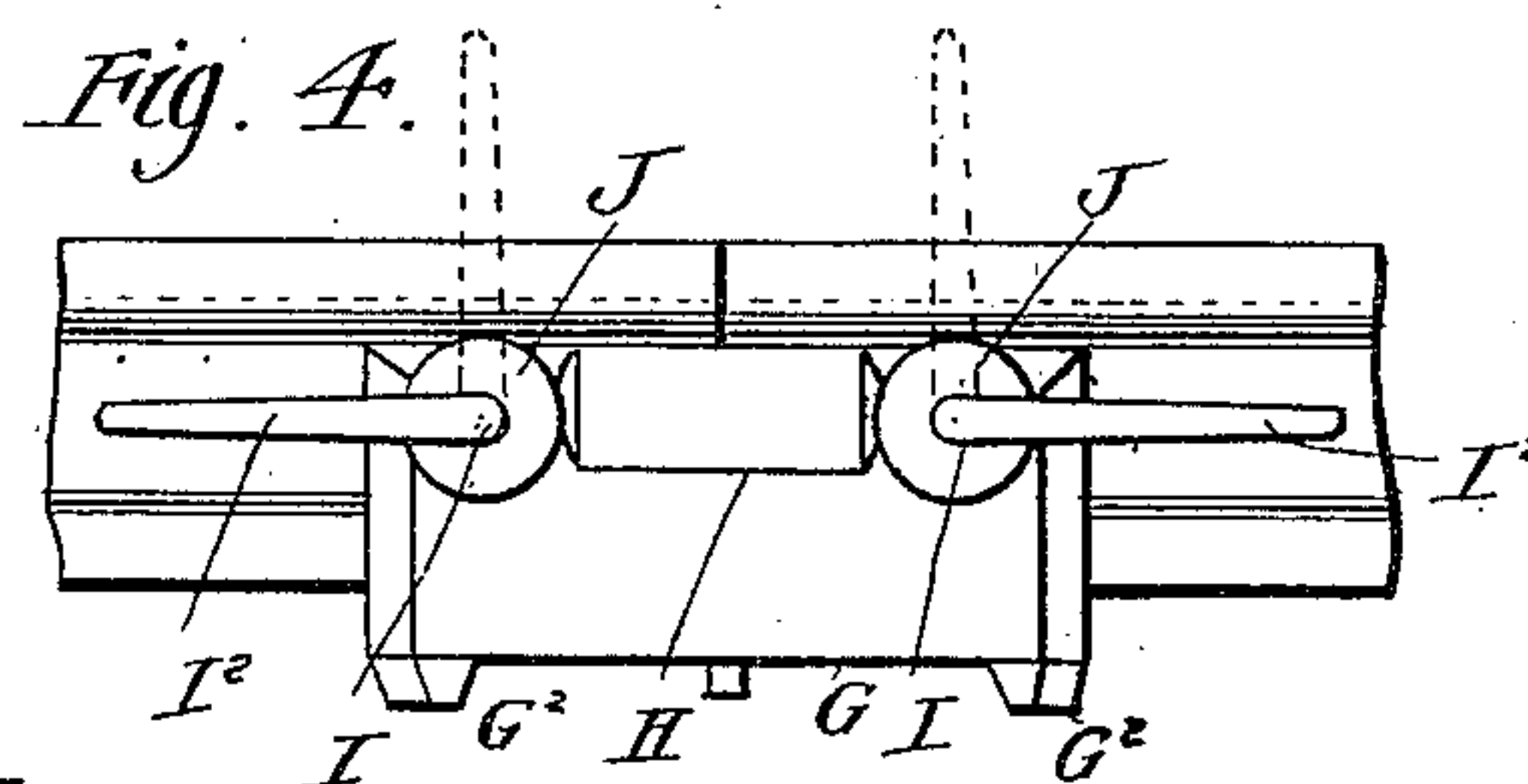
