

J. CROOKS.
RAIL JOINT.

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920,028.

Patented Apr. 27, 1909.

Fig. 1.

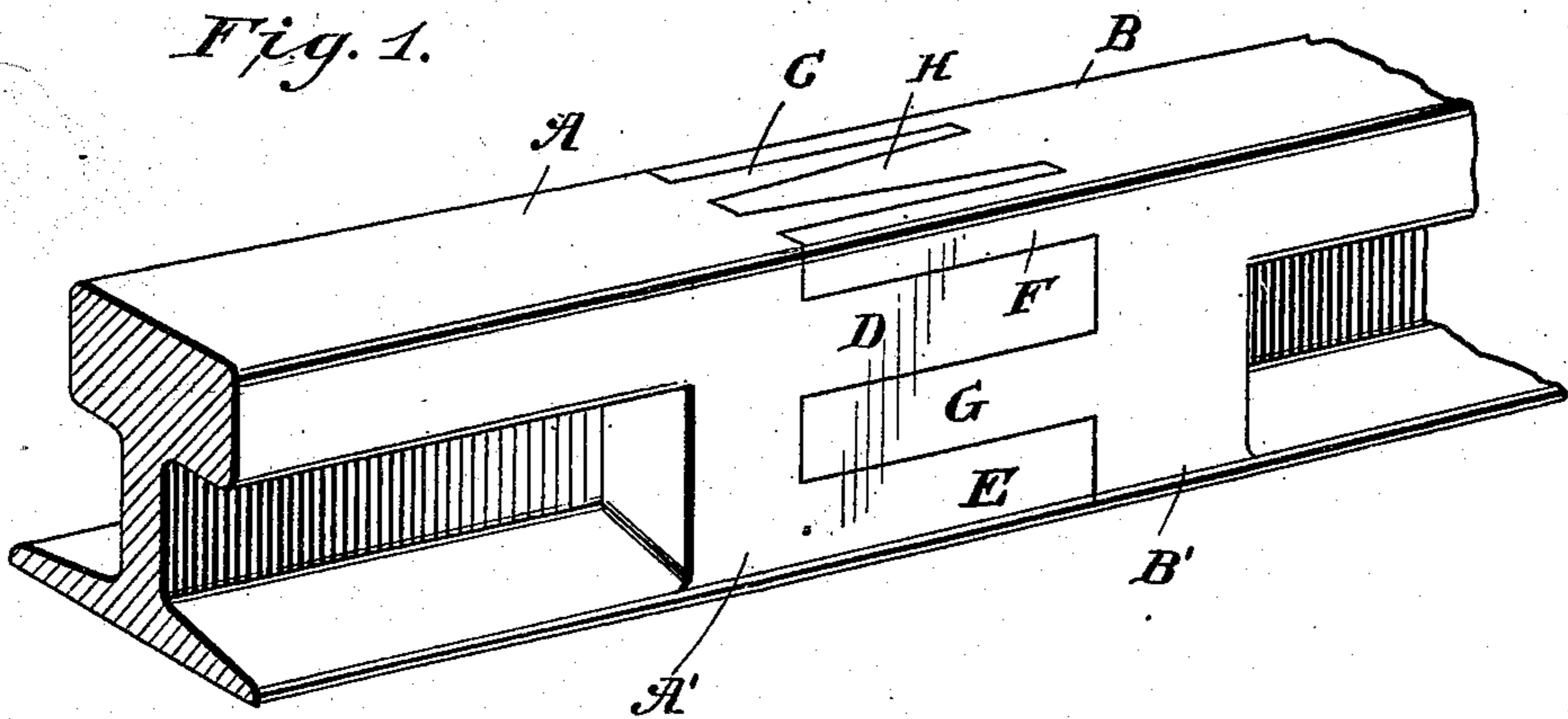


Fig. 2.

