

(No Model.)

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SAW TOOTH.

No. 260,636.

Patented July 4, 1882.

Fig. 1.

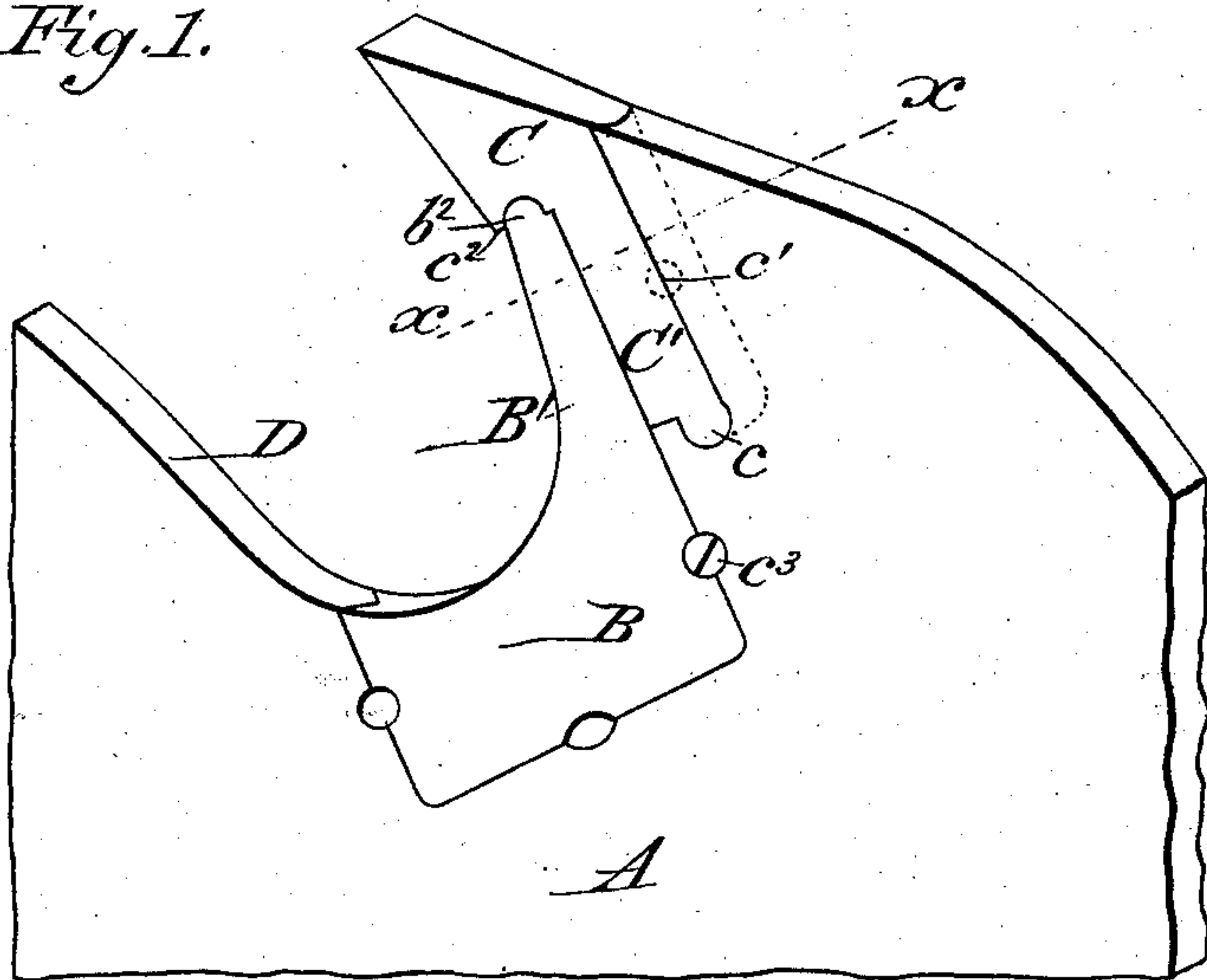


Fig. 2.