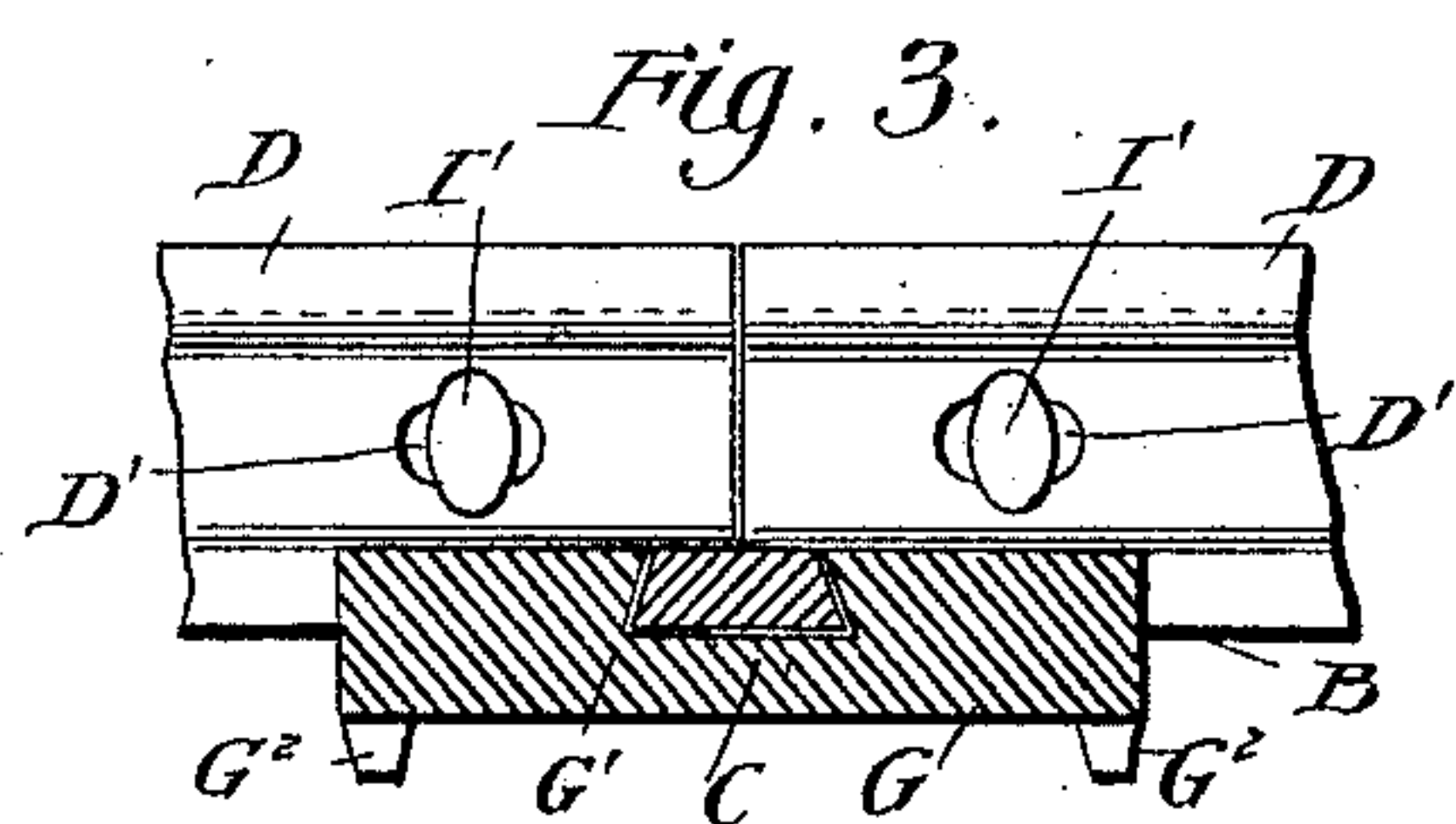
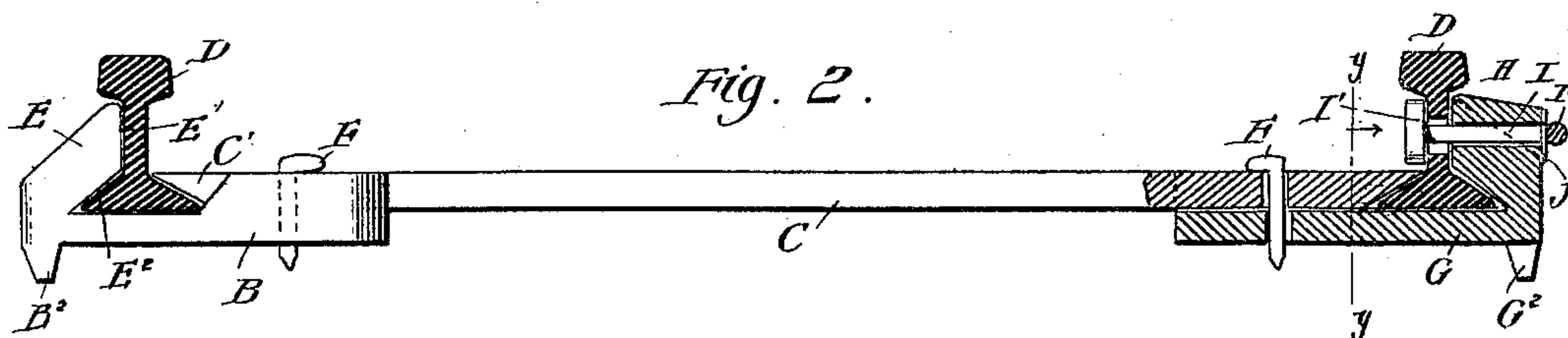
