

No. 693,808.

Patented Feb. 18, 1902.

W. H. SHIPE & J. P. GLEESON.
RAIL JOINT.

(Application filed Aug. 10, 1901.)

(No Model.)

Fig. 1.

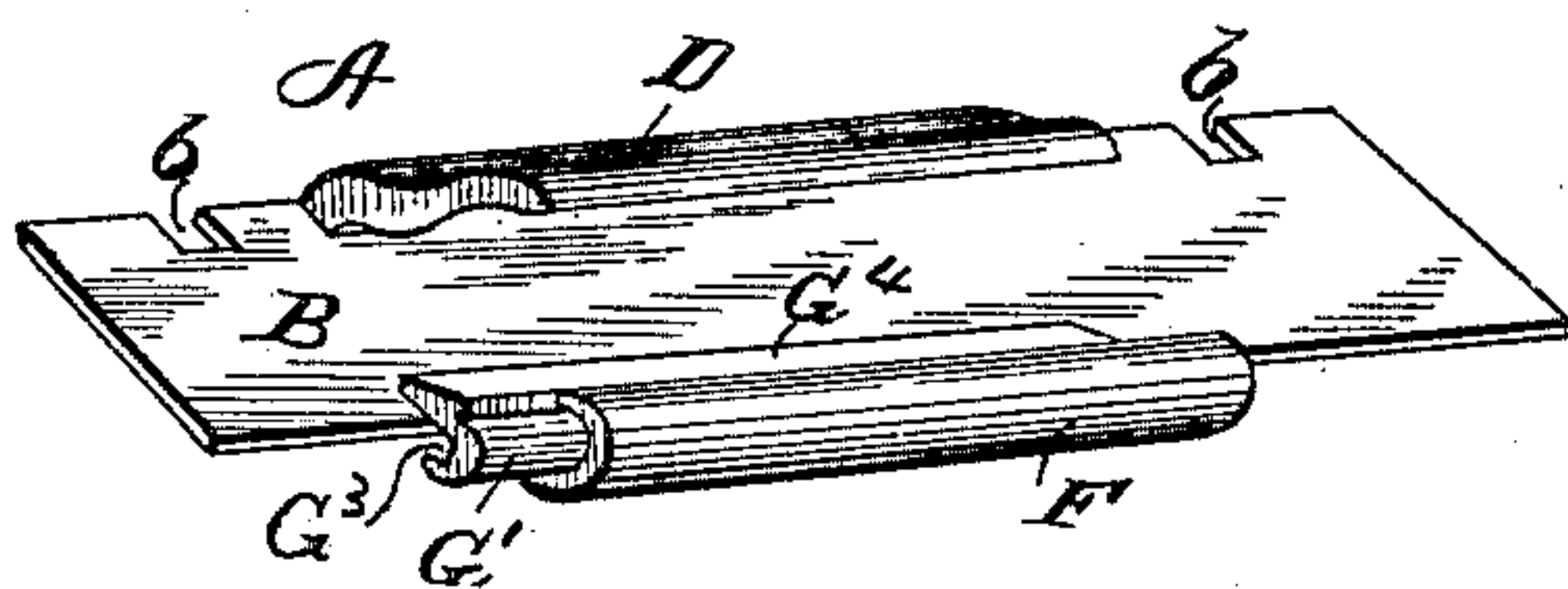


Fig. 2.