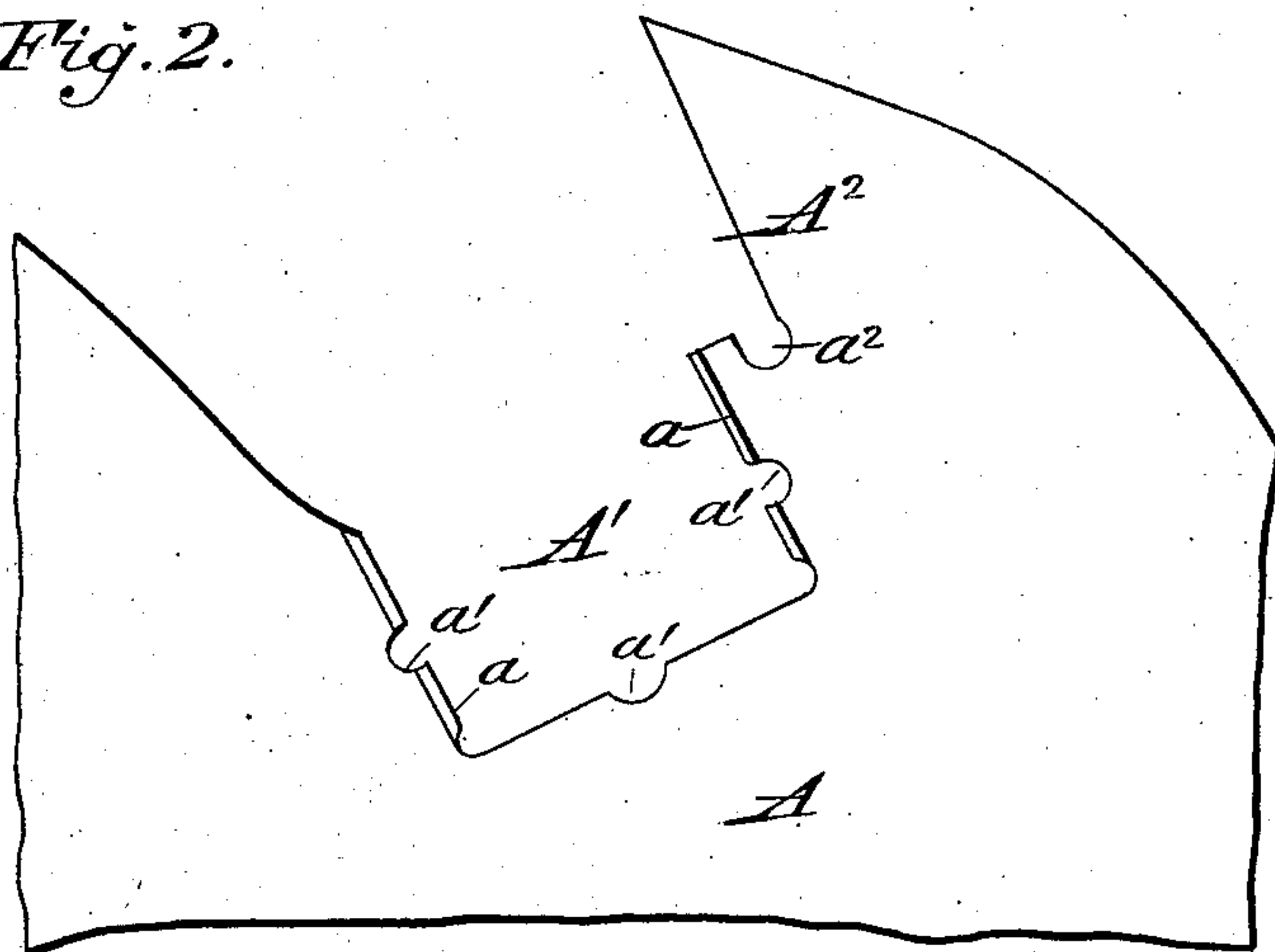


Fig. 3.

