

(No Model.)

E. C. ATKINS.
DETACHABLE SAW TOOTH.

No. 246,703.

Patented Sept. 6, 1881.

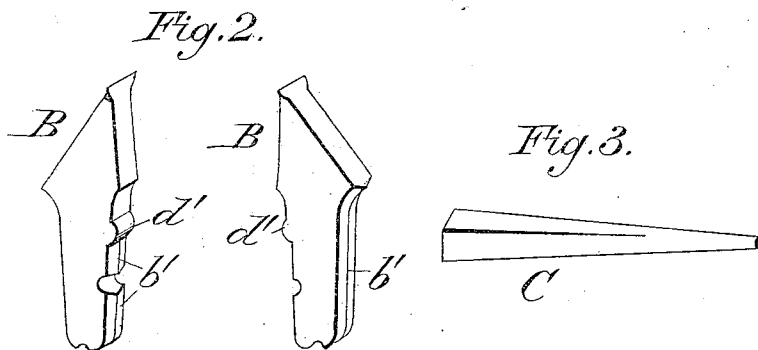
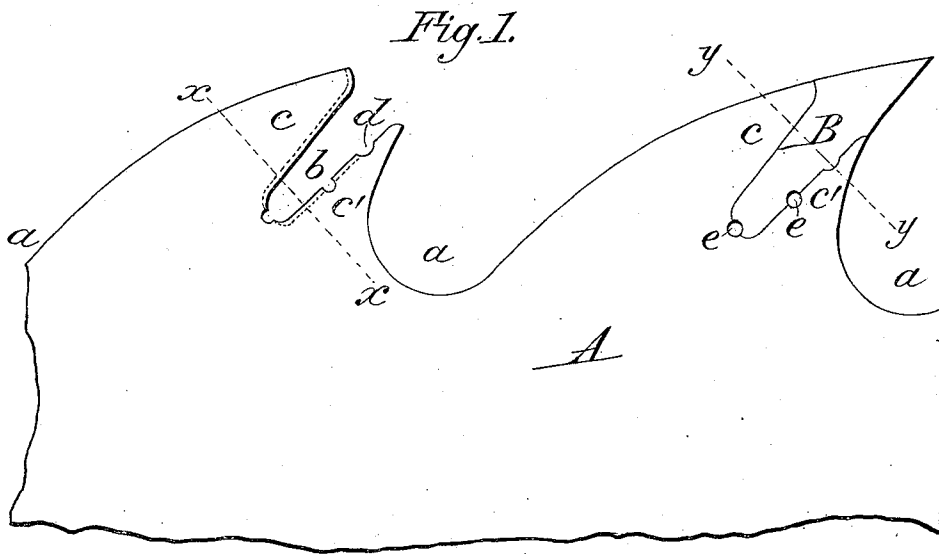
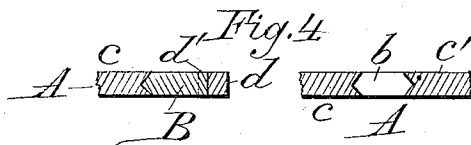
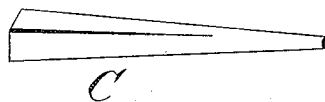


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

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DETACHABLE SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 246,703, dated September 6, 1881.

Application filed May 19, 1881. (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 Saws; and I do hereby 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 or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in saws having insertible teeth, the object being to provide a simple and efficient means of detachably securing such teeth without the usual necessity of employing rivets or locking-sections; and the invention consists in forming a spring jaw or jaws contiguous to the slots or recesses in which the teeth are inserted, said jaws being sufficiently elastic to receive and hold the teeth, as hereinafter more fully set forth.

In the annexed drawings, which fully illustrate my invention, Figure 1 is a side view of a saw-plate having spring locking-jaws. Fig. 2 represents perspective views of my insertible saw-teeth, showing the opposite edges of the same. Fig. 3 is a view of the punch used for detaching the teeth, and Fig. 4 shows sections on the lines *x x* and *y y*.

Like letters indicate like parts in the several views.

In the edge of the saw-plate A, between the gullets *a a*, are recesses *b*, formed by the spring locking-jaws *c c'*, for the reception of the insertible teeth B. The edges of the recesses *b* are grooved in the usual manner for the reception of a corresponding beveled edge, *b'*, on the insertible teeth. These recesses are also provided near their front upper ends with a curved notch, *d*, that receives a corresponding curved projection, *d'*, on the front edge of the tooth B. The V-shaped groove in the edge of the recess *b* and the beveled edge *b'* of the tooth extend around the same, except through the notch *d*, projection *d'*, and that portion of the recess and tooth immediately above said notch and projection.

At the end of the tooth and its recess, and

also on the side of the same below the notch and projection *d d'*, are half-round openings in each, which are also not grooved, and form apertures *e e* for inserting the punch C in detaching the tooth when required.

The insertible teeth B are held in place by the elasticity of the closely-fitting jaws *c c'*, which spring apart sufficiently to admit of the insertion of the teeth, and then clasp them securely until detached by means of the punch.

By referring to Fig. 1 it will be observed that the quantity of metal adjoining the recesses *b* in front, between them and the gullets, is greatly reduced, so as to render those portions of the plate sufficiently elastic to enable the recesses to receive and hold the teeth. The form of the teeth B is such that they will readily open a portion of or the entire recess until driven home, when the metal jaws *cc'* contiguous to the tooth close upon it, holding the tooth in a firm gripe without changing the tension of the saw-plate.

This construction may be varied to form the spring so that it will act on the back edge of the tooth, or on both edges to divide the strain, or, by accurate construction and adjustment, may be made to operate on a portion of or the whole line of contact of the teeth with the solid plate.

The depth of the recess in which the tooth is inserted may be greater or less in comparison with the gullets, as may be required to attain sufficient strength to hold the tooth in place and afford room for the passage of sawdust.

By transferring the spring from the insertible tooth to the saw-plate many of the objectionable effects resulting from the employment of rivets and locking plates or sections are entirely avoided. Insertible teeth held by rivets and locking-sections are liable to injuriously affect the tension of the saw-plate and to become loosened by unequal expansion of the parts when the saw is in operation. The cost of producing several pieces to hold the tooth in place is also much greater than the expense of a single bit or tooth, which, by virtue of its being firm and not compressible, is much more cheaply constructed than if made in any part elastic.

Saw-teeth held by rivets or by a spring formed in the tooth are apt to exert an injurious pressure upon the saw-plate, expanding

the rim of the saw, and by changing its tension cause it to run "shaky." This difficulty is entirely obviated by forming the saw-plate with spring locking-jaws for the reception of the insertible teeth, which are thus securely held without liability of exerting an injurious pressure upon the plate or changing its tension.

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

The combination, with an insertible saw-

tooth having suitable projections, of spring locking-jaws forming recesses in a saw-plate for the reception of the same, substantially as described.

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

ELIAS C. ATKINS.

Witnesses:

D. V. BURNS,
C. S. DENNY.