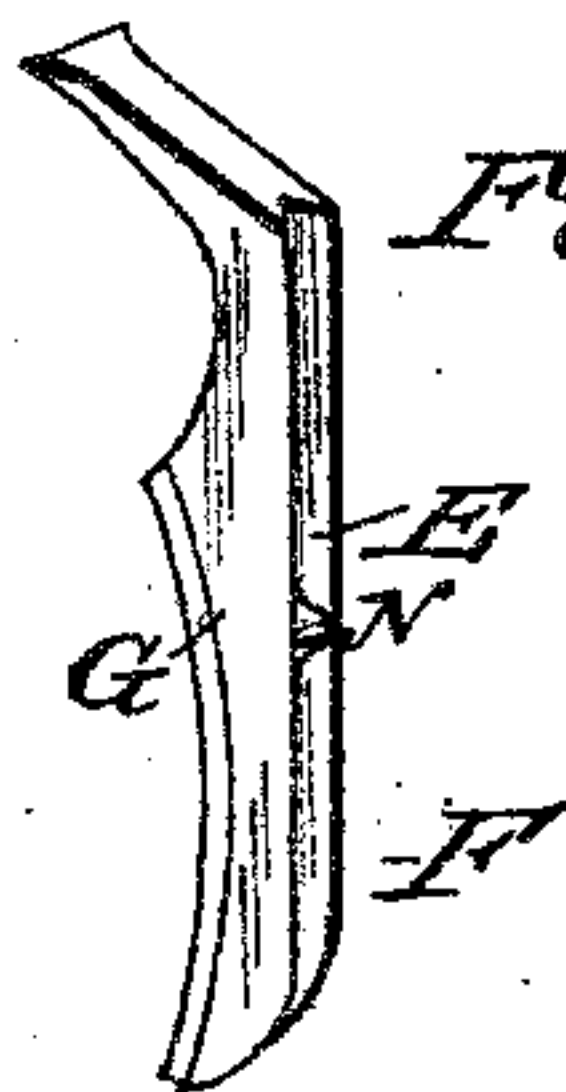
