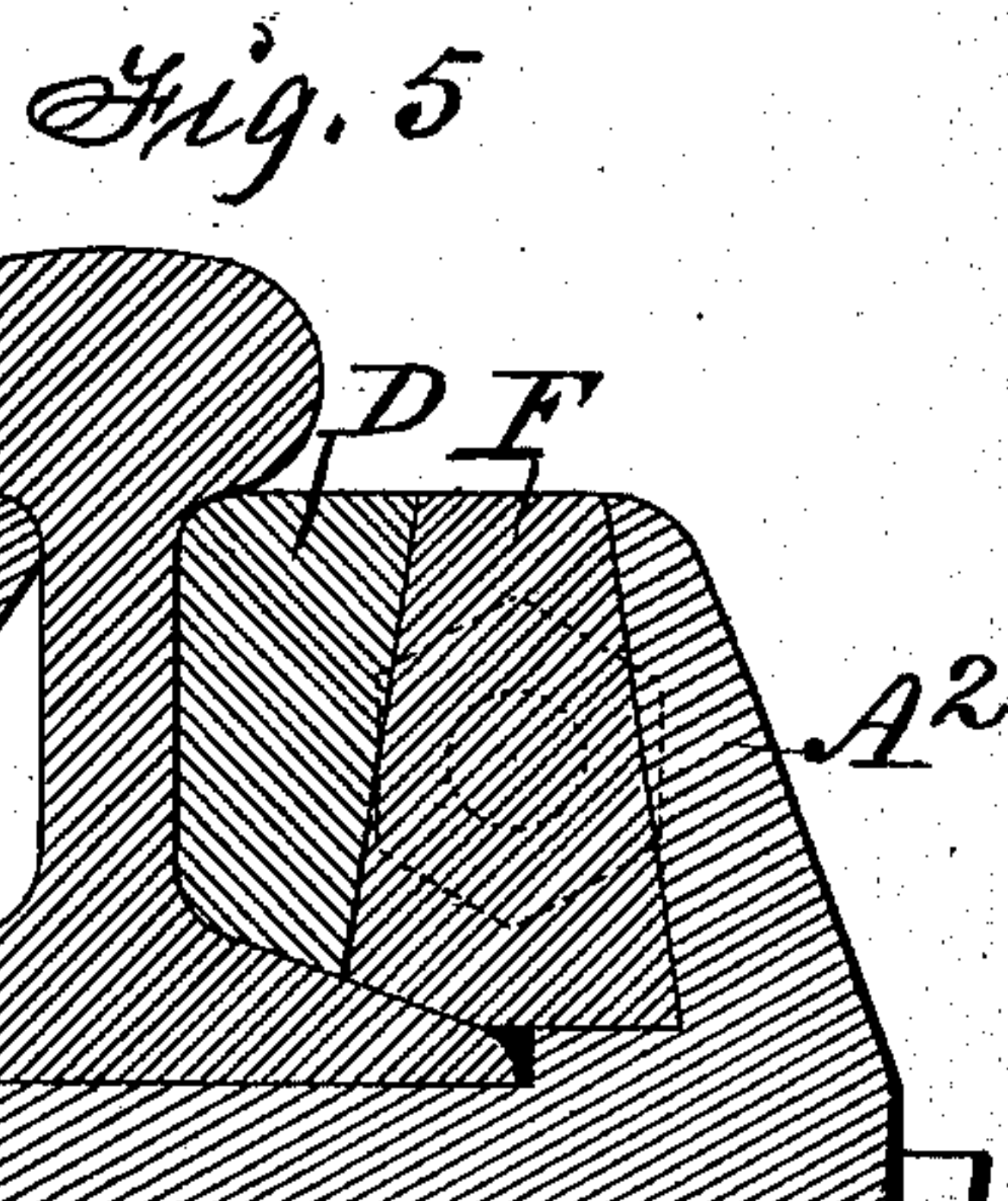
