(No Model.)

A. KRIEGER.

SAW.

No. 432,534. Patented July 22, 1890.

Fig. 1

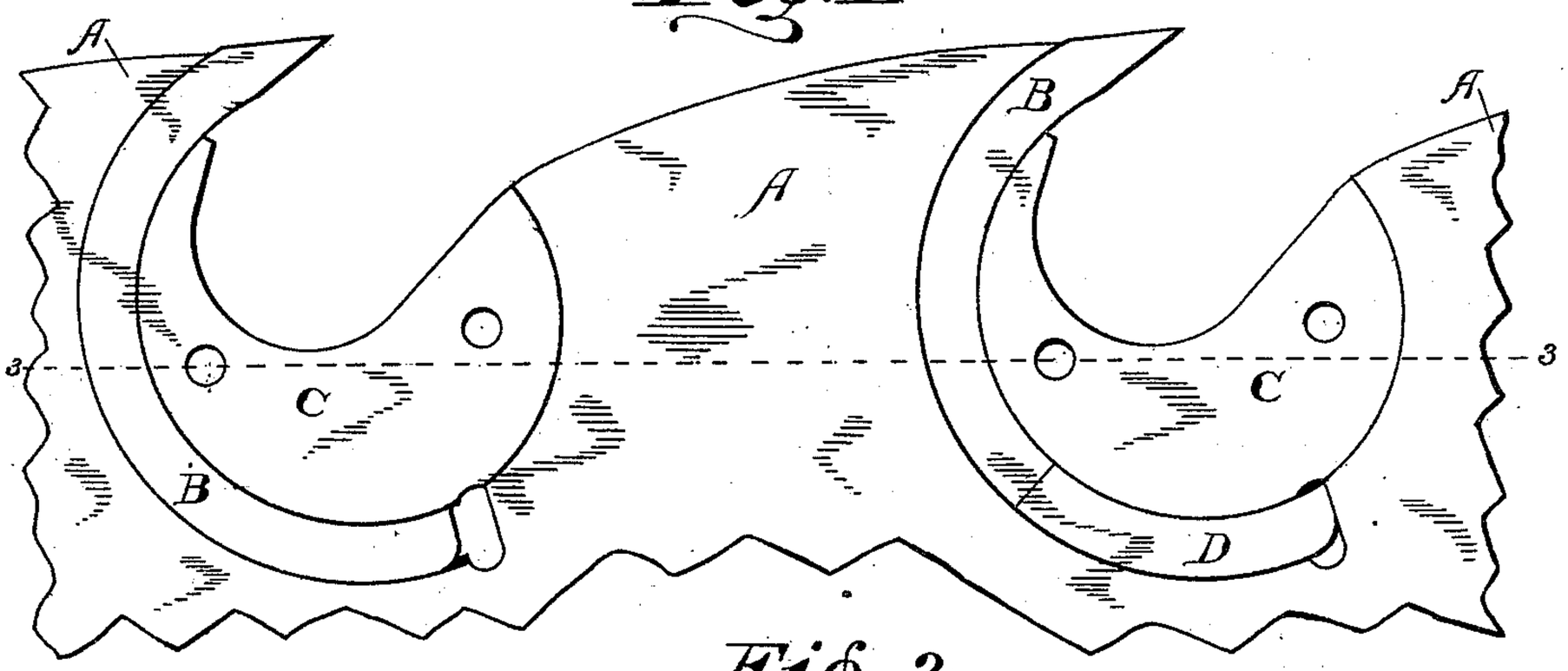


Fig. 2.