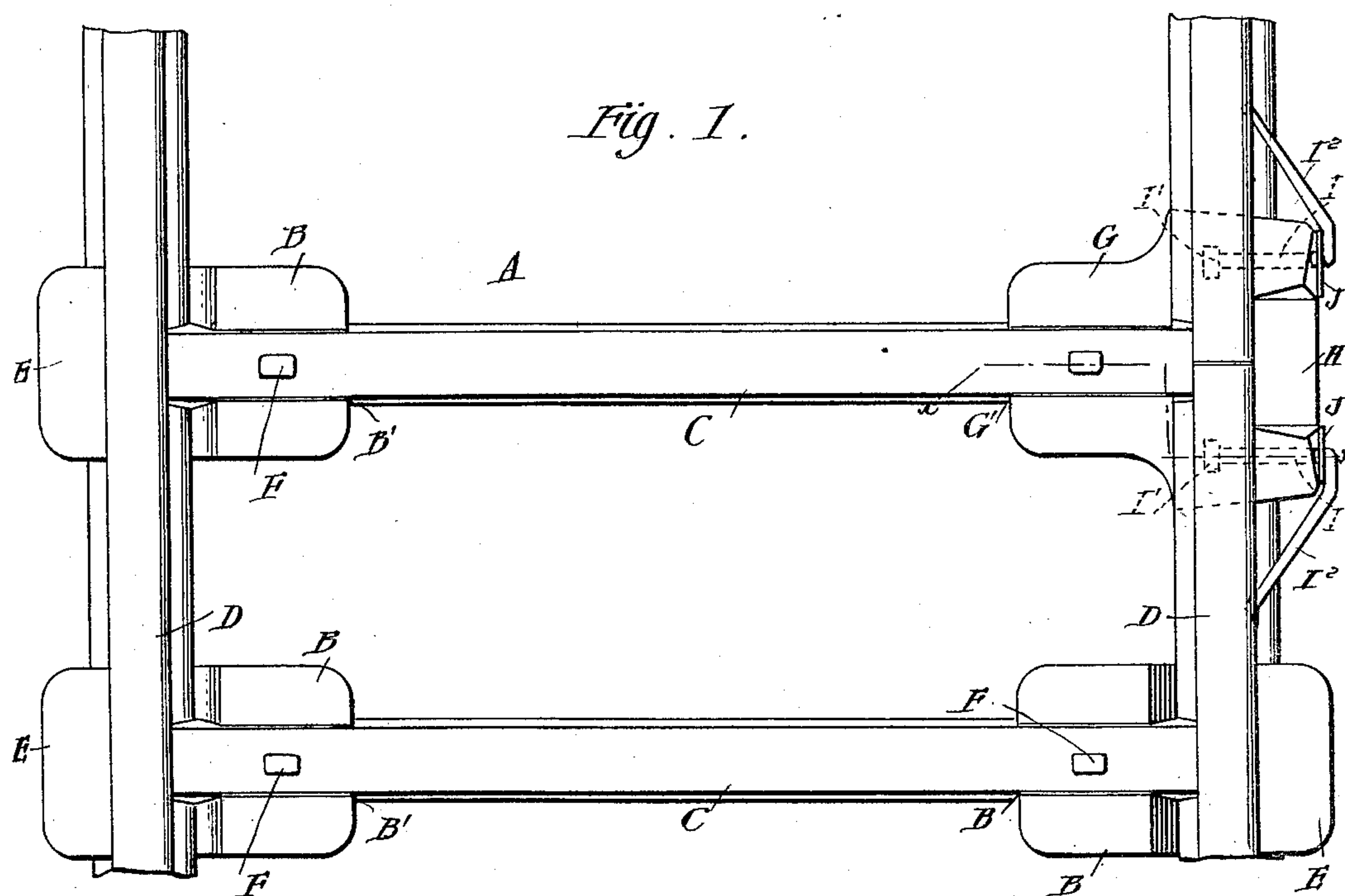