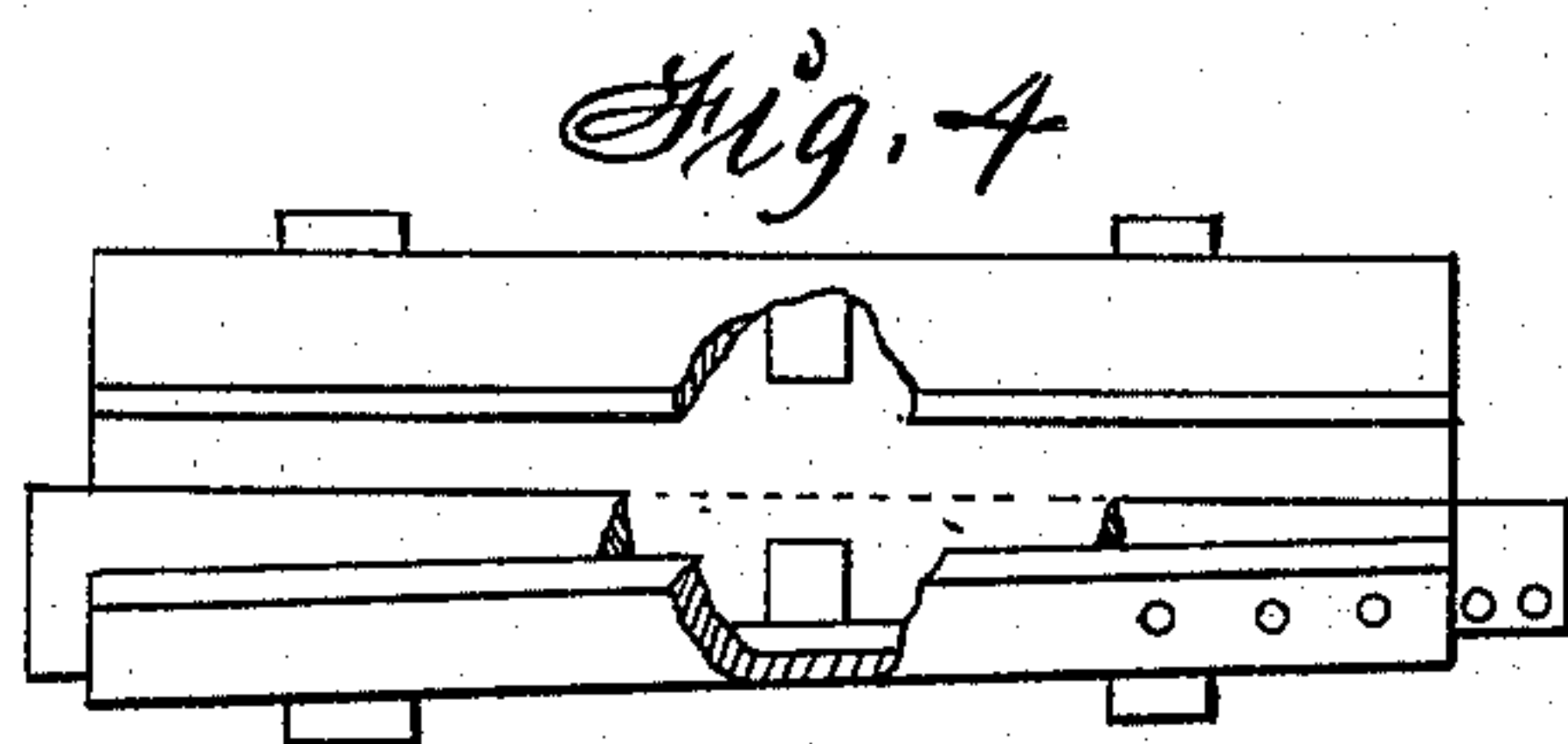