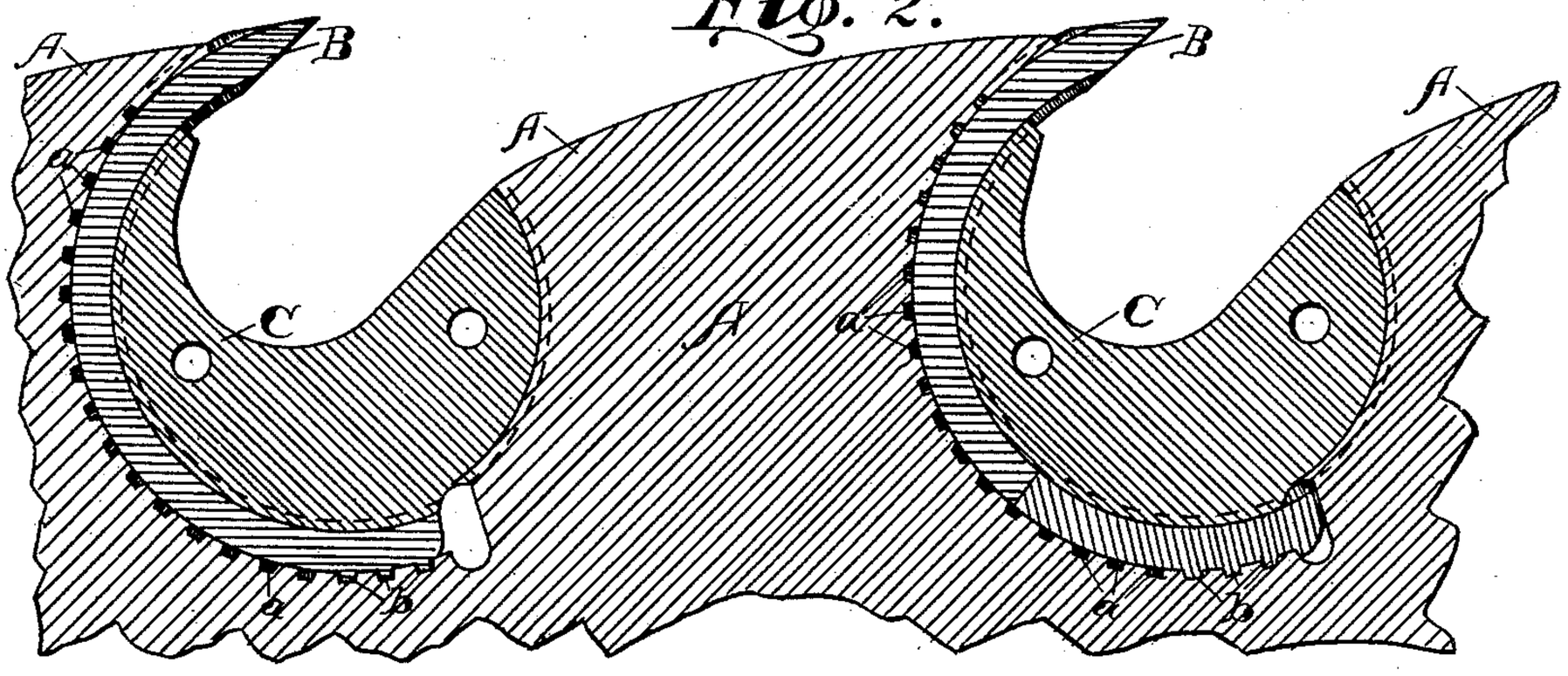


Fig. 3.

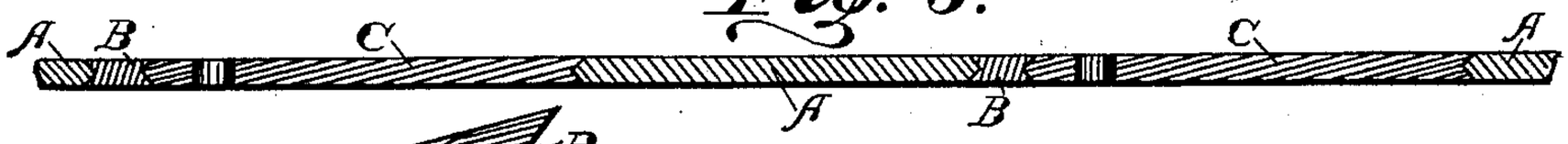


Fig. 4.