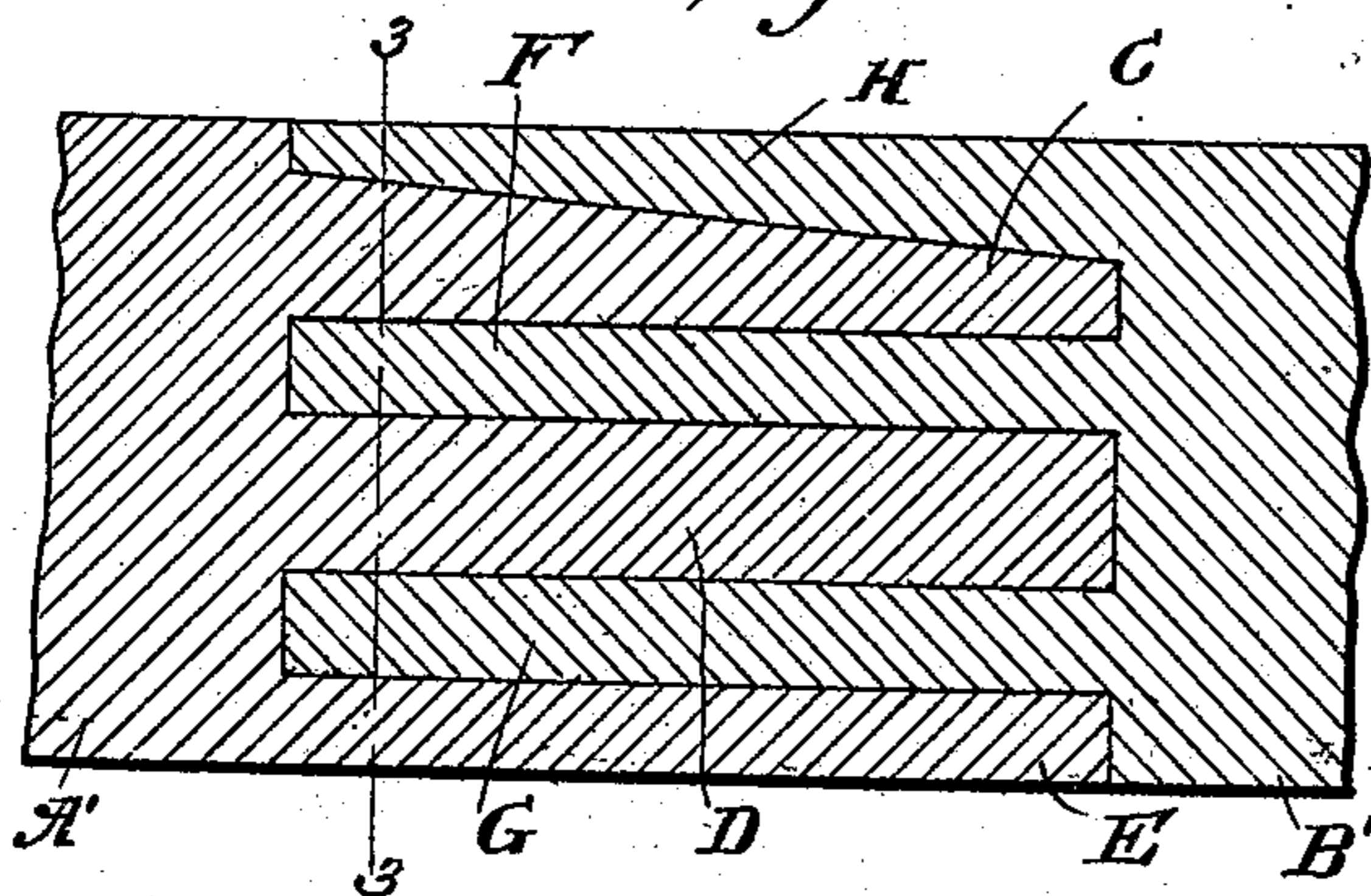


Fig. 3.

