

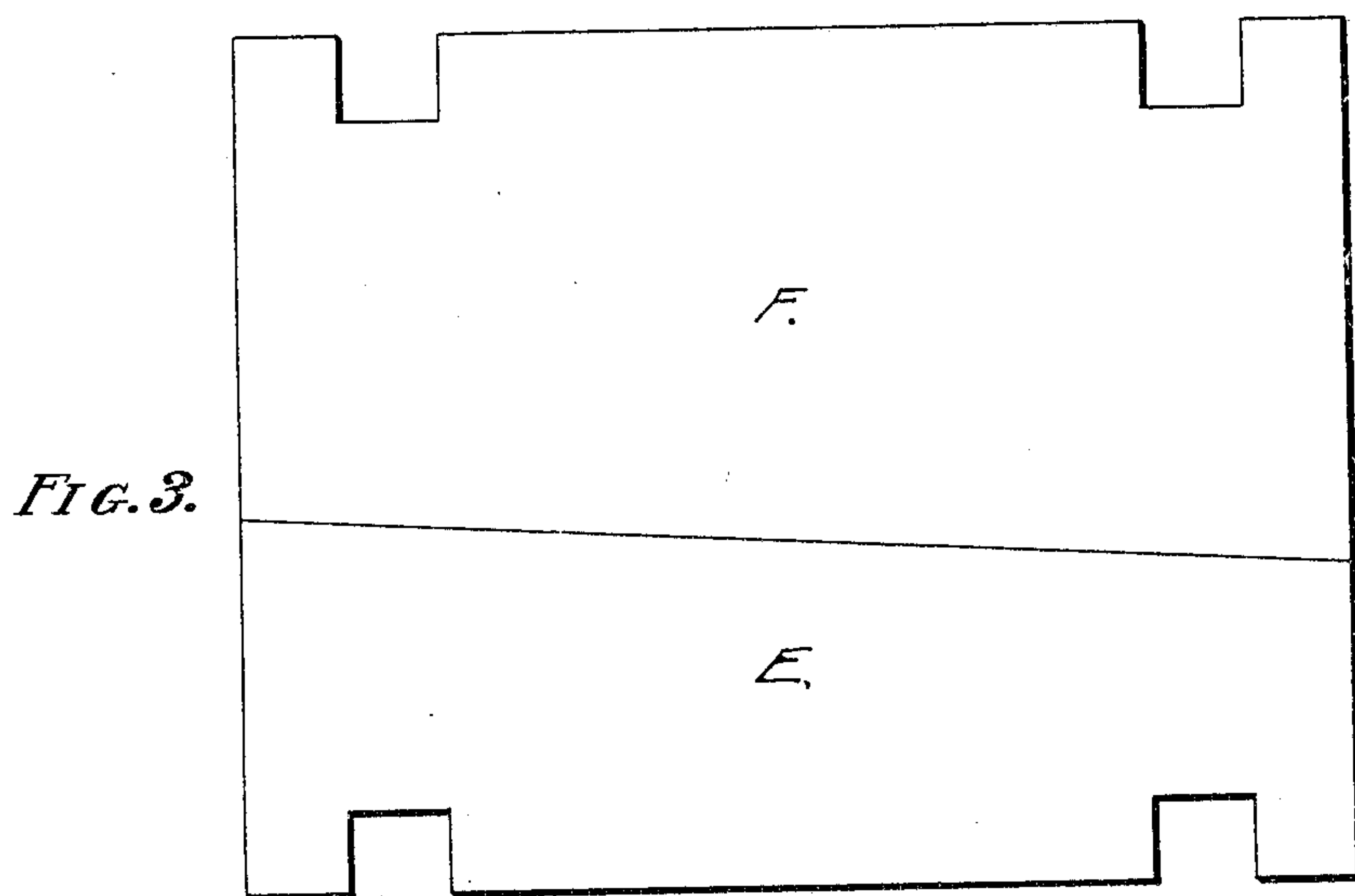
