J. R. LUCE.
Saw-Teeth.

No. 211,029. Patented Dec. 17, 1878.

Fig. 1.

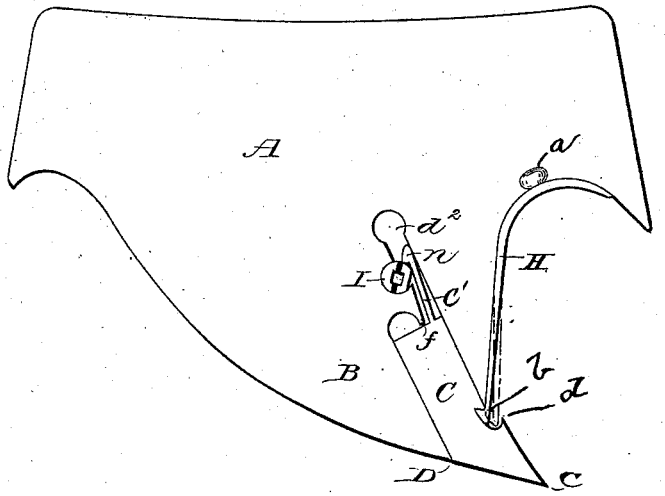
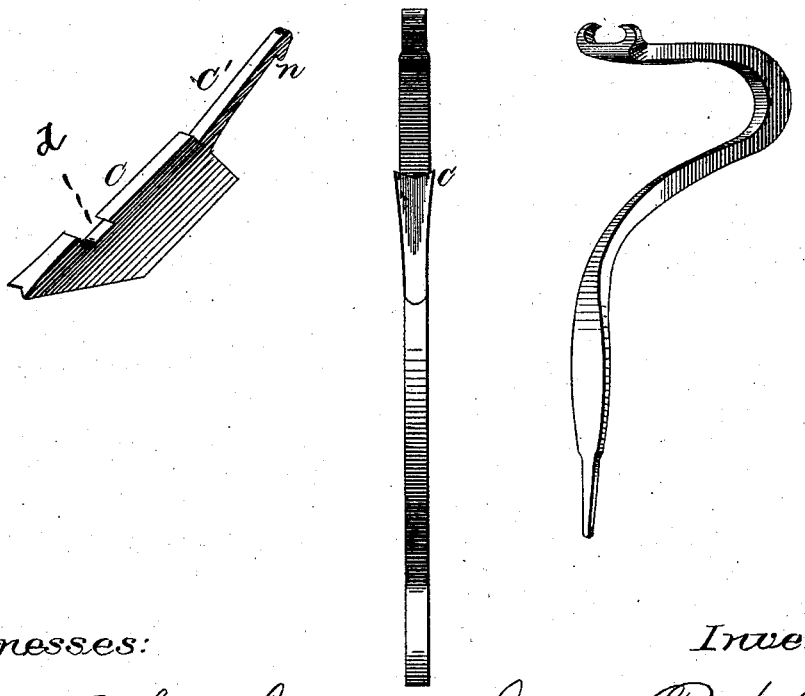


Fig. 2.



Witnesses:
James A Welch
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UNITED STATES PATENT OFFICE.

JAMES R. LUCE, OF STEVENS POINT, WISCONSIN.

IMPROVEMENT IN SAW-TEETH.

Specification forming part of Letters Patent No. **211,029**, dated December 17, 1878; application filed September 26, 1878.

To all whom it may concern:

Be it known that I, JAMES ROOT LUCE, of Stevens Point, in the county of Portage and State of Wisconsin, have invented certain new and useful Improvements in Saw-Teeth; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to that class of circular saws in which the teeth are provided with removable cutting-points; and it consists in the construction of the point and the means for holding the same in place, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a side view of a part of a circular-saw plate with tooth embodying my invention. Fig. 2 shows the various parts in detail.

A represents a part of a circular-saw plate, with tooth B, formed in any of the known and usual ways. C represents the cutting-point, constructed substantially in the form shown, and inserted in a slot, D, made for that purpose in the tooth B.

The edges of the point C are made concave, or with V-shaped grooves, to coincide with the correspondingly-shaped edges of the metal in the slot D, to prevent any lateral motion of the point.

The butt of the cutting-point rests against a shoulder, *f*, formed in the bottom of the slot D, and the point is thus firmly supported in the tooth B, and held by the following means: From the bottom or inner end of the slot D extends a smaller slot, d^2, into the saw-plate, for any suitable distance, and the inner end of this latter slot is preferably made round, as shown in Fig. 1. Into this slot d^2 projects an arm, C′, extending from the inner end of the point C, the extreme end of said arm being formed with a hook, *n*. Between the inner end of the slot d^2 and the shoulder *f*, at a suitable point, is made a circular hole, opening into the slot d^2, into which hole is inserted a round key, I, having a head at one end, and riveted at the other. Both ends of this key are countersunk into the saw-plate, so as to preserve a uniform smooth surface. This key I is formed with a central hole and groove at one end for the insertion of a suitable instrument to turn the same either to the right or left; and it has a depression on one side, so that the key will act as a cam, and the hook *n*, engaging with said cam, will hold the point C securely in its place. By turning the key or cam I the hook will be disengaged, and the point C can be removed.

As an additional fastening I use a spring, H, formed as shown in the drawing, to fit over the circle of the saw-plate. This spring is, at a proper point, provided with a riveting-head, *a*, which is inserted and riveted in a proper notch made for that purpose in the saw-plate. At the outer end of the spring is formed a hook, *b*, to take into a notch, *d*, in the point C.

When the point is being inserted into the slot D of the saw-tooth, the hook *b* rises until the point C rests on the shoulder *f*, when the hook snaps into the notch *d*.

By any suitable instrument the hook *b* may be raised out of the notch, and the cam or key I being previously set, the point can be readily taken out.

The spring H is formed a little wider than the thickness of the saw-plate, for the purpose of preventing the sawdust from passing by, and thereby prevent the heating and wearing of the saw-plate.

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

In combination with a circular-saw plate, A, with teeth B, having slots D d^2 and shoulder *f*, the cutting-point C, provided with the hooked arm C′ and notch *d*, the cam I, and the spring H, with hook *b*, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, 1878.

JAMES ROOT LUCE.

Witnesses:
JAMES A. FELCH,
W. B. BUCKINGHAM.