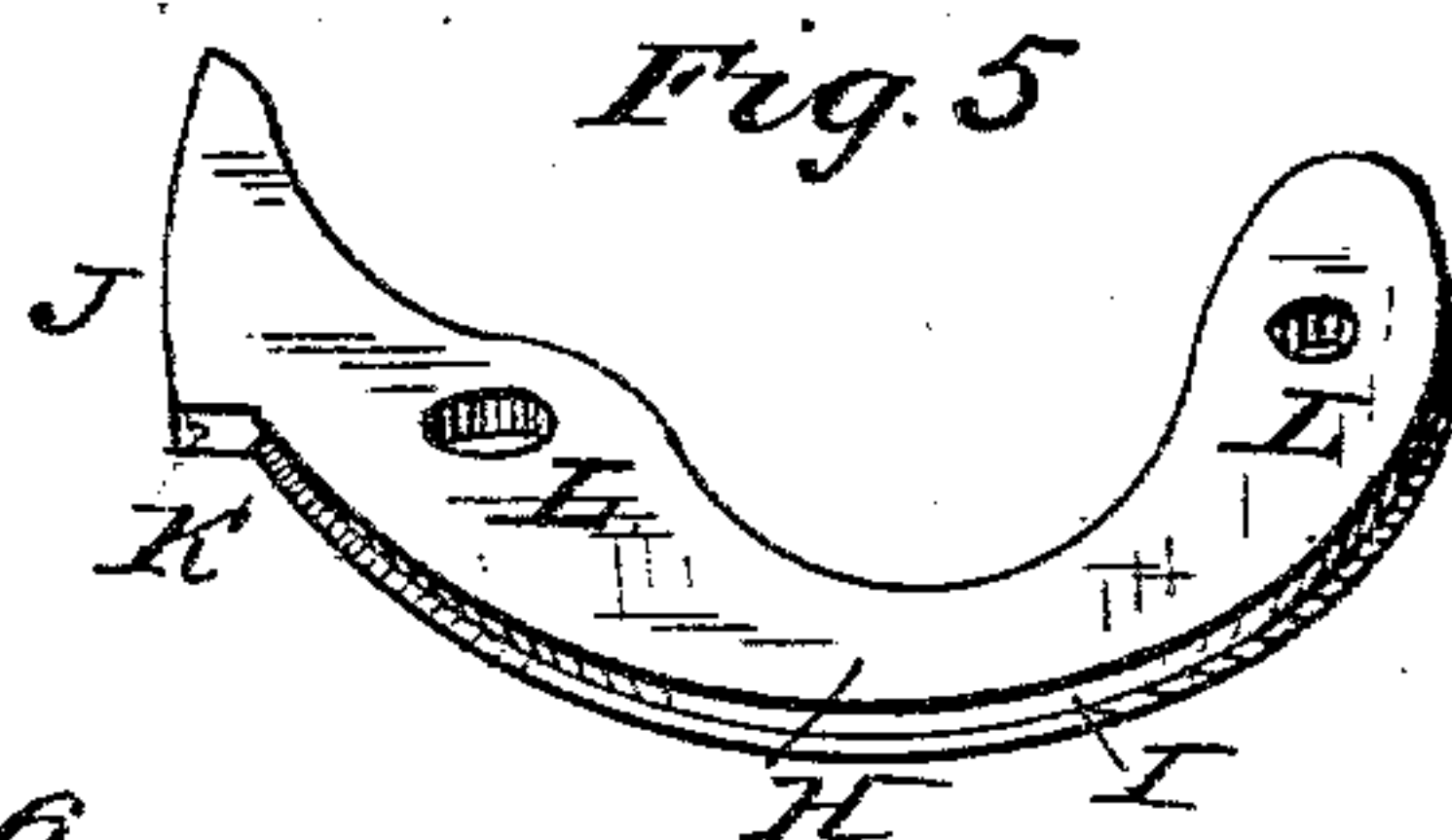
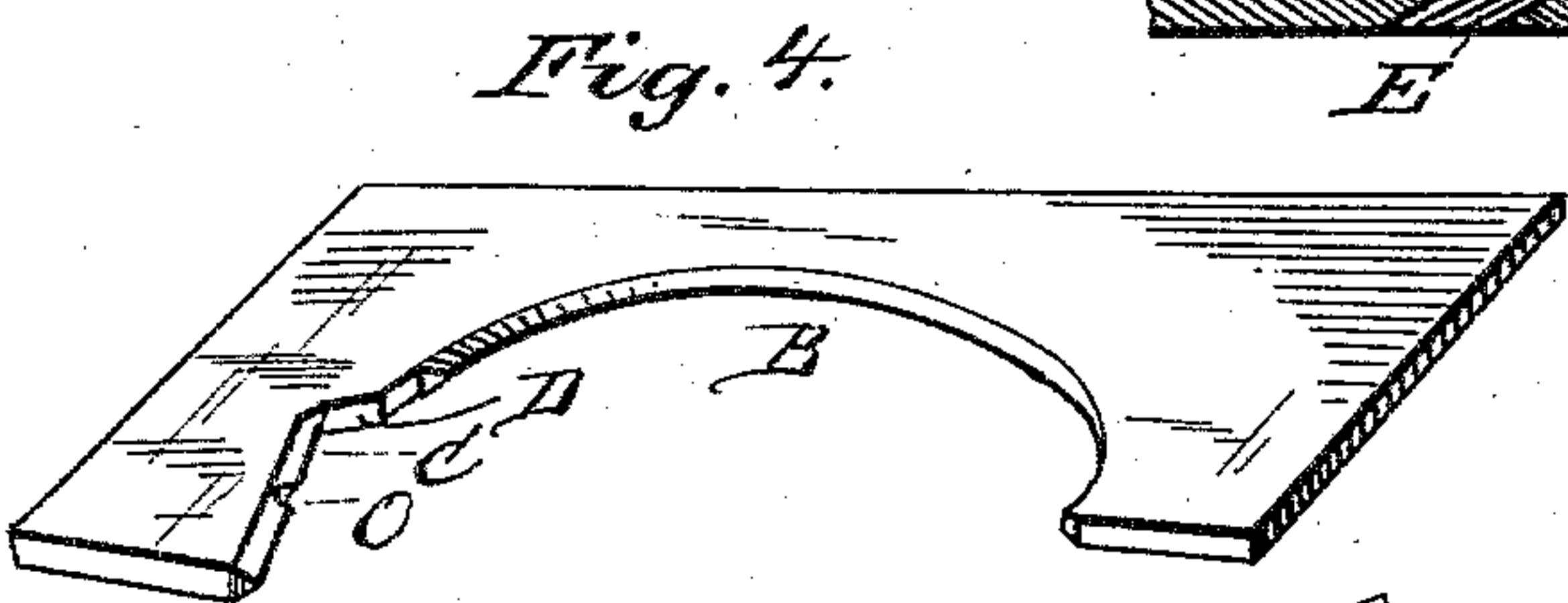
