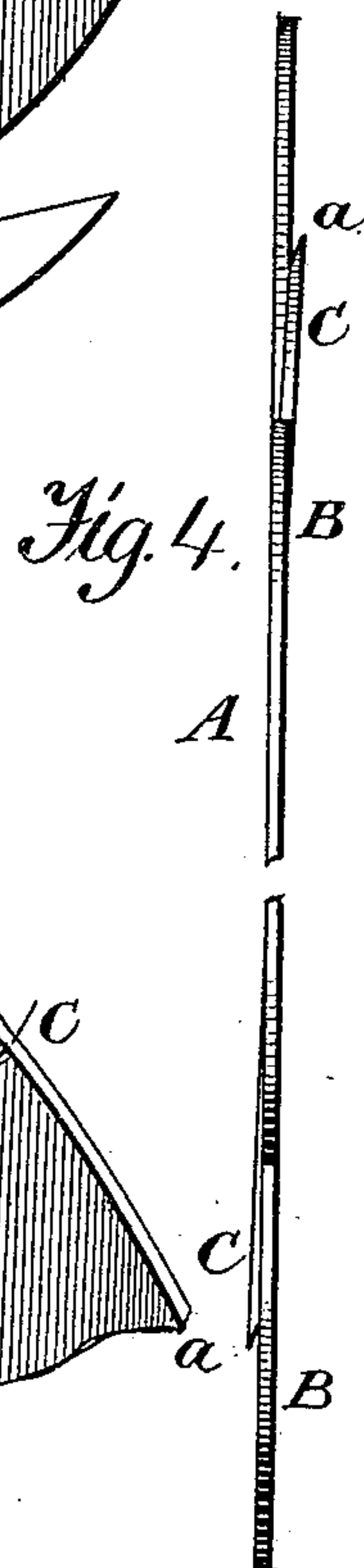