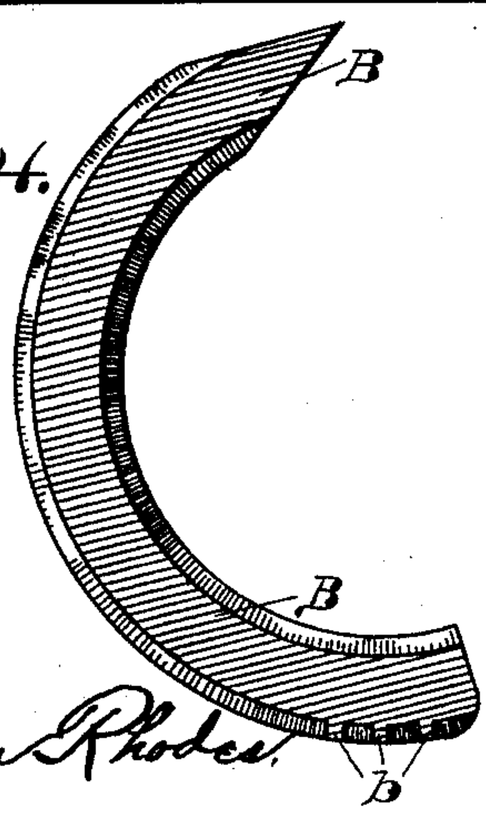
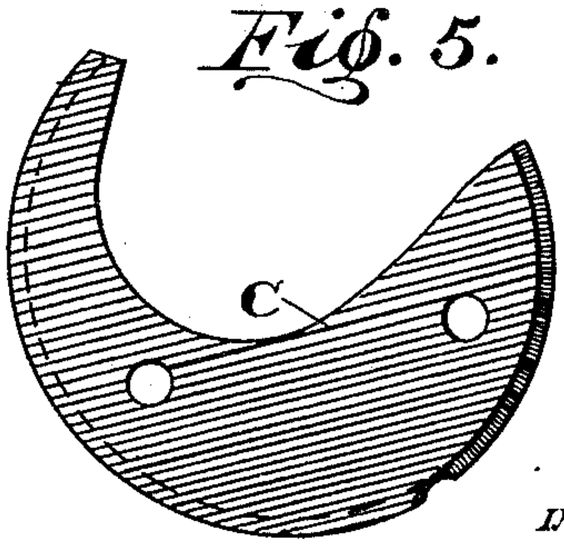


Fig. 5.



WITNESSES.

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SAW.

SPECIFICATION forming part of Letters Patent No. 432,534, dated July 22, 1890.

Application filed November 25, 1889. Serial No. 331,507. (No model.)

To all whom it may concern:

Be it known that I, ANDREW KRIEGER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Saws, of which the following is a specification.

My invention relates to that class of saws which are provided with insertible teeth; and it consists in a certain construction whereby the teeth, which are in the form of segments of circles, can be securely locked in position at any desired point, and are thereby rendered not only adjustable but capable of being as securely held when nearly worn out as when first inserted in the saw, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of a fragment of saw, showing two of my improved teeth; Fig. 2, a sectional view of the same; Fig. 3, a horizontal sectional view on the dotted line 3 3 in Fig. 1; Fig. 4, a central sectional view of one of my improved teeth separately, and Fig. 5 a similar view of the locking device.

In said drawings, the portions marked A represent the saw-blade; B, the teeth; C, the locking devices, and D segments, each similar to a portion of a tooth, which may be used as followers to fill the openings that would otherwise exist at the lower end of the teeth.

The saw-blade A is similar, generally speaking, to ordinary saw-blades of this character. Recesses are cut in its edge for the reception of the teeth and fastening devices, and the edges are beveled on the sides or Λ-shaped. These edges, however, have well-defined preferably square notches *a* therein, (see particularly Fig. 2,) into which projections or wings on the teeth (or on the followers, when the latter are employed) enter, and which serve to hold said teeth to the position in which they are placed. Teeth of this character have heretofore depended either on the friction of the parts or fine serrations for this purpose, which have not been effective, particularly when it was desired to swage the teeth with an ordinary hammer-swage, which is the most convenient way to perform this work, as the hammering in such cases has been apt to drive the teeth backward from their position. By means of my improved construction, however, not only can the operation of swaging be performed, but the teeth are capable of resisting any other pressure which can come upon them, and they can therefore always be relied upon to maintain their position.