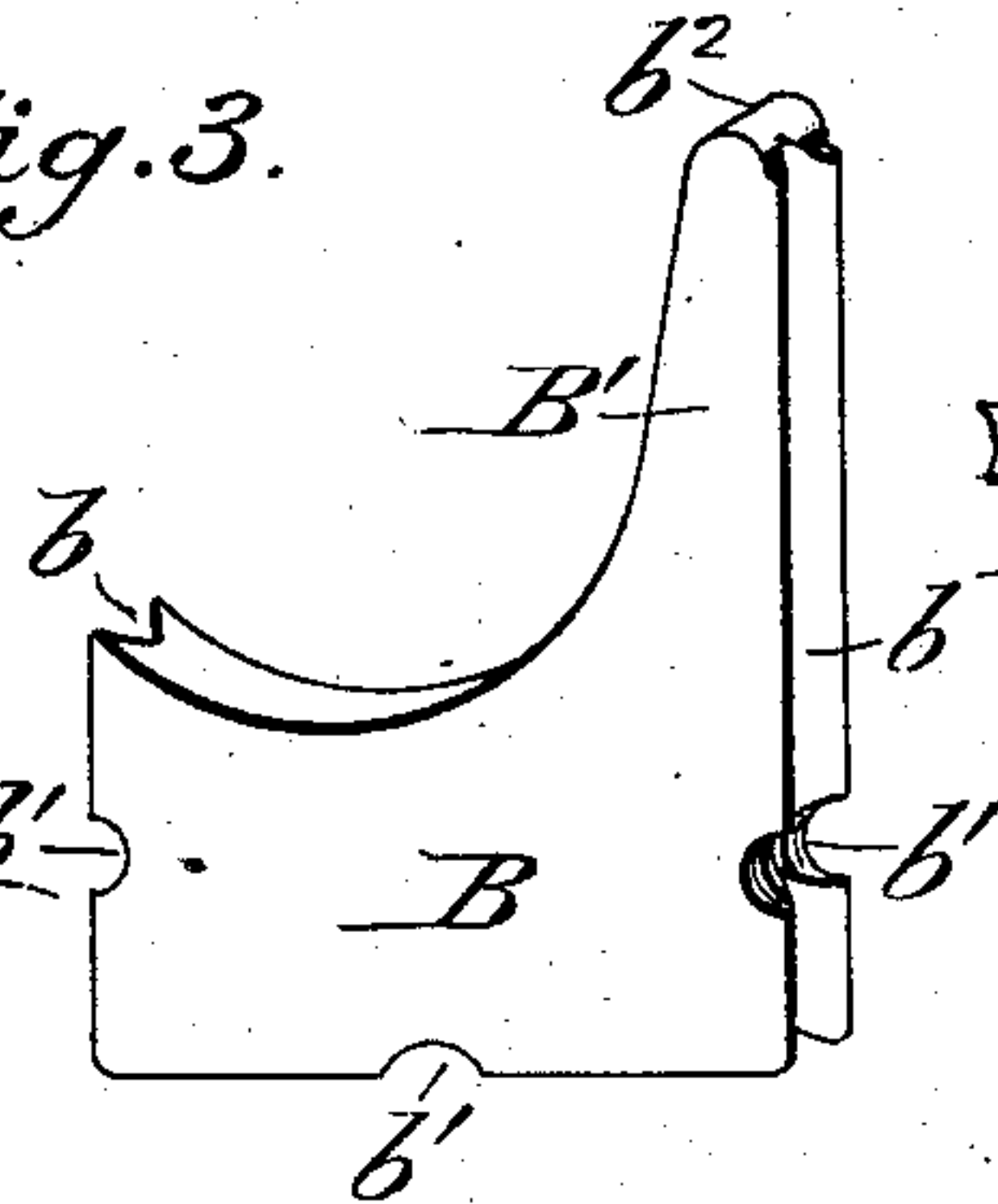


Fig. 4.



Attest:

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## SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 260,636, dated July 4, 1882.

Application filed April 18, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, ELIAS C. ATKINS, GEORGE S. BLACK, and CHARLES M. EMERSON, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Saw-Teeth; and we 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of circular saws which are provided with removable or insertible teeth, the object being to furnish a simple and convenient means of securing such teeth so that they may be readily detached when required; and the invention consists in certain peculiarities in the form and arrangement of the locking-plate and detachable teeth, as hereinafter more fully described and claimed.

In the annexed drawings, which fully illustrate the invention, Figure 1 is a perspective view of a portion of saw-plate, showing our improved bit and locking-plate or throat-piece in position. Fig. 2 is a side view of a section of the saw-plate. Fig. 3 is a perspective view of locking-plate, and Fig. 4 is a section on the line *x x* of Fig. 1.

Like letters indicate like parts in the several views.

The saw-plate A is provided with a number of nearly-rectangular recesses, A', one of which is shown in Fig. 2. The lower or inner edge of the recess A' is plain, while the side edges are beveled or tongued in the usual manner, as shown at *a a*. If desired, the lower edge may also be tongued or beveled. In each of these edges is preferably formed a curved or half-round opening, *a'*, the purpose of which will be hereinafter explained.