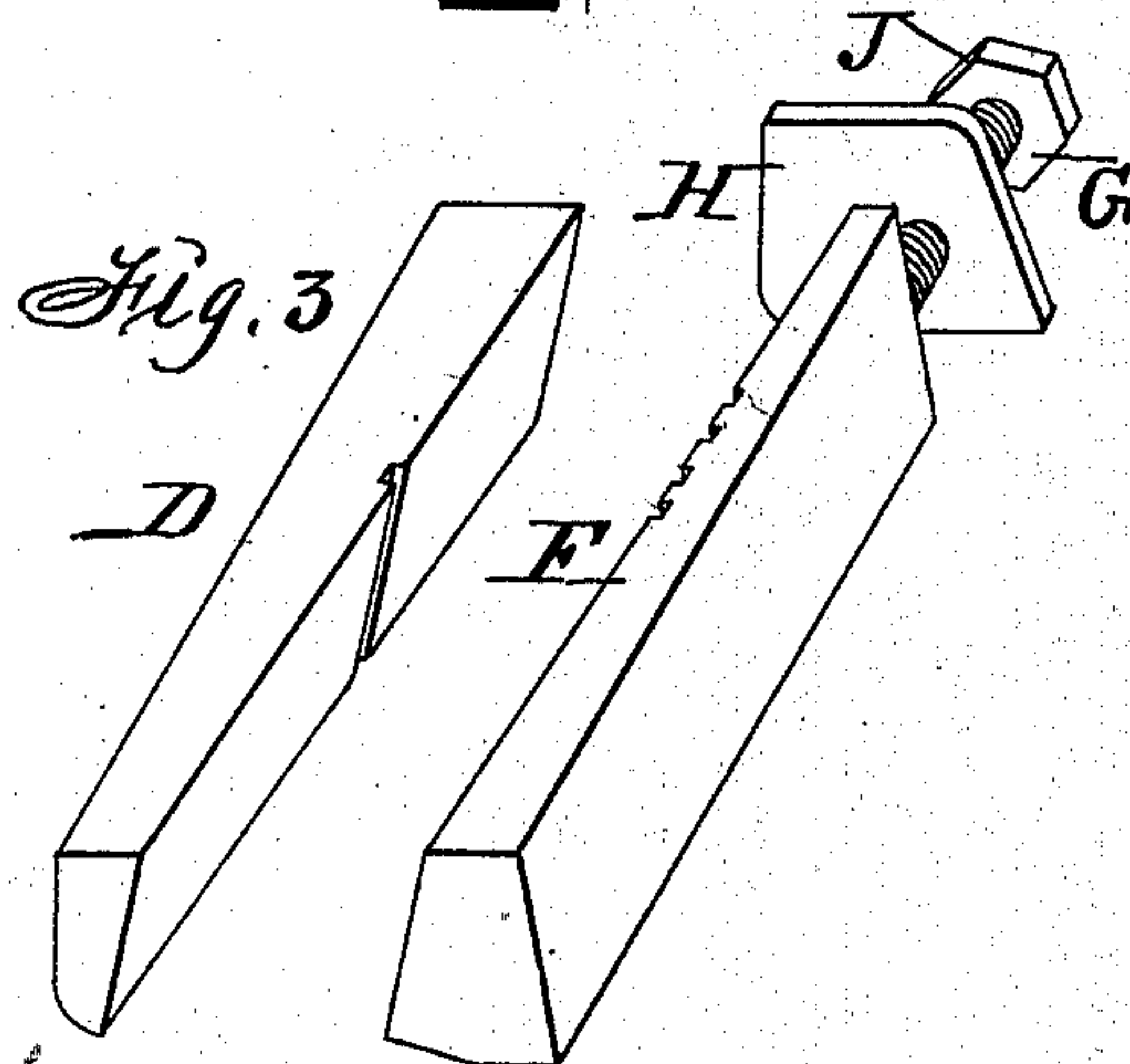
