

(No Model.)

J. J. BOWEN.

SAW PLATE AND INSERTED SAW TOOTH.

No. 283,197.

Patented Aug. 14, 1883.

Fig 1.

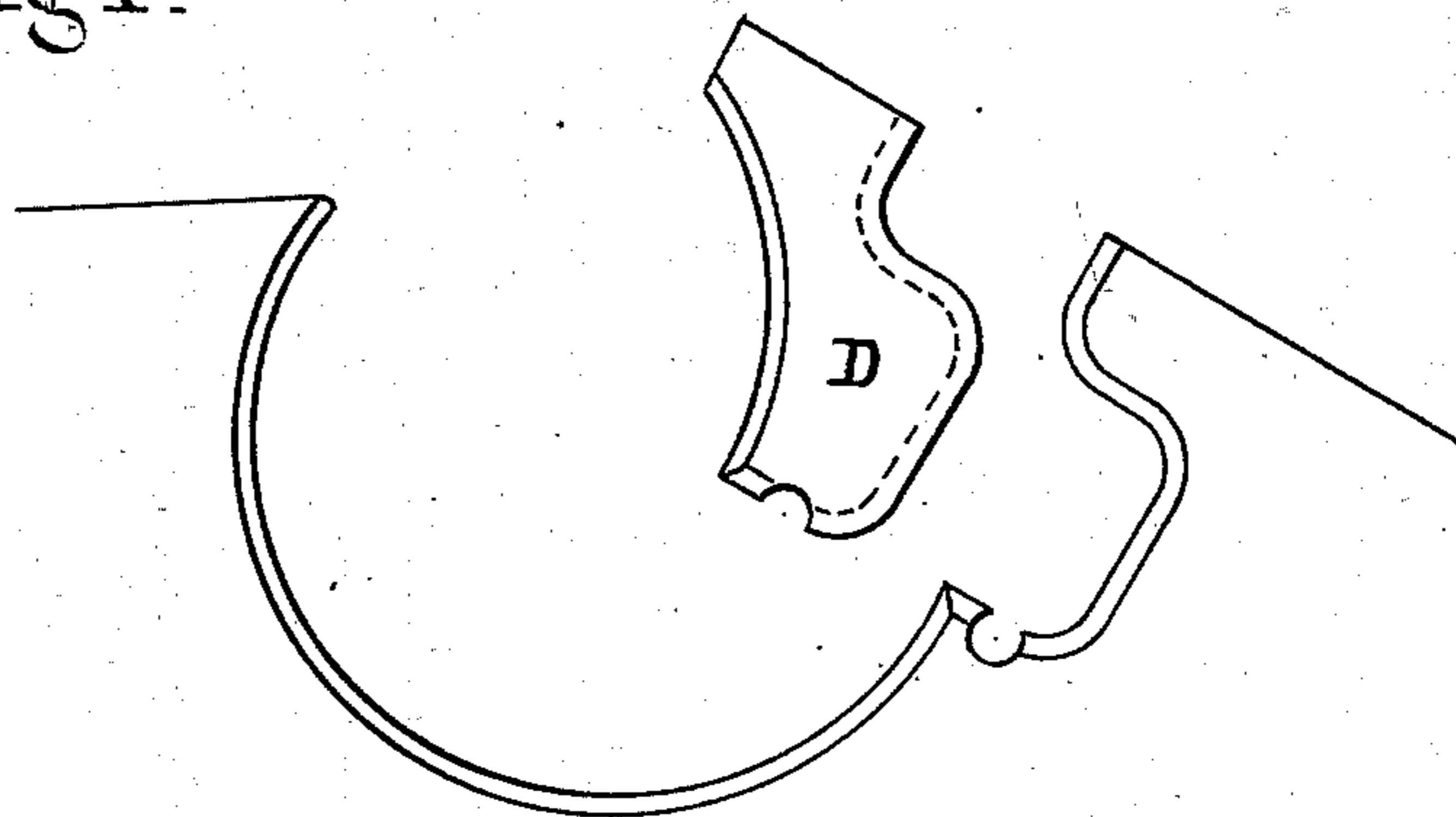
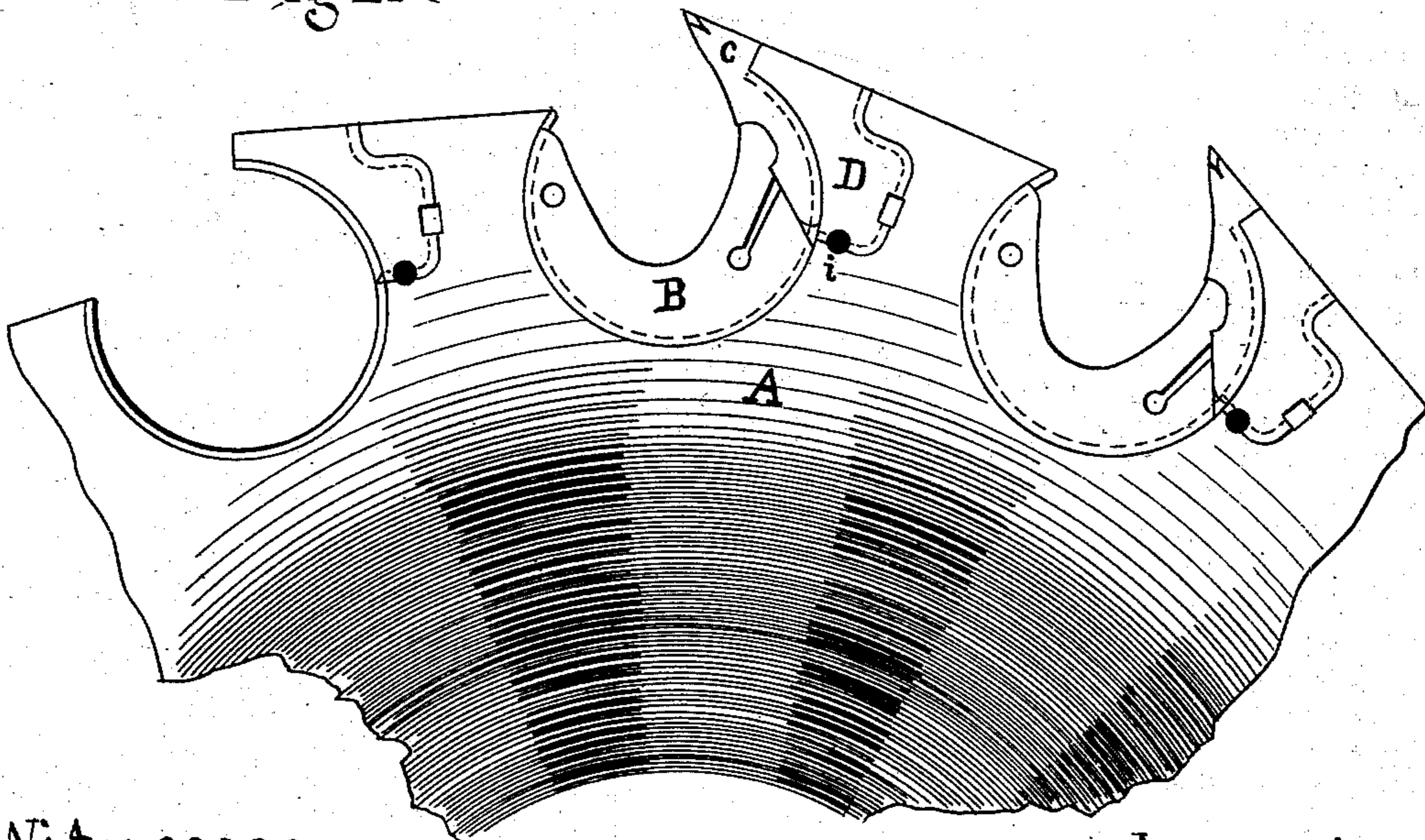