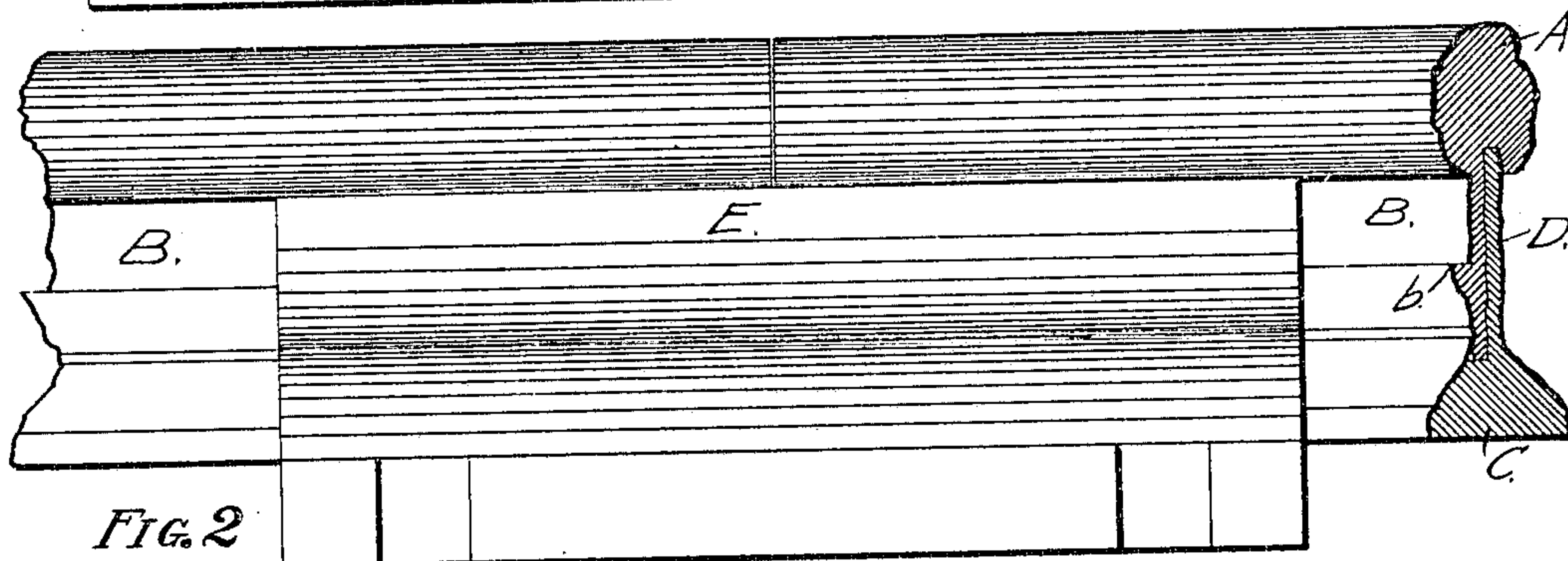
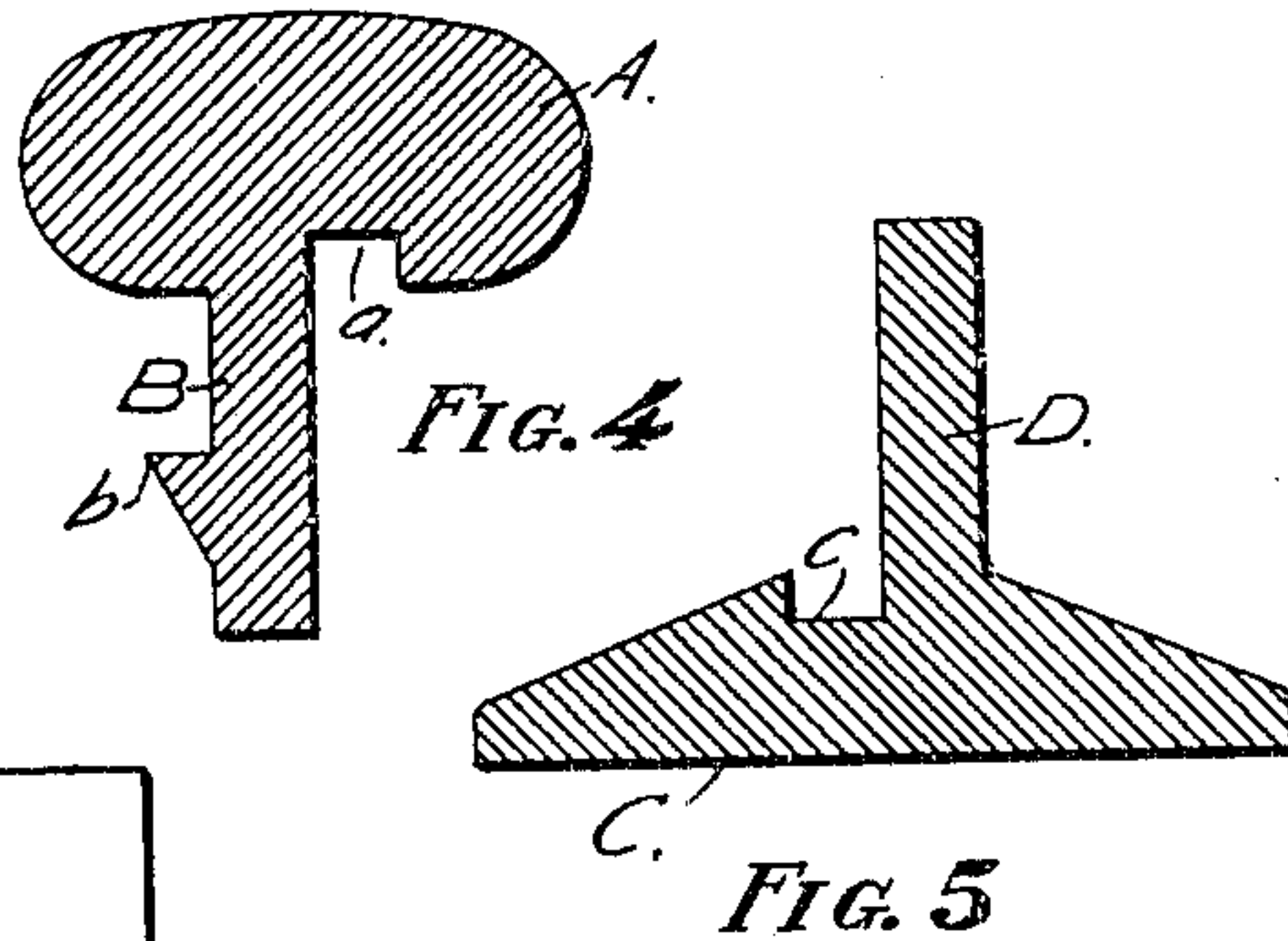