(No Model.)

E. DAINTY.
METALLIC RAILWAY TIE.

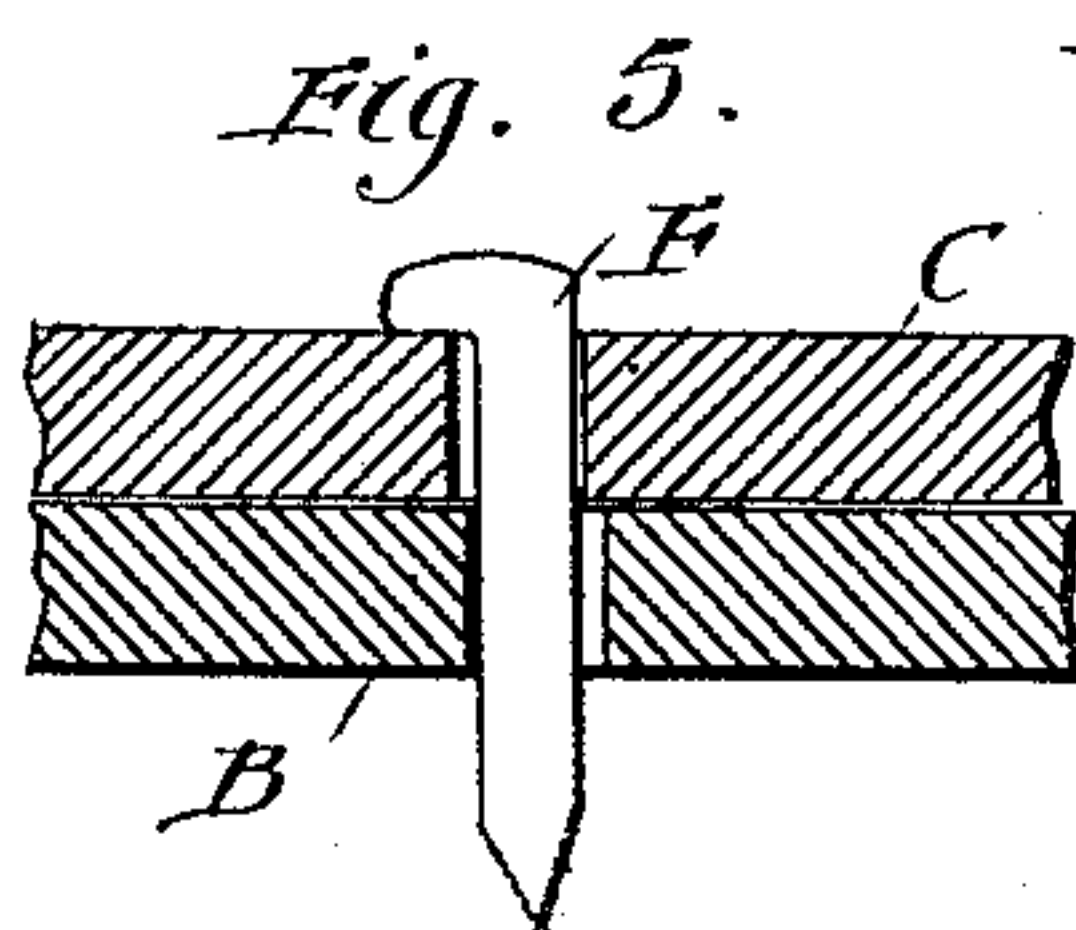
No. 432,377.