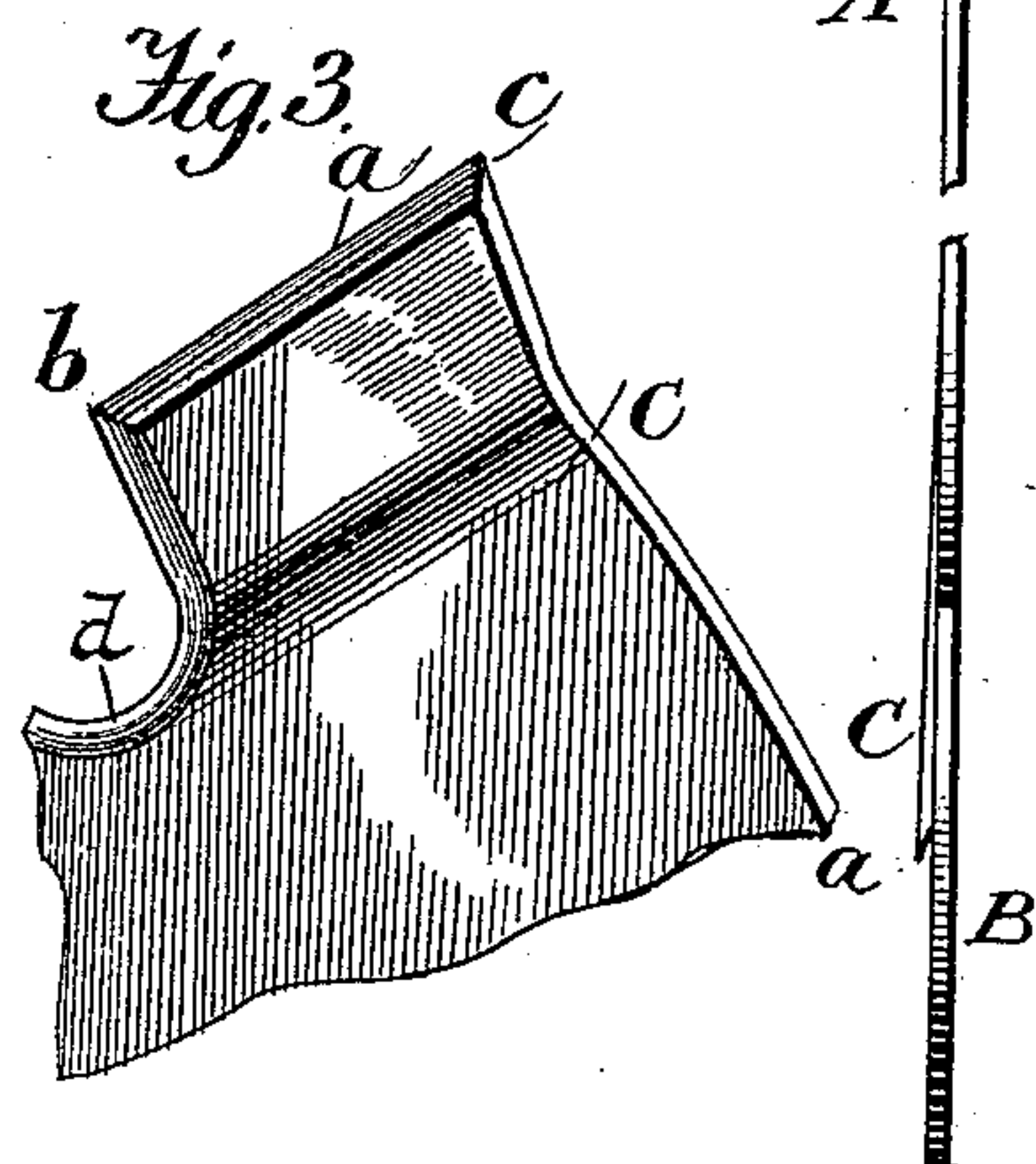
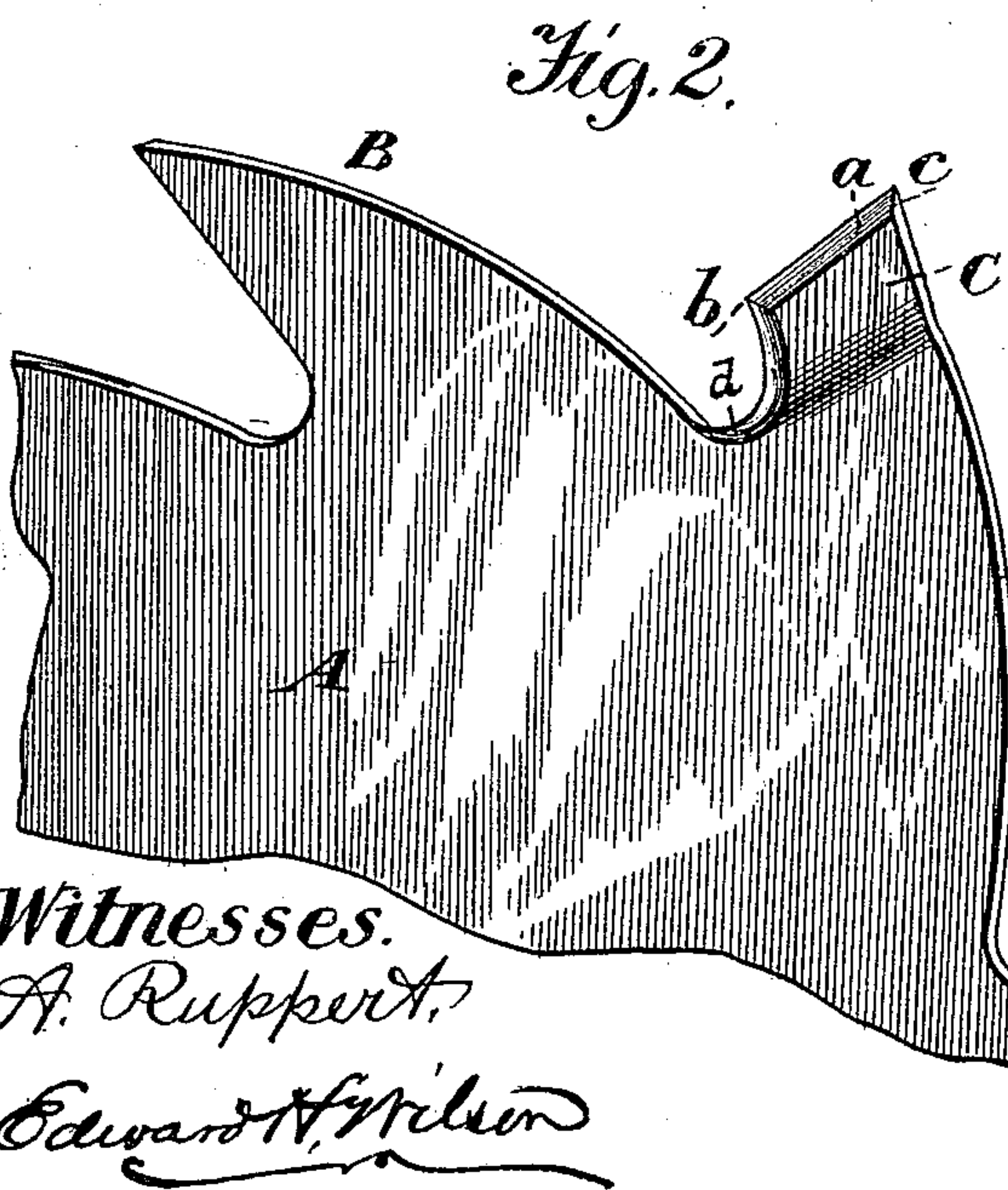