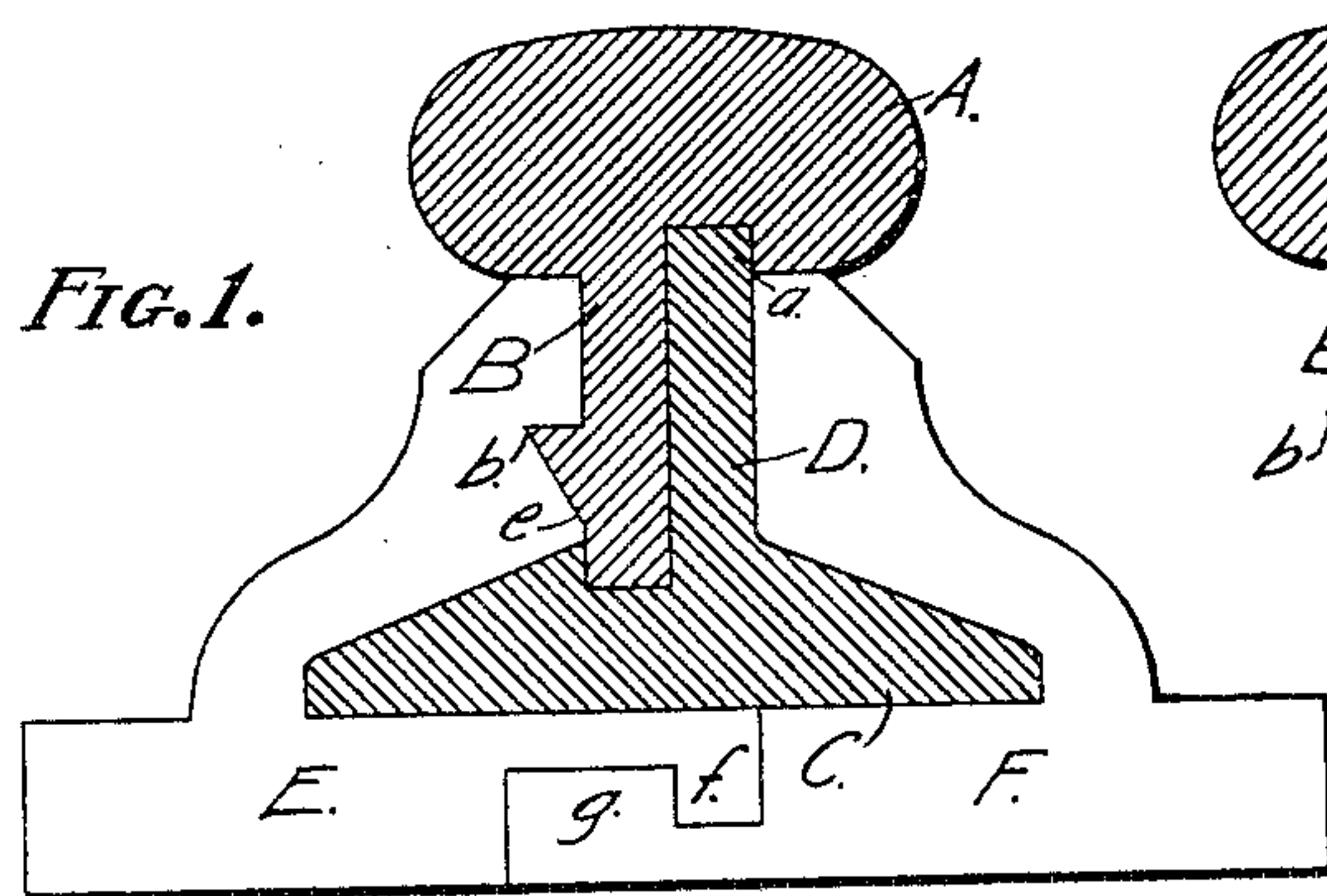
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I. N. BOOMER & S. P. LINKSWILER.