Patented July 15, 1890.



WITNESSES:

J. Clark.
C. Sedgwick



INVENTOR:

E. Dainty
Munn & Co.

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

ELIJAH DAINTY, OF COAL BLUFF, PENNSYLVANIA.

METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 432,377, dated July 15, 1890.

Application filed April 5, 1890. Serial No. 346,679. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH DAINTY, of Coal Bluff, in the county of Washington and State of Pennsylvania, have invented a new and
5 Improved Metallic Railroad-Tie, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved metallic railroad-tie which
10 is simple and durable in construction, can be quickly laid or taken up, and is specially intended for tracks which have to be frequently removed and relaid, as is the case in mines and similar places.

15 The invention consists of a base having a dovetailed groove and provided with a lug having a beveled edge adapted to engage the rail, a cross-bar fitted into the dovetail and having a beveled end engaging the edges of
20 the rail opposite the said lug, and a bolt or spike for fastening the said cross-bar to the base.

The invention also consists of certain parts and details and combinations of the same, as
25 will be hereinafter fully described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
30 corresponding parts in all the figures.

Figure 1 is a plan view of the improvement as applied. Fig. 2 is a side elevation of the same, with parts in section, on the line *xx* of Fig. 1. Fig. 3 is a sectional end elevation of
35 the same on the line *yy* of Fig. 2. Fig. 4 is an end elevation of the same at the junction of two rails; and Fig. 5 is an enlarged sectional elevation of part of the cross-bar, the bolt or spike, and the base.

40 The improved metallic railroad-tie is provided with two bases B, which are alike in construction, are arranged opposite each other, and are connected with each other by a cross-bar C. On the top of the oppositely-arranged
45 bases B are placed the two rails D for forming the track. On the top of each base and on the outside is formed a lug E, projecting upward and inward, so that the inner edge E' fits against the shank of the rail D, while the
50 lower edge E² is inclined or beveled and fits on the top of the base of the said rail, as is plainly shown in Fig. 2. The opposite side

of the base of the rail D is engaged by the beveled end C' of the cross-bar C, which latter is dovetailed near each end, its end fitting into a corresponding dovetailed groove
55 B', arranged transversely in the base B on top of the same and opposite the lug E. Each of the bases is also provided with downwardly-extending lugs or projections B², adapted
60 to pass into the ground, so as to hold the bases in place. The latter as well as the cross-bar C are provided with apertures arranged vertically and located in such a manner as not to fully register, as illustrated in Fig. 5,
65 so that a bolt or spike F, having a beveled end, can be driven through the aperture in the cross-bar C to pass into the aperture in the base B, whereby the cross-bar and the base B are moved toward each other, thereby moving
70 the beveled end C' partly over the base of the rail D and at the same time drawing the lug E firmly against the outside of the rail, thus locking the rail securely in place on top of the base B. Thus it will be seen that
75 the cross-bar C is not only locked by the bolt F to the base B, but it also serves to lock the rail D to the base B.