Fig 2.



Witnesses
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SAW-PLATE AND INSERTED SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 283,197, dated August 14, 1883.

Application filed December 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. BOWEN, of the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Saw-Plates and Inserted Saw-Teeth; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates more particularly to that class of saw-plates and inserted saw-teeth in which a crescent-shaped tooth is turned into a circular recess in the edge of the saw-plate, so that one end will form the cutting-point. Latterly these teeth have been improved by cutting off the cutting end of the crescent-shaped plate and inserting a removable cutting point or bit in place of the portion removed in such manner that the crescent-shaped piece serves as a holder for the bit. My invention is applicable, however, to any form of inserted teeth, but is most beneficial where narrow bits are used.

It consists in cutting an irregular-shaped piece out of the saw-plate just back of the cutting point or bit and inserting in the recess thus formed a patch-plate the back edge of which fits the irregularities of the recess, while its front edge conforms to the shape of the recess in which the saw tooth or bit is secured. The object and functions of this inserted patch will be hereinafter described.

Referring to the accompanying drawings, Figure 1 shows the concave tooth-socket and patch ready to be inserted. Fig. 2 shows a section of a saw-plate having two teeth complete and one incomplete.

Let A represent the saw-plate. The edge of this saw-plate is provided with recesses at regular intervals apart, in which the inserted teeth are fitted.

B is the crescent-shaped tooth-holder, which is inserted in the recess in the saw-plate by being turned into the recess, and is held in place by a V-shaped dovetail in the usual way.

C is the inserted bit or removable cutting-point. Just back of the cutting-point C, I cut out of the saw-plate an irregular-shaped piece, so as to form an opening or recess, which extends down into the plate as far as or below the point where the bit C extends, and in the recess thus formed I fit a patch, D, the back edge of which the irregular shape of the edge of the recess, while its front edge conforms to the shape of the recess in which the tooth or the tooth-

holder and bit are secured. The irregular shape of the back edge of the patch-plate fitting in the corresponding edge of the recess enables me to lock the patch in place by means of a rivet or key-pin, *i*, which passes through a hole made on the line of juncture at the lower edge of the patch. It is therefore immaterial what particular irregular shape the patch fits against; but I prefer an S shape, as more convenient to make, and because it has no angles or sharp corners. The back edge of the patch is dovetailed into the back edge of the recess in the usual way. This arrangement holds the tooth or bit with an elastic grip, which prevents it from being displaced. The special office of the patch, however, is to permit of that portion being renewed when it becomes worn or broken. The sawdust, passing back from the throat of the tooth, soon wears the sides of the saw-plate thin at this point; but by inserting the patch-piece it receives the wear, and can be renewed when desired, thus preserving the plate. The frequent removal and replacement of the saw tooth or bit also wears the edge of the recess, so that the tooth or bit becomes loose, in which condition it is liable to come out. This difficulty is also remedied by the patch-plate, as a new one can be inserted at any time, thus keeping the teeth tight.

In case a tooth or bit should strike against a hard substance when passing through a log, instead of breaking the plate, as heretofore, the patch-piece only will be broken, and the saw can be repaired by inserting a new patch.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is--

The saw-plate A, having a recess formed in it directly behind the cutting point or bit, the back edge of which is irregular in shape, in combination with a patch, D, the back edge of which corresponds with and fits the back edge of the recess, while its front edge conforms with the curve of the recess in which the saw-tooth fits, the tooth-holder B, and the removable cutting-point C, substantially as specified.

In witness whereof I have hereunto set my hand and seal.

JOHN J. BOWEN. [L. S.]

Witnesses:

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