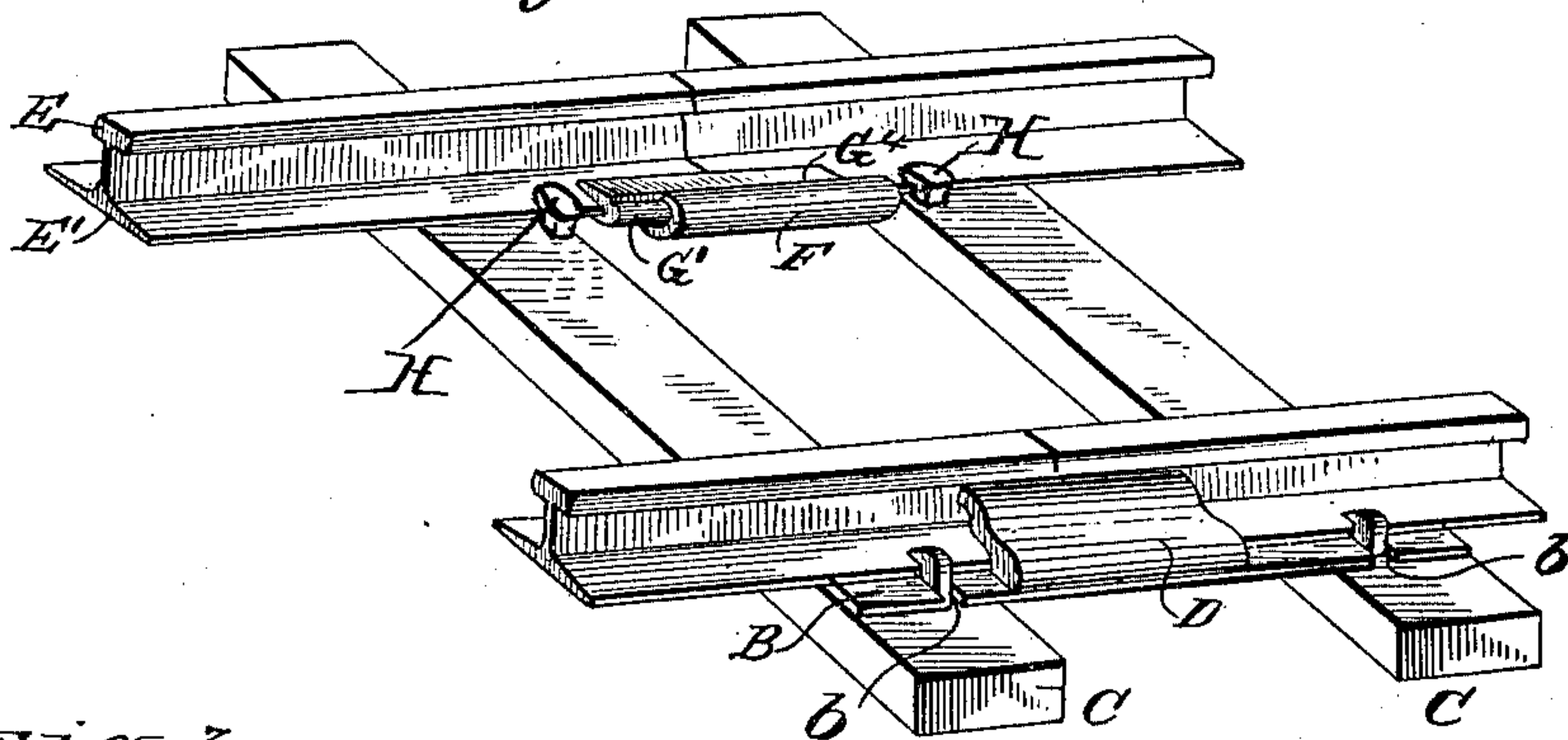


Fig. 3.