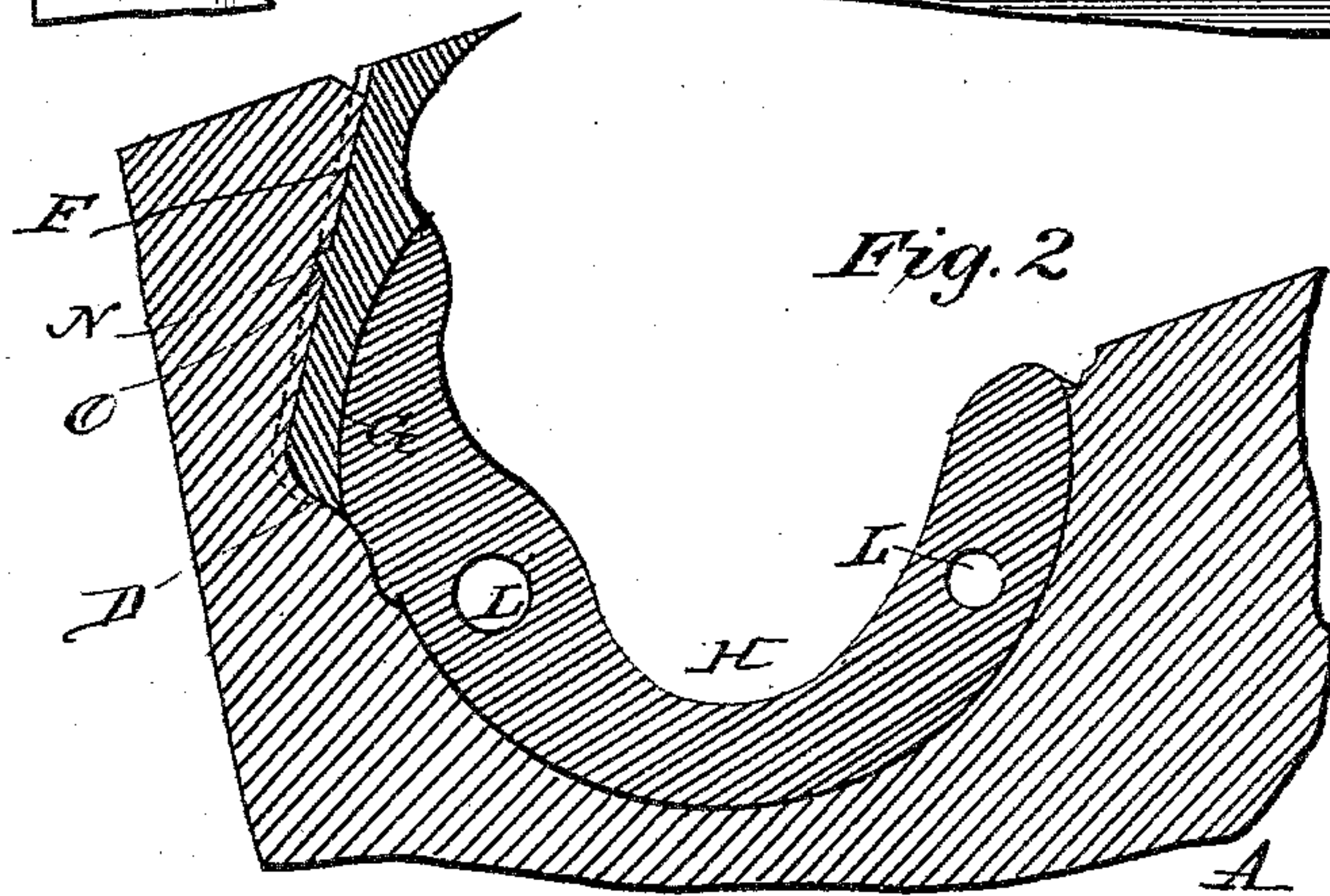