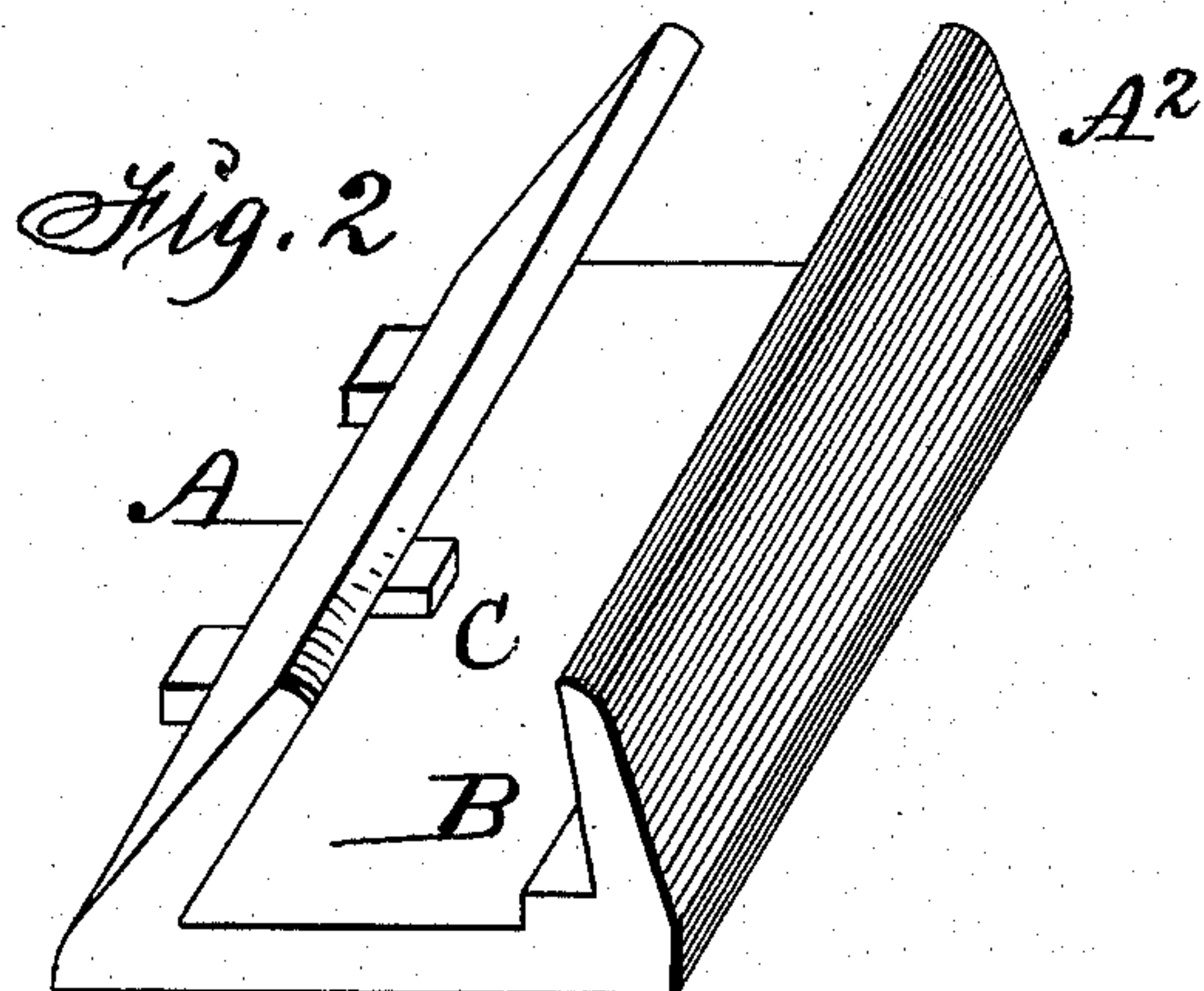