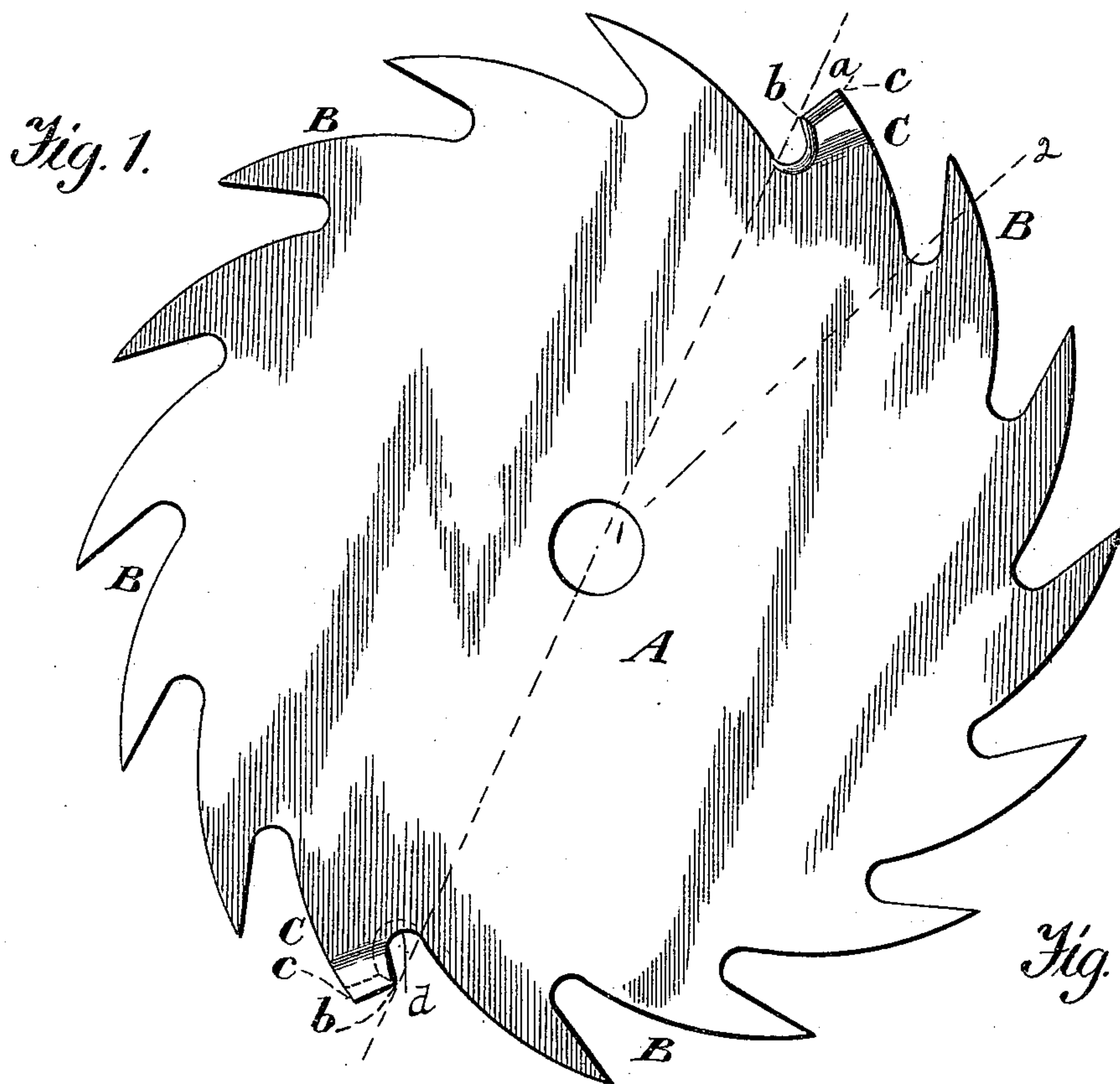