The teeth B, as hereinbefore stated, are, generally speaking, of a common and well-known form, but are provided with the projections or flanges *b*, which enter the notches *a* in the edge of the recesses in the saw-plate. As these teeth are worn away they can be advanced from time to time by simply removing the fastening devices C and setting the teeth the distance of the space between two of the notches farther out and restoring the fastening devices to position, which fully accomplishes this purpose. This operation can be repeated until nearly the entire length of the saw-tooth is worn away, which results in great economy in the use of these teeth, as they will last much longer than the ordinary kind, which depend upon the securing devices heretofore used.

The locking devices C are in general form substantially like similar devices heretofore used; but that portion of the inner face which comes in contact with the tooth is Λ-shaped, while that portion which comes in contact with the saw-blade is V-shaped, which permits the entire edge of the recess in the saw-plate to be Λ-shaped and the grooves in both sides of the teeth to be V-shaped, and they are thus held in place very securely.

In many cases, especially after a considerable portion of the teeth has been worn away, it is desirable that the spaces which would otherwise be left be filled, and I have therefore provided the followers D. These followers are of substantially the same form as the tooth itself, except in length, and except that they are not pointed, and they fill the spaces behind the teeth as they are moved forward from time to time. It is equally effectual for my purpose to put the projections or flanges *b*, which enter the notches *a* in the edge of the recess in the saw-plate, upon these followers when they are used as upon the teeth

themselves, and, indeed, it may be considered preferable to use followers of this sort from the first, using short ones first and longer ones afterward, and have no projections or flanges *b* upon the saw-teeth proper at all, it being equally as effectual for my purpose to move the followers forward notch by notch as to move the teeth, as will be readily understood. However, I do not desire to be understood as confining myself to one or the other of these constructions, but may use either at pleasure.

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

1. The combination of the saw-blade having recesses, the edge whereof has regularly-formed even-spaced notches *a*, and the insertible tooth or follower having corresponding projections or flanges *b*, whereby the tooth may be securely held to a determinate position, substantially as set forth.

2. The combination, in a saw, of the saw-blade having recesses for the teeth, the edges whereof are provided with notches, as shown, the teeth adapted to fit into said recesses, followers occupying the spaces in the rear of the saw-teeth, and locking devices interposed between the saw-teeth and followers and an opposite surface in the recesses of the saw-plate, the edge of the recess in the saw-plate and an edge of one of the parts coming in contact therewith being in each case respectively provided with regularly-formed even-spaced notches and projections, which engage with each other, substantially as shown and described.

3. A saw-plate having recesses for insertible teeth, and teeth adapted to fit therein, the adjacent edges of said recesses and said teeth being provided with regularly-formed even-spaced notches and projections, which engage with each other, whereby said teeth may be moved forward from time to time as the points are worn away and securely held in position, substantially as set forth.

4. The combination, in a saw, of the saw-plate having recesses to receive insertible teeth, said recesses being beveled or Λ-shaped and provided with regularly-formed even-spaced notches throughout a considerable portion of their length, and saw-teeth having corresponding edges with V-shaped grooves, the lower ends of said teeth being provided with projections or flanges which enter said notches, and locking devices for holding the teeth in position, substantially as shown and described, and for the purpose specified.

5. The combination, in a saw, of the saw-plate having recesses to receive insertible teeth, said recesses being beveled or Λ-shaped and provided with notches in the Λ-shaped beveled edge, and saw-teeth having corresponding edges with V-shaped grooves, and projections or ribs in said grooves which fit into notches in the Λ-shaped edge of the saw-plate, said notches and projections being completely covered and hid from view when the parts are in position, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 21st day of November, A. D. 1889.

ANDREW KRIEGER. [L. S.]

Witnesses:
CHESTER BRADFORD,
JAMES WALSH.