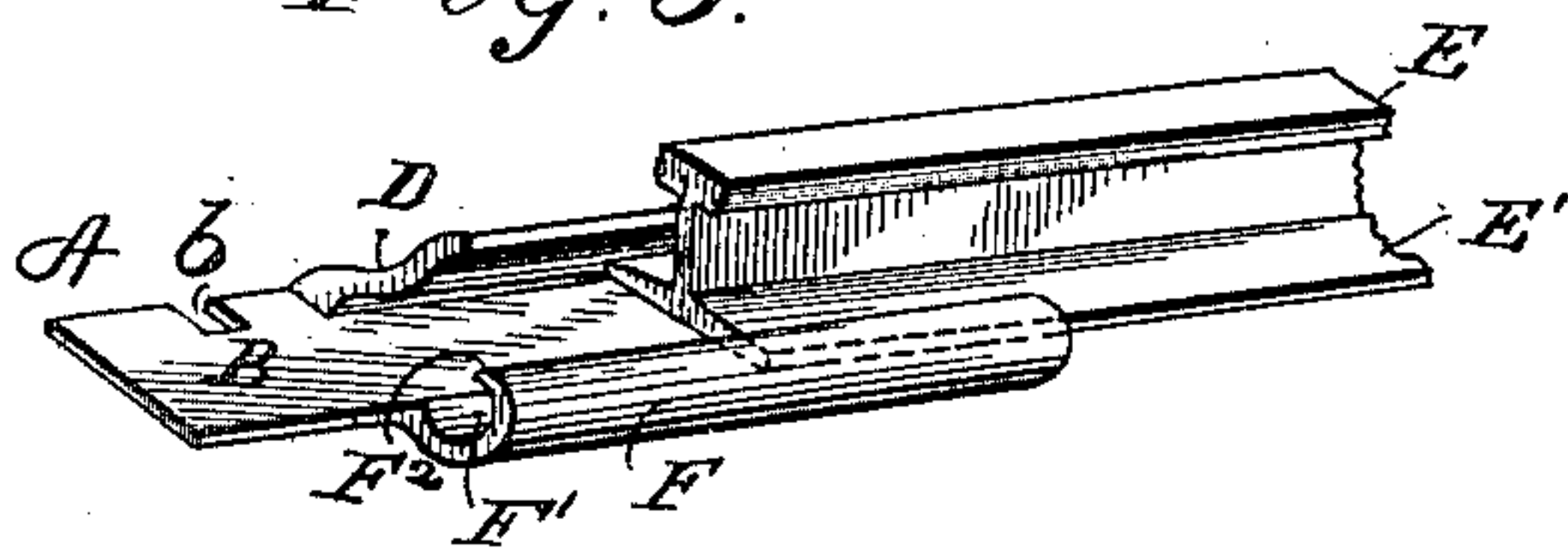
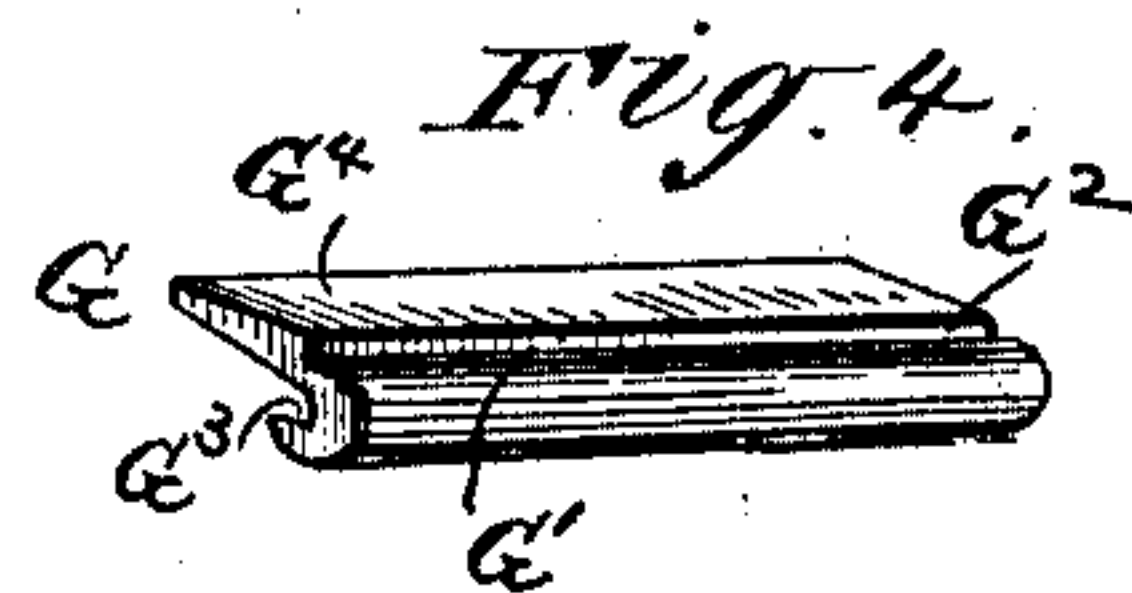