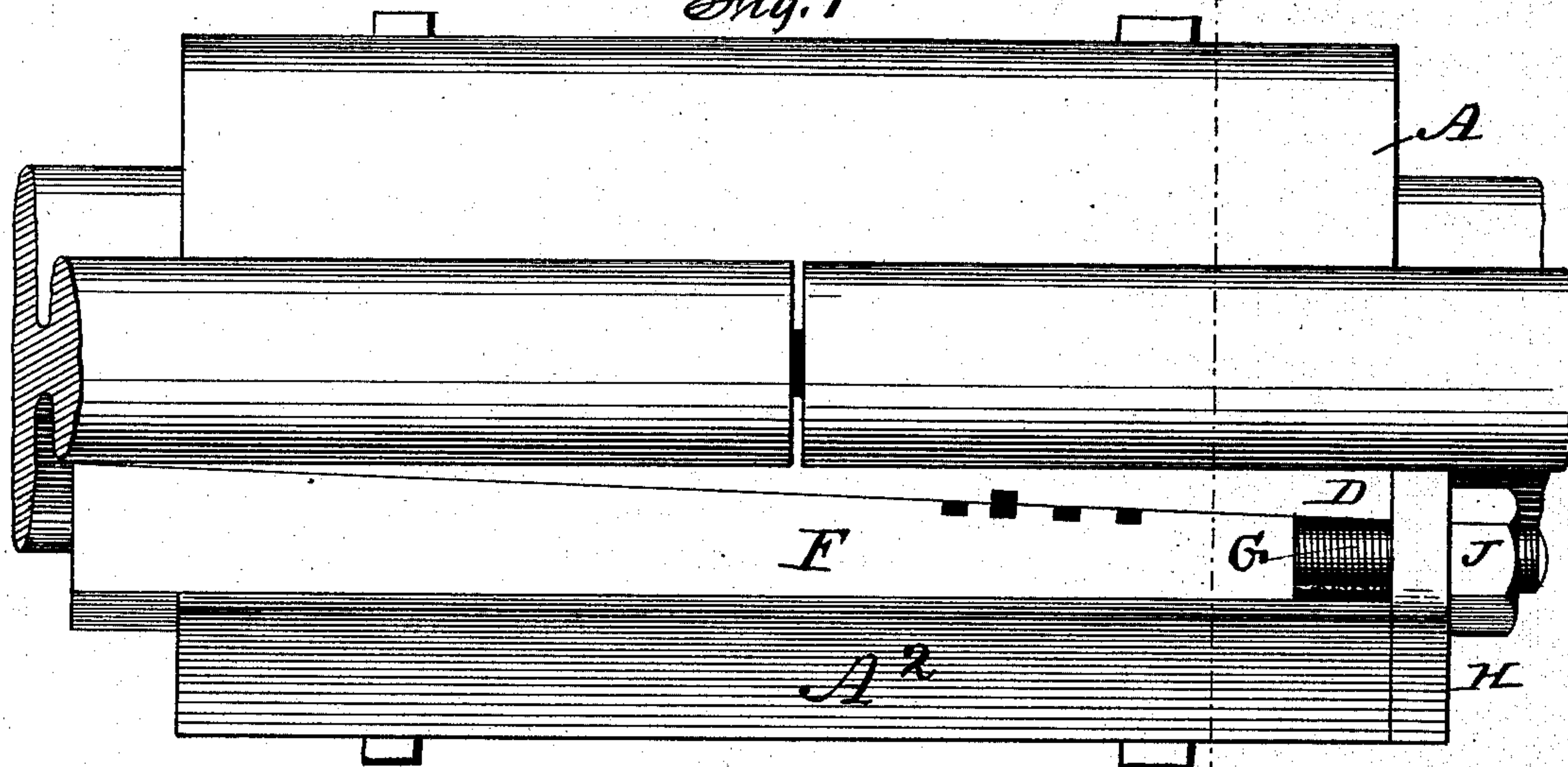
(No Model.)