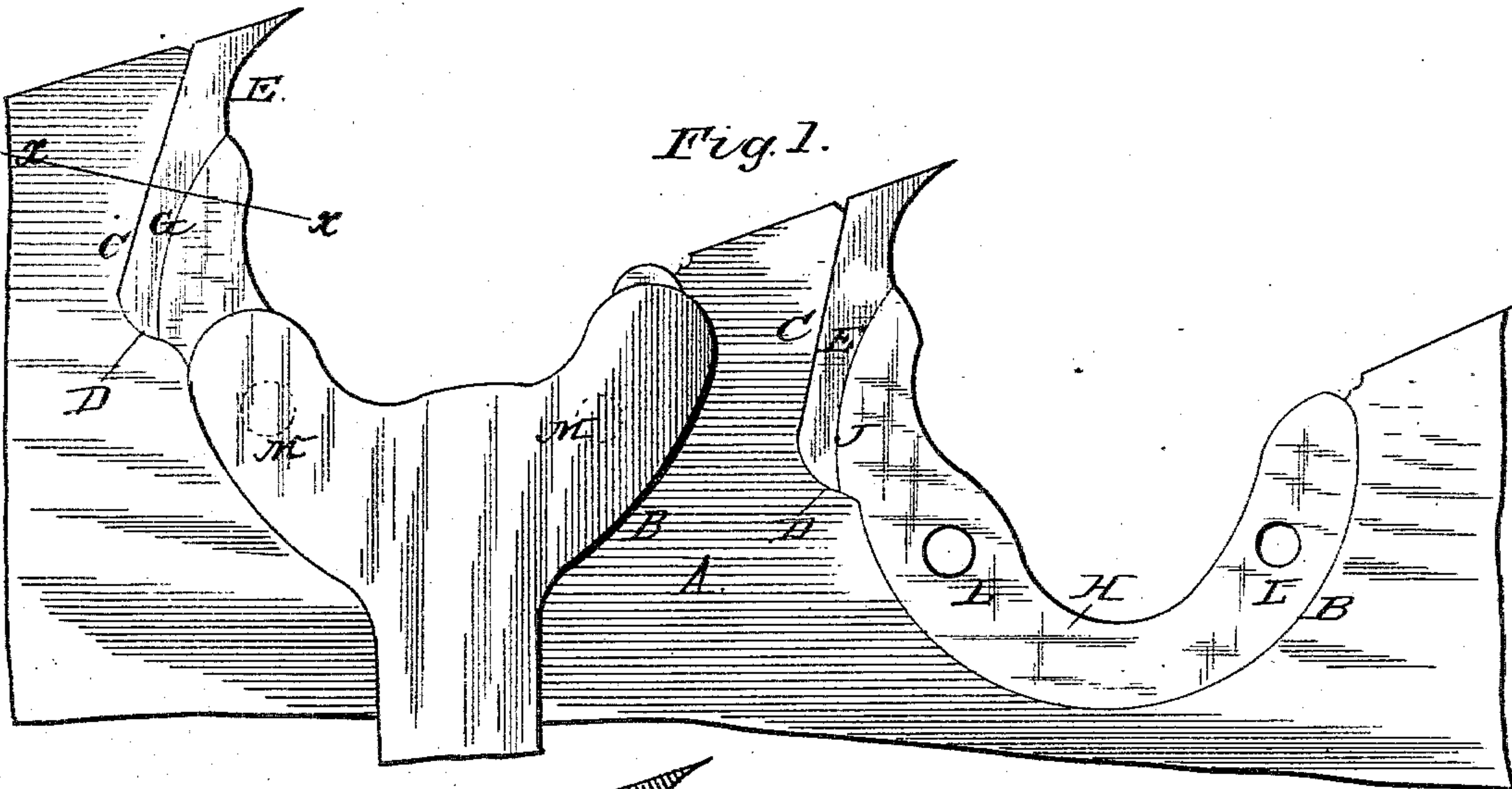