(No Model.)

T. L. SLAUGHTER.
CIRCULAR SAW.

No. 449,005.

Patented Mar. 24, 1891.



Witnesses.
A. Ruppert,
Edward H. Wilson

Inventor.
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UNITED STATES PATENT OFFICE.

TRIPLETT L. SLAUGHTER, OF SALINE, ASSIGNOR OF ONE-HALF TO LAURA SMITH DREW, OF BIENVILLE, LOUISIANA.

CIRCULAR SAW.

SPECIFICATION forming part of Letters Patent No. 449,005, dated March 24, 1891.

Application filed September 16, 1890. Serial No. 365,142. (No model.)

To all whom it may concern:

Be it known that I, TRIPLETT L. SLAUGHTER, a citizen of the United States, residing at Saline, in the parish of Bienville, and State of Louisiana, have invented certain new and useful Improvements in Circular Saws; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in circular saws, and it has more particular reference to that class of saws in which provision is had for dressing or planing the lumber during the process of sawing. To accomplish this result, various expedients have heretofore been resorted to—such, for instance, as changing the set of one or more of the saw-teeth and providing such teeth with beveled or cutting edges; but it has been found that this practice, as heretofore adopted, has resulted in unsatisfactory work, from the fact that the edge of the tooth thus sharpened imparts to the wood with which it contacts a direct downward or scraping blow, and when the cutting-edge becomes slightly dulled from use the grain of the wood is liable to be broken or torn. Thus, instead of presenting a smooth and finished appearance, it frequently happens that the boards are found to present a rough and uneven surface, which requires that they should be replaned.

The essential object of the present invention is to generally improve upon the construction of this class of saws, and to provide the saw with a series of planing or finishing teeth so fashioned that the said teeth, instead of imparting to the wood a direct downward movement, will cut with a drawing or shaving motion, and thus insure a more perfect finish to the face of the board.

To this end and to such others as the invention may pertain the same consists in the peculiar construction and arrangement of the planing or finishing teeth of the saw, as will be more fully hereinafter described, shown in

the accompanying drawings, and then particularly defined in the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which drawings—

Figure 1 shows a circular saw provided with two of my planing-teeth. Fig. 2 is a perspective view of a section of the saw, showing one of the planing-teeth, the same being upon an enlarged scale. Figs. 3 and 4 are enlarged perspective and end views of the planing or finishing tooth.

Reference now being had to the details of the drawings by letter, A represents the saw-blade, which is provided with the usual cutting-teeth B B. The planing or finishing teeth C may be of any desired or suitable number, though in the present instance I have shown a saw provided with two of these teeth, and I will now proceed to explain the construction and operation of such teeth. The tooth C is formed by cutting off one of the ordinary teeth B upon a line at substantially fifteen or twenty degrees from a line drawn radially through the center of the saw-blade and extended through the saw-tooth, as indicated in dotted lines in Fig. 1 of the drawings. The line 1 2 shows the angle at which the said tooth is cut, said line being parallel with the face of the cut-off tooth C. The tooth is set so as to cause it to cut slightly beyond the cut of the saw-teeth proper, and the cutting-edge *a* is beveled and sharpened in the usual manner. Where two or more of these planing-teeth are employed, it is my purpose to set each alternate tooth in opposite directions, so as to cause the same to act upon opposite sides of the saw-blade.

It will be seen that in operation the cutting-edge of the tooth C will contact with the wood in such a manner as to cause the same to cut with a drawing or shaving motion, the point *b* of the tooth first coming in contact with the wood and the cutting being continued from this point to the opposite end of the cutting-edge, or to the point *c*. It will also be understood that the edge of the tooth

will be less liable to become dulled in use than it would be in case the edge cut with a direct downward movement, as is the case with other saws heretofore used, and it will
5 also be seen that by the construction shown the end of the tooth is provided with the cutting-edge, and that in consequence a much stronger and more durable tooth is provided than those heretofore used.

10 As is clearly shown in the drawings, the extreme edges of the planing-teeth are a considerable distance inside the circumference of the saw-blade, and therefore do not cut into the wood together with the saw-teeth,
15 but plane the surface which has already been cut, thus saving a great amount of wear upon the edges of the planing-teeth.

The throat *d*, between each planer-tooth and the tooth next in advance thereof, is
20 rounded and sharpened on the same angle or inclination as the acting edge *a* of the planer-tooth, as clearly shown in Figs. 1, 2, and 3. This is deemed important, as the throat thus serves in cutting or clearing away the shav-
25 ings and sawdust and prevents clogging.

It is deemed important that the throats between the planer-teeth and the next cutting-tooth be curved and beveled upon one side

only, with the bevel thereof corresponding with and forming a continuation of the bevel 30 of the planer-tooth, as I have found that better results are obtained, and the bevel of the throat serves to remove the sawdust and chip-pings and produce a smoother surface.

Having thus described my invention, what 35 I claim as new, and desire to secure by Letters Patent, is—

The saw described, having cutting-teeth B and two planer-teeth C arranged diametrically opposite each other, each planer-tooth 40 being formed by cutting off a cutting-tooth at an angle, with its acting edge within the periphery of the saw and with its acting edge beveled upon one side only, with a curved throat between each planer-tooth and the next 45 tooth in advance thereof, said throat being beveled, with the bevel thereof conforming to and joining with the bevel of the acting face of the planer-tooth, substantially as shown and described. 50

In testimony whereof I affix my signature in presence of two witnesses.

TRIPLETT L. SLAUGHTER.

Witnesses:

B. H. SCHEEN,
S. D. PEARCE.