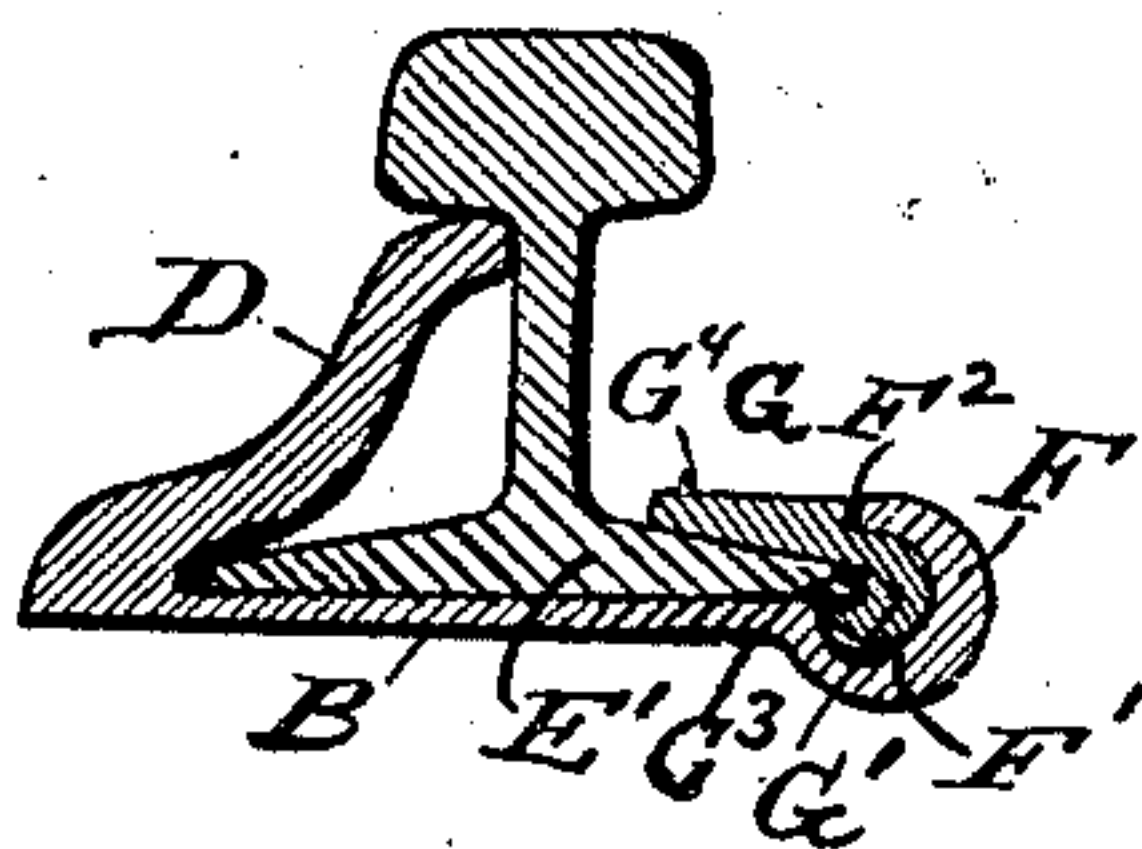