At the point where two rails are to be joined the base B is somewhat differently constructed, as shown in Figs. 1, 2, 3, and 4. The base
80 G is provided with the transverse grooves G' for the reception of the dovetailed end of the cross-bar C, and is also provided with an opening for the entrance of the bolt F, as is
85 plainly shown in Fig. 2. A lug H is formed on the top of the base G near its outer end, and is similar to the lug E, previously referred to, and formed on the base B. Transverse
90 openings are also formed in the lug H, and through these openings pass bolts I, having elongated heads I', adapted to pass through correspondingly-shaped openings D' in the
95 adjoining rails D, as is plainly shown in Fig. 3. The outer ends I² of the bolt I are bent at angles, as is plainly shown in Fig. 1, so as to form a handle for conveniently turning the bolts. When the said handles I² stand in a
100 vertical position, as indicated in dotted lines in Fig. 4, the heads I' of the bolts register with the elongated openings D' in the rails, so that the said bolts can be removed from the rails and lug H or inserted, after which the handles I² are turned down into the posi-

tion shown in Fig. 4, so that the heads I' stand vertically and engage the shank of the rail, so as to lock the latter at adjoining ends to the said lug II. The lug II in this case serves
5 as a fish-plate.

Washers J are placed on the bolts I next to the handles I', so as to prevent the bolts from wobbling when the handles are drawn downward, as previously described. It is understood that when the handles are in a vertical position the said washers can be conveniently slipped over the handles onto the bolts, but cannot be removed after the handles are moved into a horizontal position, as shown in
15 Fig. 4.

It will thus be seen that by constructing a railroad-tie in this manner the several parts can be conveniently and quickly laid down and the rails fastened, as described, or taken
20 up, so as to move the track to another place. It will further be seen that it requires no skilled labor whatever to lay a track of this kind.

Having thus fully described my invention,
25 I claim as new and desire to secure by Letters Patent—

1. A metallic railroad-tie comprising a base having a dovetailed groove and provided with a lug adapted to engage the rail, a bar fitting
30 at one end into the dovetailed groove and adapted to engage the rail opposite the said lug, and a bolt or spike for locking the said cross-bar to the base and for locking the rail in place on the base, substantially as shown
35 and described.

2. A metallic railroad-tie comprising a base having a transversely-extending dovetail, a beveled lug formed on one end of the said base and adapted to engage the rail, a cross-bar
40 having a beveled end and fitted into the said

dovetailed groove, the said beveled end being adapted to engage the rail, and a bolt or spike passing through apertures in the said cross-bar and base to move the cross-bar and base toward each other to lock the rail in place, 45 substantially as shown and described.

3. In a railroad-tie, the combination, with a base having a beveled lug adapted to engage the outside of the rail, of bolts mounted to turn in the said lug and having elongated
50 heads and handles, substantially as shown and described.

4. In a metallic railroad-tie, the combination, with a cross-bar having dovetailed sides and a beveled end, of a base provided with a
55 dovetailed groove into which fits one end of the said cross-bar, a bolt adapted to pass through the said cross-bar and base, a lug having a beveled edge and formed on top of the said base and adapted to engage the outside
60 of the rail, and bolts mounted to turn in the said lug and adapted to lock the rails to the said lug, substantially as shown and described.

5. In a metallic railroad-tie, the combination, with a cross-bar having dovetailed sides
65 and a beveled end, of a base provided with a dovetailed groove into which fits one end of the said cross-bar, a bolt adapted to pass through the said cross-bar and base, a lug having a beveled edge and formed on top of the
70 said base and adapted to engage the outside of the rail, and bolts mounted to turn in the said lug and adapted to lock the rails to the said lug, the said bolts being provided with elongated heads and handles, substantially as
75 shown and described.

ELIJAH DAINTY.

Witnesses:

BERNARD VOLK, Jr.,
PETER MASSUNG.