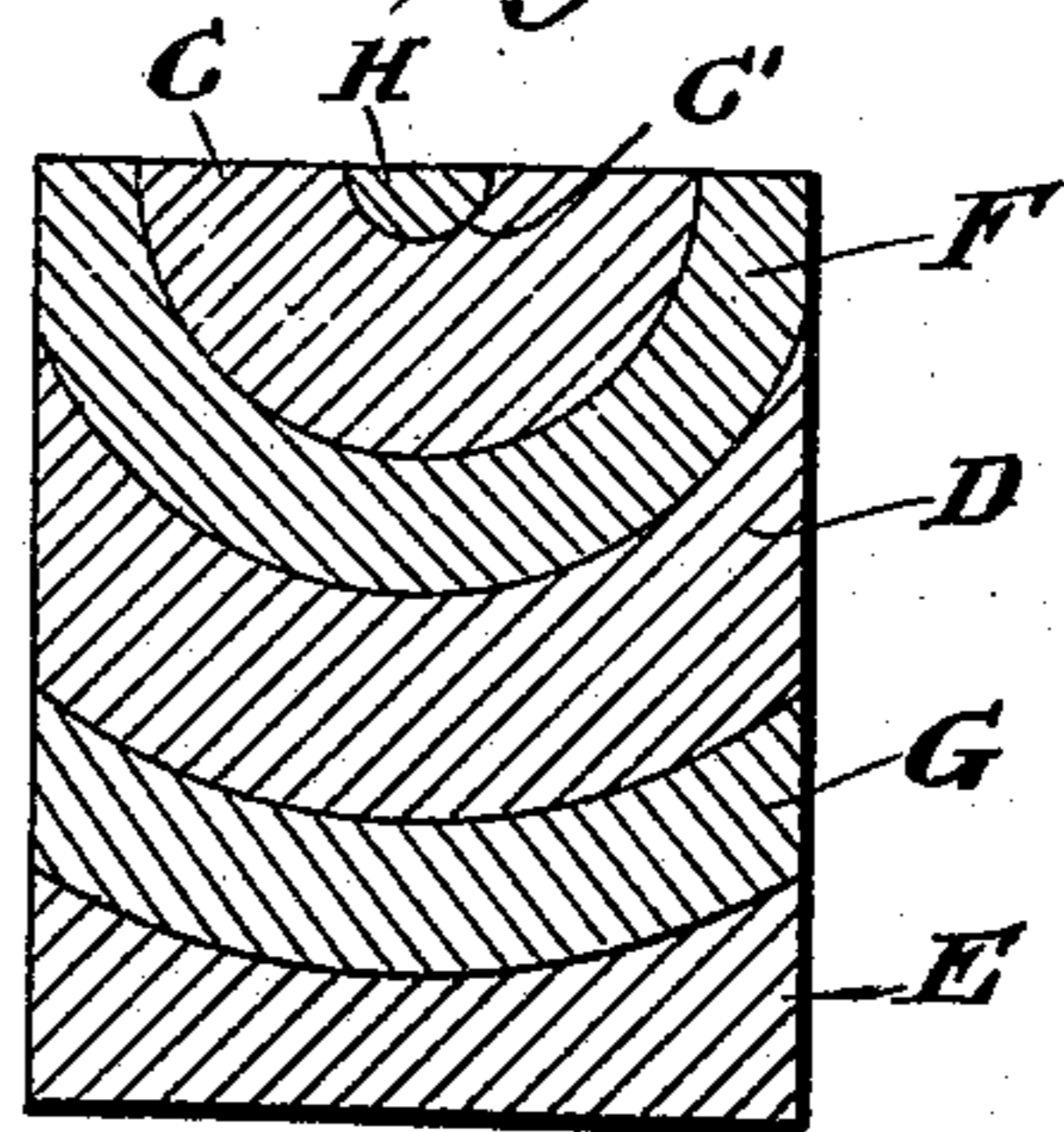


Fig. 4.