Fig. 5.



WITNESSES:

W. R. Edelen,
Perry B. Furpin

INVENTORS.
William H. Shipe.
Joseph P. Gleeson
BY Munn & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM H. SHIPE AND JOSEPH P. GLEESON, OF SCOTTTDALE,
PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 693,808, dated February 18, 1902.

Application filed August 10, 1901. Serial No. 71,637. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. SHIPE and JOSEPH P. GLEESON, citizens of the United States, residing at Scottdale, in the county of Westmoreland and State of Pennsylvania, have made certain new and useful Improvements in Rail-Joints, of which the following is a specification.

Our invention is an improvement in rail-joints, it being in the nature of a combined chair and rail-joint in which the chair-like base will stand a space between two adjacent ties, so it will be supported on both said ties and a joint may be effected between the ties, and devices are employed for securely fastening the rail in the joint-section as desired; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of the combined chair and joint devices. Fig. 2 is a perspective view illustrating a section of track provided with our invention. Fig. 3 is a detail perspective view illustrating the chair and a rail therein, the key being removed. Fig. 4 is a detail perspective view of the key, and Fig. 5 is a cross-sectional view illustrating the chair and joint devices with a rail applied and secured.

The chair A is shown as formed with a base-plate B, made of sufficient length to extend between two adjacent ties C, so it can rest at both ends thereon. At one side, preferably the outer side, as shown in Fig. 2, the chair A is provided with the upwardly-extending wing D, which conforms and fits against the outer side of the rail E, preferably extending up within the hollow of the rail to a point under the tread of the rail, as shown in Fig. 5, so the rail will be securely held at its outer side and will be pressed immediately beneath its tread portion, as is illustrated in the said Fig. 5. This wing D terminates short of the opposite ends of the plate B, so the latter is provided with projecting portions beyond the outer wing D and the opposite seat portion F for the key G. This seat portion F is arranged at the side of the base-plate B opposite the wing D and preferably at the inner side of the rails, as will be understood from

Fig. 2, and it has provided in its inner side a circular groove or socket F', which is extended beyond the half-circle, so the curved rib G' at the outer side of the key G can be slipped longitudinally into the seat F and will be held therein, as is best shown in Fig. 5. It will be seen from Fig. 5 that the seat F is depressed immediately adjacent to its juncture with the base-plate B slightly below the level of such base-plate, so the base E' of the rail can overlie at its edge the longitudinal recess F', as shown in Fig. 5. It will be noticed that the edge F² of the seat portion F curves slightly inward to enter the longitudinal groove G² in the key G.

The key G (shown in detail in Fig. 4) is provided with the longitudinal curved portion G' at its outer edge, with the groove G² in its upper side forming a shoulder for abutment by the edge F² of the portion F, has the longitudinal groove G³ in the inner face of its curved portion G', is provided with the inwardly-projecting web or portion G⁴ to rest upon the base of the rail, and is held from displacement by the spikes H.

In practice the base-plate is provided with notches b for the spikes, which may be spiked to the ties and the rails inserted, as shown in Fig. 3. The keys G may then be applied by slipping them longitudinally in their seats in the chairs, when they will operate to secure the rails in place and to bind them firmly within the chairs, as will be readily understood from the drawings and the preceding description.

It will be noticed that by our invention we provide an efficient and economical joint and abolish bolts and nuts, as commonly employed, and provide a joint which can be readily applied and removed and which can be applied to ordinary constructions now in use.

By providing supports on both ties a solid bearing is given to the joint, and the joint is made as solid as any other portion of the rail. Manifestly the chairs and keys may be made in different sizes to fit different rails and in different weights, according to the traffic the rails are designed to bear. It will be noticed that the construction is such that the rails can be inserted or removed without displac-

ing the chair proper and that the key forms an effective fastening by which to hold the rail in place.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination substantially as herein described, of the rails, the joint devices comprising the chair having a base-plate and provided at one side with the wing to fit in the hollow of the rails, and at its opposite side with a seat portion curved in cross-section depressed at its lower edge below the outer side of the base-plate and curving thence upwardly and inwardly and opening toward the opposite wing and having its free edge slightly inturned, the base of the rail being arranged to extend slightly within the hollow of the said seat portion, and the key provided at its outer edge with a rib to fit within the seat portion of the chair and having in the inner side of said rib a longitudinal groove to receive the outer edge of the base of the rail, said key being provided in its upper side with a longitudinal groove to receive the inturned edge of the seat portion and having a web extending inwardly beyond said groove and bearing upon the base of the rail, substantially as set forth.
2. The combination of the chair having a seat portion for the key provided with a free edge, and the key provided in its upper side with a groove to receive the edge of the seat portion and in its under side with a groove

to receive the edge of the rail-base, substantially as set forth.

3. The chair having a base-plate provided at one side with a seat portion to receive the key and the key having at its outer edge a rib to fit in said seat portion, and provided in its upper side with a longitudinal shoulder for abutment by the edge of the seat portion, substantially as set forth.

4. In a rail-joint, the combination of the chair having a base-plate and provided at one side thereof with a curved portion which dips below the level of the base and curves thence upwardly and inwardly, the rail fitted to the chair and the key having a curved portion corresponding to that of the chair and provided in its upper side with a longitudinal groove to receive the edge of the upwardly-curved portion of the chair.

5. The combination in a rail-joint, of the key provided at its outer edge with the longitudinal rib, and having the inwardly-projecting web portion to bear upon the rail-base, provided in its upper side with a longitudinal groove and in its under side with the longitudinal groove, and the chair having a seat portion to receive said key, substantially as set forth.

WILLIAM H. SHIPE.
JOSEPH P. GLEESON.

Witnesses:

JOHN D. SISLEY,
J. S. KLINGENSMITH.