J. C. LEFLER & A. SWIVEL.

RAILWAY RAIL JOINT.

No. 322,300.

Fig. 1 Patented July 14, 1885.



Witnesses:
Orra B. Moore,
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UNITED STATES PATENT OFFICE.

JOHN C. LEFLER AND ANDREW SWIVEL, OF DES MOINES, IOWA.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 322,300, dated July 14, 1885.

Application filed April 11, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. LEFLER and ANDREW SWIVEL, of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Railway-Rail Joint, of which the following is a specification.

Our object is to connect the abutting ends of rails by means of a chair and two wedges in such a manner that the one wedge will be pressed laterally against the webs of the rails, and also vertically against the under sides of the balls of the rails as the other wedge is moved longitudinally.

Heretofore wedges have been placed between the jaw or vertical flange of a chair and the webs of the rails in such a manner that they could be moved longitudinally to press laterally but not vertically, at the same time to press against the under sides of the balls of the rails, as required, to maintain continuity of track by compensating for wear and keeping the top surfaces of the ends of the rails level.

Figure 1 of our accompanying drawings is a top view of our complete joint. Fig. 2 is a perspective view of our improved chair. Fig. 3 is a perspective view of a pair of wedges and our wedge-fastening device. Fig. 4 is a top view, showing a modified form of our chair. Fig. 5 is a transverse section of Fig. 1 through the dotted line shown in that figure.

Jointly considered, these figures illustrate the construction, application, and operation of our complete invention.

A represents a chair of common form, excepting that it is provided with a shoulder or raised portion, B, that extends its entire length, and in combination with the flanges of the abutting ends of the rails forms a base and support for an adjustable wedge, as clearly shown in Fig. 5. It is also provided on its top surface and longitudinal center with a lug, C, on each side, that extends inward to enter corresponding notches formed in the ends and corners of the flanges of the rails that enter the chair for the purpose of restricting the longitudinal movement of each rail relative to the chair, so that neither one of the rails can advance past the center of the chair, or the continuous track creep relative to the chairs and ties to which the chair may be fixed by means of spikes, or in any suitable way.

Projections may be formed on the sides to engage spikes in the ties.

D is a wedge-shaped block, fitted against the webs of the rails in such a manner that it will rest upon the tops of the flanges of the rails, and also against the base of the ball of each rail, as clearly shown in Fig. 5. It has a longitudinal taper, and also a transverse taper, adapting it to be simultaneously moved laterally and vertically by the longitudinal movement of a wedge.

F is a wedge designed to fit in the space between the block D and the vertical flange A² of the chair in such a manner that it can be moved longitudinally, but not vertically, for the purpose of pressing the wedge D laterally and also vertically, and clamping all the parts rigidly together.

G is a screw-threaded extension on the small end of the wedge F. H is a washer upon the screw G. J is a nut on the end of the same screw.

By placing the ends of two rails in the chair, and the block D and wedge F in position, as shown in Fig. 1, the washer H will rest against the ends of the block and the flange A² of the chair, and by then simply operating a nut, J, by means of a wrench, the wedges can be drawn toward the washer, and all the parts firmly keyed together, as required, to retain the abutting ends of two rails level and in line. By removing the nut the clamping force is relaxed and all the parts can be separated.

By notching the contiguous side faces of the block D and wedge F, as shown in Figs. 1 and 3, a key may be inserted to lock them together.

Fig. 4 shows the shoulder B and flange A² of the chair parallel with each other, but inclined relative to the flange on the opposite side of the chair. By thus forming a wedge-shaped chair, the wedge-shaped block D can be dispensed with, and the wedge F made to fit against the webs of the rails and to fill the entire space between the inclined flange A² and the rails. Horizontal perforations in the flange and end of the wedge allow a screw to be inserted to lock them together.

From the description of the construction and function of each part, the practical application, operation, and utility of our complete invention will be obvious to all persons familiar with railroads.

We claim as our invention—

1. A railway-chair having a shoulder, B, a block, D, having a longitudinal and also a transverse taper, and a wedge, F, having a longitudinal and also a transverse taper, arranged and combined, relative to each other and the ends of two rails having flanges at their bottoms and balls at their tops, to operate in the manner set forth, for the purposes stated.

2. The improved railway-rail joint composed of the chair A B, the block D, the wedge F, having a screw-threaded end, G, the washer H, the nut J, and two rails, substantially as shown and described.

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Witnesses:

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