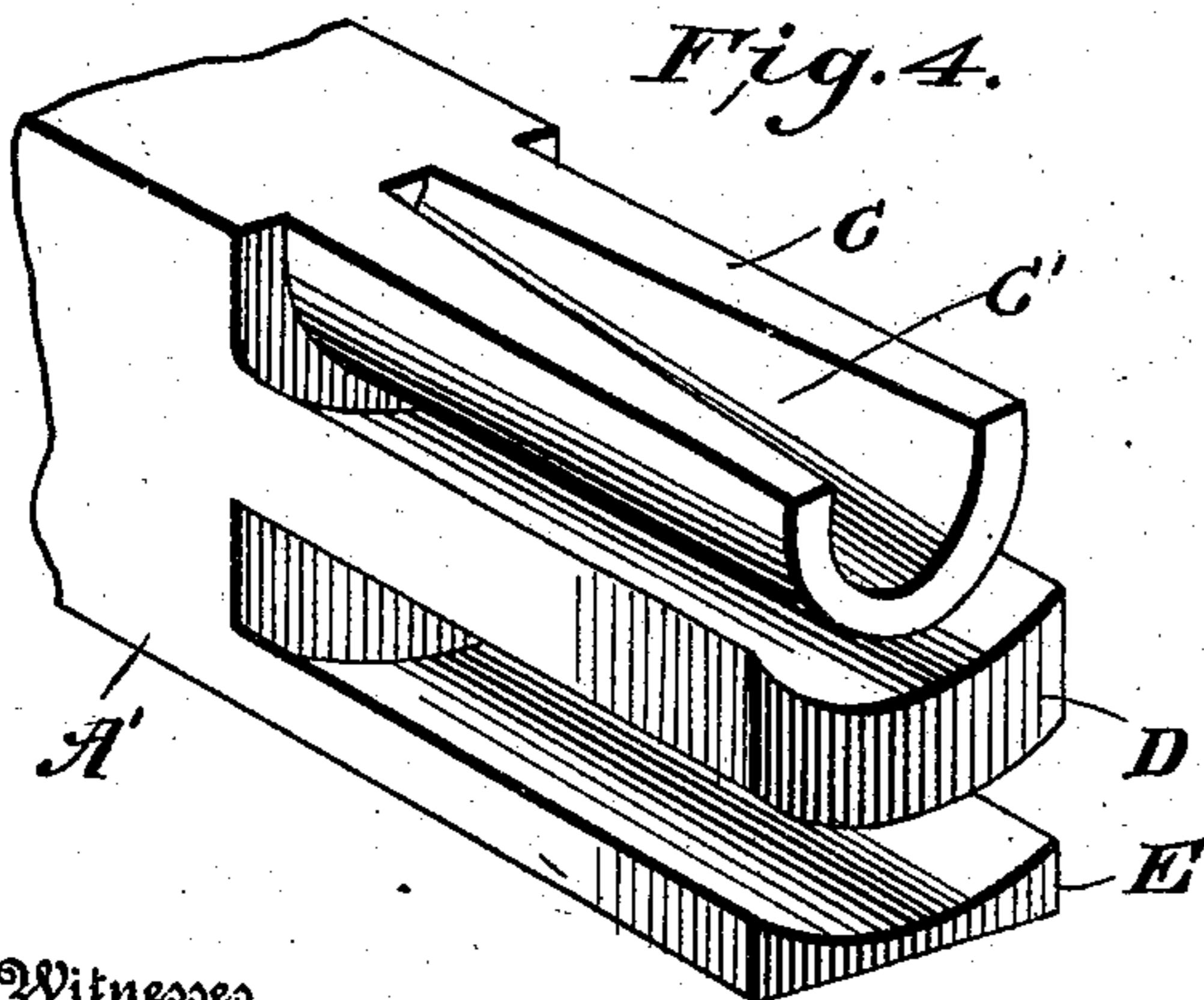
