

(No Model.)

E. C. ATKINS.

SAW TOOTH.

No. 260,519.

Patented July 4, 1882.

Fig. 1.

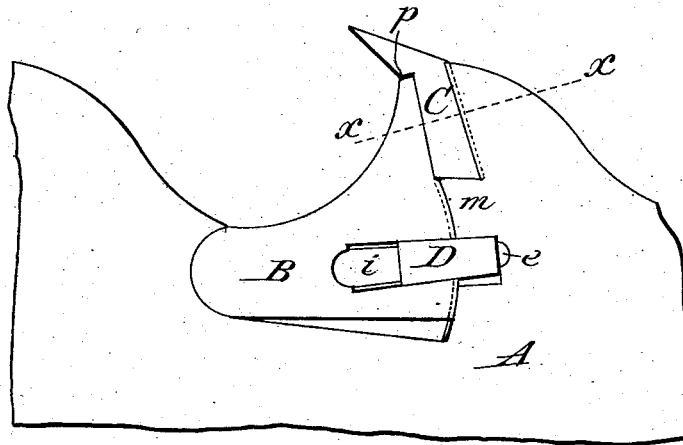


Fig. 2.

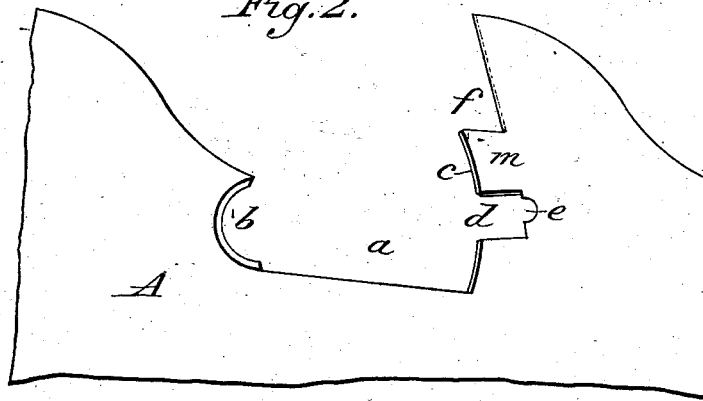


Fig. 7.

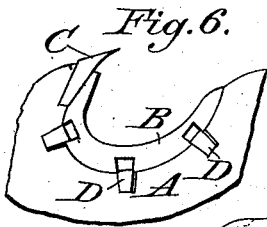
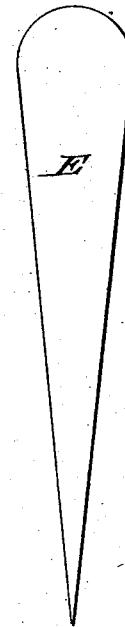


Fig. 3.

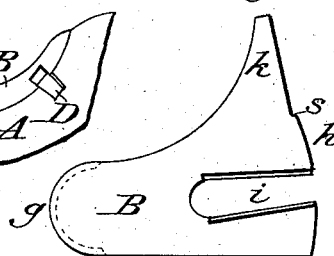


Fig. 4.



Fig. 5.



Attest:

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SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 260,519, dated July 4, 1882.

Application filed March 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, ELIAS C. ATKINS, a citizen 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 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to a novel manner of securing insertible saw-teeth; and it consists in the construction and combination of a recessed saw-plate, an insertible tooth, a locking-plate, and a key, as hereinafter more fully described and claimed.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a side view of a portion of a circular saw-plate, showing the manner in which the tooth, locking-plate, and key are preferably arranged. Fig. 2 is a side view of a section of the recessed saw-plate with the tooth and locking-plate removed. Fig. 3 is a side view of locking-plate. Fig. 4 represents sections on the line *xx* of Fig. 1. Fig. 5 is a plan and section of the locking-key. Fig. 6 represents a modified manner of arranging the locking key or keys; and Fig. 7 is a view of an instrument for adjusting the parts in position and for detaching the same when required.

Like letters of reference are used to designate the same parts in the several views.

The periphery of the saw-plate A is provided with recesses *a*, which are oblong in form, and are preferably rounded or curved at their ends *b c*, as shown in Fig. 2. At the end *c* of the recess *a* is a recess, *d*, which is nearly rectangular in form, its sides having a slight taper. A curved notch, *e*, is formed in the end of this sub-recess, for the purpose hereinafter mentioned. Above the end *c* of the recess *a* is an offset, *f*, of a form corresponding with that of the rear and bottom edges of the insertible tooth.