RAILROAD RAIL.

APPLICATION FILED JUNE 5, 1905.



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ISAAC N. BOOMER AND STERLING P. LINKSWILER, OF SALIX, IOWA.

RAILROAD-RAIL.

No. 799,140.

Specification of Letters Patent.

Patented Sept. 12, 1905.

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To all whom it may concern:

Be it known that we, ISAAC N. BOOMER and STERLING P. LINKSWILER, citizens of the United States, and residents of Salix, in the county of Woodbury and State of Iowa, have invented a new and useful Improvement in Railroad-Rails; and we do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part thereof.

Our invention relates to railroad-rails and the means for securing them to the ties; and the object of the invention is to provide a rail in which the head is separate from the base and may be replaced when worn and also to provide means for securing the joints without the use of bolts or pins. These objects we accomplish by forming a part of the web integral with the head and a part of the same integral with the base, one side of the web having a tongue which fits a groove in a clamp inclosing the web and base, the clamp being secured underneath the base.

Reference is now had to the accompanying drawings, forming a part of the specification, in which—

Figure 1 is a view showing a cross-section of the rail and end view of clamp. Fig. 2 is a view in side elevation, showing the clamp and joint in the rail. Fig. 3 is an inverted plan view of the clamp. Figs. 4 and 5 are sections of rail, showing the head and base apart.

Referring to the drawings, in which like parts are designated by similar letters of reference, A is the head of the rail, having underneath on one side of the web a groove or furrow *a*.

B is one part of the web formed integral with the head, having on the outer side or side opposite the other part of the web a projecting tongue *b*, the upper surface of the tongue formed at right angles to the web, the lower surface sloping diagonally toward the base. The base of the rail C has a groove *c*, like the groove *a*, on the upper surface of the base and on the opposite side of the web, the upper end of the base part of the web D fitting the groove *a* in the head and the head portion of the web B fitting the groove *c* in the base.

The clamp consists of two parts E and F, the part E having a triangular-shaped groove *e*, closely fitting the tongue *b*, on the side of the web, the inside of both parts of the clamp conforming to the surface of the web as united and the base. The edges of the clamp meet

underneath the base of the rail, where one part overlaps the other, the overlapping edges being cut away to form a smooth joint, the part E having a tongue *f*, which fits a groove *g* in the part F. To further tighten the joint of the clamp, the two parts are made diagonal with reference to each other where the edges join, as shown in Fig. 3, one end of each part being wider than the other, the narrow end of the part E being adjacent to the wide end of the part F. When the clamp is adjusted to the rail and the parts secured, they may then be driven at the ends and form a complete wedge, thus securely fastening the joint. When spikes are driven into the ties through the openings in the clamp left for that purpose, the rails are secured to the ties without bolts, nuts, or pins. The tongue *b* of the web fitting into the groove *c* in the clamp, it is impossible for the head of the rail to be raised without first removing the clamp. When the head is worn, it may be quickly replaced without removing the base from the ties. Joints may be provided anywhere in the rails and may be broken, so that the joint on one side of the track is opposite the middle of the rail on the other side. There being no bolts or pins passing through the rails, the rails are free to expand and contract with changes of heat and cold.

We are aware that it is not new to provide rails with a part of the web integral with the head and a part integral with the base, with upper and lower grooves into which the parts of the web fit; but we know of no rail constructed in the manner here shown, with a clamp inclosing the web and base and securing the joint of the rail in the manner here described.

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

1. In a railroad-rail, the combination of the head of the rail having a groove on the under surface, a part of the web formed integral with the head, a base having a groove on the upper surface, a part of the web formed integral with the base, said parts being adapted to overlap and the ends of the webs to fit said respective grooves, a projecting tongue on the side of the web, and a clamp inclosing the web and base of the rail having a groove adapted to fit said projecting tongue, substantially as described.

2. In a railroad-rail, the combination of a head having a groove on the under surface,

a web part formed integral with the head, a projecting tongue on the side of said web part, a base having a groove on the upper surface, a web part formed integral with the
5 base, said web parts being adapted to overlap and their ends to fit said respective grooves, a clamp formed of two parts inclosing the web and base of the rail, one of said parts having a groove adapted to fit the projecting
10 tongue of said web part, the edges of the clamp overlapping underneath the rail, a tongue on one of said parts adapted to fit a groove in the other part of the clamp and form

a tight joint therein, said edges being diagonal or wedge-shaped with reference to each other, and means for securing said clamp to the ties, substantially as described. 15

In testimony whereof we have hereunto affixed our signatures in the presence of two witnesses.

ISAAC N. BOOMER.
STERLING P. LINKSWILER.

Witnesses:

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NEWMAN D. LEAVITT.