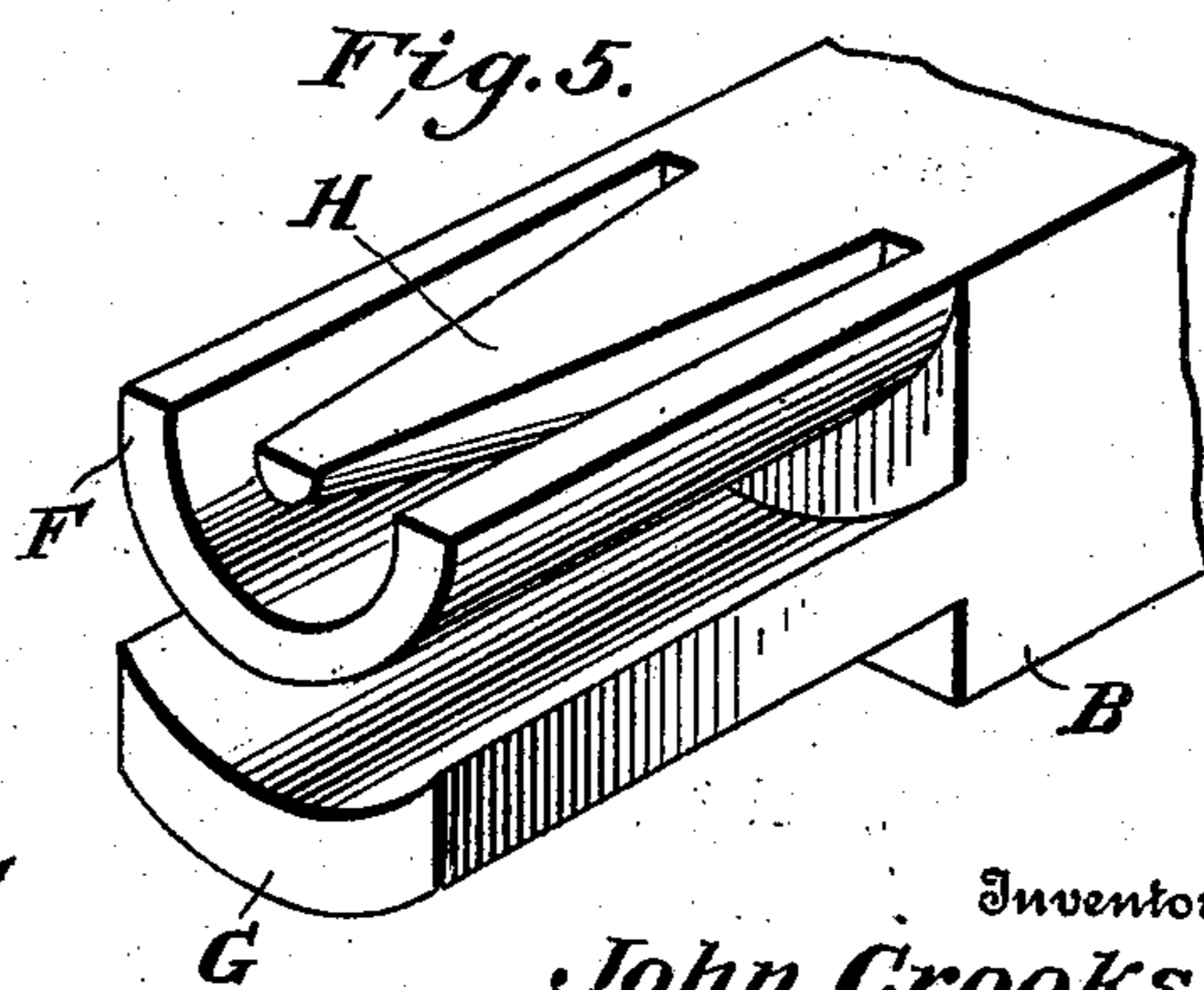