Within the recess *a* is placed a locking-plate, B, that is adapted to secure the bit or tooth C, as hereinafter described. This locking-plate

corresponds in form with the recess *a*, and has rounded ends *g h*, an oblong tapering recess, *i*, coinciding with the recess *d* that is formed in the saw-plate, and an arm or projection, *k*, adapted to bear against the front edge of the tooth and hold the same in place.

The locking-plate B and tooth C are secured by means of the tapering block or key D, that is adapted to slide in the recesses *i* and *d*, thereby forcing the locking-plate to bear downward in the recess *a*, and causing its arm or projection *k* to grasp the tooth and hold it in position between said projection and the offsetting portion of the saw-plate.

It will be observed that the recess *d* is slightly wider than the recess *i*, thus leaving a slight space beneath the wedge or key D when its end is driven into the former recess. A tapering space is also left at the bottom of the recess *a*, between the edges of the plates A and B. By means of the spaces thus formed a sufficient displacement is allowed the locking-plate to take up wear and compensate for inaccuracies in fitting without affecting the operation of the sliding key.

The rounded edges of the locking-plate are preferably grooved to fit corresponding tongues or projections formed in the rounded edges of the saw-plate, the locking-plate being thus firmly seated. The wedge or key D is also grooved to fit corresponding tongues on the edges of the recesses *i* and *d*. The front and rear edges of the tooth or bit C are made to fit the adjacent edges of the saw-plate and arm *k* of the locking-plate, and these adjoining edges may be grooved and tongued in any suitable manner. If desired, the front or rear edge of the tooth or the edge of either the saw-plate or locking-plate may be provided with a lug to fit a corresponding recess in the contiguous part.

The shank of the tooth or bit C, which rests in the offsetting portion of the saw-plate upon the projection *m*, is tapered from above downward, being wider below than above. At the junction of the shank and point on the front of the tooth is a shoulder, *p*, that rests on the end of the projecting arm *k* of the locking-plate. The outer edge of this projection *k* does not quite coincide with the curved edge *h* of

the locking-plate, but tapers slightly inward, so as to form a shoulder, *s*, against which the front lower edge or corner of the tooth-shank is supported.

- 5 Owing to the construction of the saw-plate, tooth, and locking-plate as described, it will be seen that the parts may be readily adjusted to compensate for wear or any slight irregularities in fitting.
- 10 The parts are adjusted in position, and also detached when required, by means of a wedge-shaped instrument or lever, *E*, the point of which is inserted into the notch at the end of the recess *i* or *d*, so as to bear upon and force
- 15 the lug *D* forward or back, as may be desired. When the key is forced into the recess *d* the parts will be securely locked, and by forcing the key or wedge back into the recess *i* said parts may be readily detached.
- 20 The recesses *i* and *d*, instead of being located at the point shown in Fig. 1, may be formed at any point in the circular part of the locking-plate and corresponding portion of the saw-plate; or two or more locking-wedges may be
- 25 employed and be located at the points shown in Fig. 6, in which the locking-plate is shown as having a semi-lunar form. The construction shown in Fig. 1, however, is deemed preferable. By this manner of securing insertible
- 30 saw-teeth it will be observed that screws or rivets are entirely dispensed with, the employ-

ment of the locking-plate and key being sufficient to secure the tooth, so that it may be readily detached when required, and so that its adjustment to compensate for wear of the 35 parts may be readily accomplished.

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

1. The combination, with the saw-plate *A*, 40 having a recess, *a*, provided with curved ends *b c*, a tapering recess, *d*, formed in the curved end *c* of the large recess, and an offsetting portion, *f*, for the reception of the tooth, of the locking-plate *B*, having curved ends *g h*, taper- 45 ing recess *i*, and a projection, *k*, and the locking-key *D*, adapted to slide in the recesses *d i*, substantially as described.

2. The combination of the recessed saw-plate *A*, locking-plate *B*, having curved ends, and 50 a projection, *k*, provided with shoulder *s*, the tooth *C*, having a shoulder, *p*, and provided with a tapering shank, and the wedge *D*, adapted to slide in tapering recesses formed in the saw-plate and locking-plate, substantially as 55 described.

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

ELIAS C. ATKINS.

Witnesses:

CHARLES M. EMERSON,
M. G. McLAIN.