Within the recess A' is fitted the throat-piece or locking-plate B. This plate is of a form corresponding in general outline with that of the recess A', and is grooved in its edges, as shown at *b b*, Fig. 3, said grooves being adapted to engage with the tongues or bevels *a a*, that are formed in the edges of the recess.

In each edge of the plate B is also formed an opening, *b'*, corresponding with the openings *a'* in the edges of the recess in which said plate is to be fitted. One side of the plate B is elongated, so as to form a slender spring-projection, B', which bears against the front edge of the bit C and holds the same in position. The spring jaw or projection B' terminates on its outer edge in a curved lug, *b''*, which engages with a recess in the tooth or bit.

Within the edge of the saw-plate adjoining the recess A is formed one half or side of a recess, A<sup>2</sup>, the other side of which is formed by the spring-projection B'. This recess A<sup>2</sup> is for the reception of the tooth or bit C, and at its lower or wider end is an indentation or curved opening, *a''*, in which fits a lug, *c*, that is formed at the lower end of the bit.

The shank C' of the tooth or bit C is slightly wider at its lower end than it is near the expanded portion or body of the tooth, so that when forced into the tapering recess A<sup>2</sup> the pressure of the spring B' upon its front edge will be sufficient to hold the tooth in place. In the lower portion or body of the tooth-body is an opening or recess for the reception of the lug *b''* at the end of the spring arm or projection B' of the locking-plate, the tooth C and plate or throat-piece B being thus adapted to react upon each other with the effect of remaining securely in position until properly displaced. The edges of the tapering bit-shank C' are rounded or beveled in the ordinary manner for engagement with the grooved edges of the saw-plate and locking-plate, forming the tapering recess A<sup>2</sup>, so as to afford a firm seat and prevent lateral displacement of the bit or tooth.

If desired, the tooth may be further secured by a screw or rivet at the point indicated by the dotted circle *c'* in Fig. 1. This, however, is not deemed necessary, as the pressure of the spring portion B' of the locking-plate or throat-piece B is sufficient to hold the tooth in place. The locking-plate B, in addition to the engagement of its grooved edges with the tongued or beveled edges of the recess A', may also be further secured by means of a screw or screws, *c''*; or the screws or rivets may be substituted for said tongued and grooved edges. These screws or rivets when employed are inserted



in the openings formed by the junction of the half-circles  $a'$  and  $b'$  at the sides of the plate B, the elliptical opening at the bottom edge of the plate being intended for the insertion of an instrument by means of which the plate B is removed.

The upper curved edge of the locking-plate or throat-piece B is continuous with the outer edge of the saw-plate and forms a portion of the throat D. The body of the tooth C is expanded and swaged in the ordinary manner, so as to form a kerf that will clear the sides of the saw-plate, and thus avoid the liability of overheating.

In adjusting the removable teeth in position the locking-plates B are first inserted into the recesses  $A'$  and secured by screws or not, as may be desired. The teeth C are then driven into the recesses  $A^2$ , the spring-projections  $B'$  being adapted to give slightly to permit the passage of the wide lower end of the tapering shank  $C'$ , and then closing firmly upon said shank, thereby securing the tooth. When the tooth C is in position the lug  $b^2$  at the end of the spring projection or jaw  $B'$  enters a curved opening in the lower edge of the tooth-body, which thus assists in holding the throat-piece B in place, and the lug  $c$  at the lower end of the tooth-shank enters the opening or recess  $a^2$

of the saw-plate, thereby relieving the lower end of the spring-jaw  $B'$  from a constant strain.

In order to remove the tooth, a slight blow or suitable pressure with any convenient instrument against the shoulder  $c^2$  will be sufficient.

The locking-plate B may likewise be readily removed by inserting the point of a proper instrument into the opening at its lower edge.

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

The combination of the saw-plate A, having recesses  $A'$ ,  $A^2$ , and  $a^2$ , the rectangular locking-plate B, provided with a spring jaw or projection,  $B'$ , having a lug,  $b^2$ , and the tooth or bit C, adapted to engage with said saw-plate and spring-projection, and provided with a shank,  $C'$ , having lug  $c$ , adapted to engage in the recesses  $A^2$   $a^2$ , substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

ELIAS C. ATKINS.

GEORGE S. BLACK.

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Witnesses:

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