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN CROOKS, OF PHILADELPHIA, PENNSYLVANIA.

RAIL-JOINT.

No. 920,028.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN CROOKS, a subject of the King of Great Britain, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints, the object being to provide a joint by means of which the adjacent rail sections can be readily secured together without the use of bolts.

Another object of my invention is to provide the meeting ends of the adjacent rails with interlocking tongues, which are so constructed that they can be connected from the side, thereby overcoming the difficulties now existing with rail joints in use, as when it is necessary to replace a rail, it is impossible to do so without removing a great number of sections as the locking sections are forced longitudinally together.

Another object of my invention is to provide the adjacent rail sections with connecting members which are so arranged that when interlocked, it will be impossible for the rails to move in a vertical or lateral direction or longitudinally because of its engagement with the adjacent rail.

Another object of my invention is to provide a rail joint which will prevent rail hammering, so as to avoid the disadvantages now existing with joints in use.

A further object of my invention is to provide a rail joint which is exceedingly simple and cheap in construction, and one which is provided with segmental interlocking tongues.

These objects are obtained by the novel arrangement and construction of parts hereinafter fully described and shown in the accompanying drawings, in which:

Figure 1, is a perspective view of my improved rail joint. Fig. 2, is a detail longitudinal section. Fig. 3, is a section taken on line 3—3 of Fig. 2. Fig. 4, is a perspective view of one of the ends of a rail section, and Fig. 5, is a perspective view of the end of the adjacent section.

Referring to the drawings A and B, indicate the abutting ends of two rail sections which are enlarged as shown at A', B', forming heads, in which the interlocking members are formed so that a rigid joint will be obtained. The head A', of the rail A, is provided with outwardly projecting segmental

tongues C, D, in different horizontal planes, and a base tongue E, having a concaved upper face which corresponds to the curvature of the tongue D. The tongue C, is provided with a tapering socket C', substantially semicircular in cross section, and the edges of the tongues are flush with the tread of the rail.

The head B', of the rail B, is provided with outwardly projecting segmental tongues F and G, and a tapering substantially semicircular tongue H, adapted to fit in the semicircular socket C', the tongue F, fitting between tongues C and D, and the tongue G, fitting between the tongues D and E, when the sections are forced together the edges of the tongue F, being flush with the edges of the tongue C.

It will be seen that by forming the heads with segmental tongues they can be readily interlocked from the side by simply turning one section one direction, and one the other, or by simply placing the tongue H, in the socket C, and twisting the section B, so as to force the tongues F and G, between the tongues C, D and E.

It will be seen that when the tongues are interlocked the tongue H, will fit closely within the socket C', of the tongue C, the edges of the tongue F, lying flush with the edges of the tongue C, so that the tread of the rail at the joints is perfectly smooth, it will also be seen that when the sections are interlocked it is impossible to move the same vertically or horizontally except by a movement of rotation of the same character used to engage the rails.

From the foregoing description it will be seen that I have provided a rail joint which can be readily connected, and will be securely locked together without the use of bolts or any other clamping means, the tongues being so formed that when interlocked and in position on the ties, it will be impossible to disconnect the same without lifting the rails.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A rail joint comprising a pair of rail sections having segmental interlocking tongues at their abutting ends, each of said tongues being laterally and vertically curved.

2. A rail joint comprising a pair of rail sections having heads at their abutting ends provided with laterally and vertically curved segmental interlocking tongues.

3. A rail joint comprising a pair of rail sections having laterally and vertically curved segmental tongues formed on their abutting ends, the tongues of both ends
5 being concentric with each other and with the longitudinal axis of the rail whereby said tongues can be interlocked by forcing the rails together from the side.

4. In a rail joint, the combination with
10 two abutting end rails, of segmental tongues formed on one rail, one of said tongues being provided with a socket, segmental tongues formed on the other rail and a tongue formed on said rail adapted to fit in said
15 socket.

5. A rail joint comprising a pair of rail sections provided with heads at their abutting ends, one head being provided with segmental tongues, one tongue having a tapering
20 ing socket substantially semicircular in cross section, segmental tongues formed on the other head, and a tongue substantially semicircular in cross section adapted to fit in said socket.

25 6. A rail joint comprising a pair of rail sections provided with heads at their abutting ends, the head of one section being provided with segmental tongues and a base tongue provided with a concaved face, the
30 upper segmental tongue having a tapering

socket substantially semicircular in cross section, segmental tongues formed on the other section adapted to interlock with said tongues and a tapering tongue formed on said section substantially semicircular in
35 cross section adapted to fit in said socket.

7. A rail joint comprising a pair of rail sections provided with enlarged abutting ends forming heads, the head of one section being provided with segmental tongues in
40 different horizontal planes, and a base tongue having a concaved face, the curvature of said face corresponding to the curvature of the adjacent tongue, the upper tongue of said section being provided with a
45 tapering socket substantially semicircular in cross section, segmental tongues formed on the head of the other section adapted to interlock with said tongues of the first section, said head being provided with a tapering
50 tongue substantially semicircular in cross section fitting within the socket of the head of the other section.

In testimony whereof I have signed my name to this specification in the presence of
55 two subscribing witnesses.

JOHN CROOKS.

Witnesses:

R. H. KRENKEL,
P. E. POTTS.