(No Model.)

J. O'GRADY.  
INSERTIBLE SAW TOOTH.

No. 286,478.

Patented Oct. 9, 1883.



WITNESSES:

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INVENTOR.

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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN O'GRADY, OF COLUMBUS, OHIO, ASSIGNOR TO FRANK X. OHLEN, OF  
SAME PLACE.

## INSERTIBLE SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 283,478, dated October 9, 1883.

Application filed July 5, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN O'GRADY, a citizen of the United States, and a resident of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Insertible Saw-Teeth; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to  
10 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of a portion of a circular saw provided with my improved insertible tooth. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a cross-section of the same on line *xx*, Fig. 1; and Figs. 4, 5, and 6 are perspective detail views of the  
20 several parts of the saw, tooth, and key-piece detached.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to insertible teeth for saws; and it consists in the improved construction and combination of parts of an insertible tooth, which is held in place by a segmental key, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the body or blade of the saw, the outer edge of which has a series of recesses, B, forming circle-segments, the side of which C, facing in the direction of the rotation, is cut  
35 off straight and cut into the side of the recess at a sharp angle to the outer edge of the saw, forming a shoulder, D. The edges of the recesses are beveled to both sides, forming tongues V-shaped in section, and the straight side C  
40 is beveled in the same manner, while the shoulder D is flat.

E is the tooth, the rear side or edge, F, of which is straight and grooved to correspond to the tongue upon the side C of the recess, while its front edge forms, at its lower portion,  
45 a circle-segment, G, which is tongued in the same manner as the edge of the recess, and is concentric with the same, but of a larger radius. The lower end of the tooth is rounded  
50 at the rear corner, corresponding to the shape

of the corner in the recess, and the remaining portion of the lower end is flat, fitting and bearing against the flat portion of the shoulder D.

A segmental key, H, having a grooved edge, I, corresponding to the edge of the recess and concentric with the same, is inserted to hold the tooth in place when it has been inserted, and the end bearing against the front edge of the tooth, forms a segmental edge, J, grooved  
60 in the same manner and concentric with the other part of the edge, but of a larger radius, forming a shoulder, K, which is flat, and bears against the outer portion of the shoulder formed by the straight and the segmental portion of the recess. The outer edge  
65 of the segmental key is cut out in the manner usual in the teeth of a circular saw, and the key has two perforations, L, into which two projecting lugs, M, upon the key or wrench  
70 may fit, serving to turn the key-piece, releasing or fastening the tooth.

The straight edge C of the recess has a notch near its middle, and the straight edge of the tooth has a small projection, N, projecting  
75 above the bottom of the groove and fitting into a notch in the straight edge of the recess, thus preventing the tooth from slipping up out of its position. The back of the tooth forms a continuation of the outer edge  
80 of the saw-blade, and the point is widened into chisel shape, as usually done in circular saws, for the purpose of cutting freely and without too much friction upon the sides of the saw.

It will be seen that by this construction of  
85 an insertible saw-tooth the tooth may be removed and again inserted in a moment of time, and that by having the teeth small, fastened by the segmental key-piece, a supply of extra teeth may be kept on hand without occupying  
90 much room, and may be inserted in the case of an accident to any of the teeth.

I am aware that insertible saw-teeth have been made having a straight rear edge and segmental front edge, and secured in segmental  
95 recesses in the saw-blade by means of correspondingly-shaped key-pieces, and I do not wish to claim such construction, broadly; but

What I claim, and desire to secure by Letters Patent of the United States, is—



The combination of the tooth E, having straight grooved rear edges, F, provided with projection N, and the bottom of the groove and segmental tongued front edge, G, the saw  
5 A, having recesses B, provided with a tongued edge, and having the edge C, facing the direction of rotation, straight and tongued, provided with a notch, O, and forming a flat shoulder, D, and a segmental key-piece, H, having

grooved edges I and J, and forming shoulder K, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN O'GRADY.

Witnesses:

PETER LEAVY,  
BERNARD CASEY.