(No Model.)

J. A. DEAN.

SAW TOOTH.

No. 330,680. Patented Nov. 17, 1885.

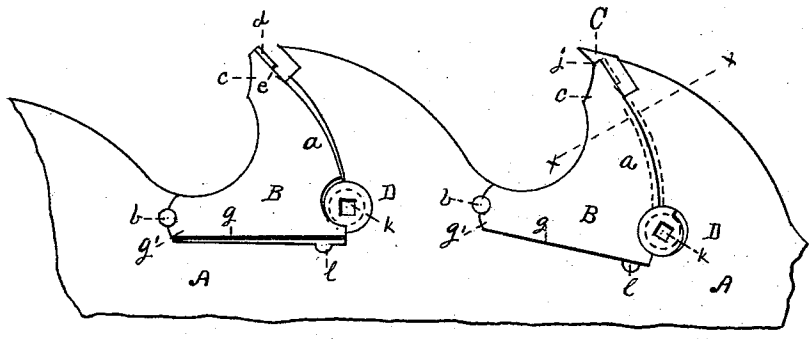


FIG. 1.

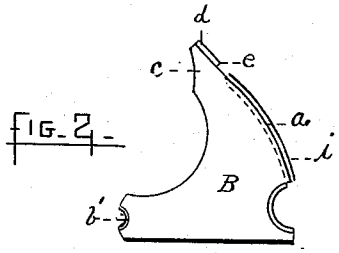


FIG. 2.

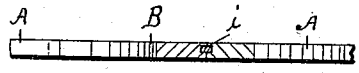


FIG. 3.

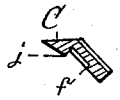


FIG. 4.

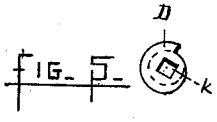


FIG. 5.



FIG. 6.

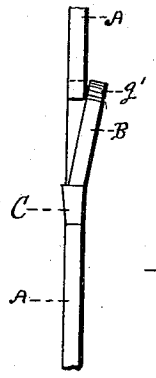


FIG. 7.

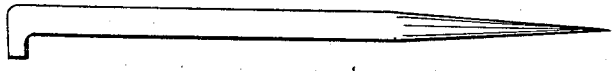


FIG. 8.

Witnesses.

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H. M. Fowler

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UNITED STATES PATENT OFFICE.

JOHN A. DEAN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO CHRISTOPHER RICHARDSON, OF NEWARK, NEW JERSEY.

SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 330,680, dated November 17, 1885.

Application filed November 28, 1884. Serial No. 148,995. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. DEAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Saw-Teeth, of which the following is a specification containing a full, clear, and exact description of the invention, reference being had to the accompanying drawings, in which—

Figure 1 shows a side view of a portion of a saw-plate, illustrating the method of inserting and retaining the teeth in the saw-plate. Fig. 2 is a view of the locking-plate. Fig. 3 is a sectional view on line *x x*, Fig. 1. Fig. 4 is a longitudinal sectional view of the tooth or bit. Fig. 5 is a view of the cam. Fig. 6 is a sectional view of the same. Fig. 7 is an edge view of the saw-plate, showing the method of removing the locking-plate, and Fig. 8 represents the wrench.

Similar letters refer to like parts in the several views.

A A is a section of the saw-plate, provided with sockets or recesses capable of receiving a locking-plate, B, corresponding in form with the recess and adapted to secure the tooth or bit C in position, as hereinafter set forth. The locking-plate B has the side *a* formed of the segment of a circle whose center is at or near the center of the rivet-hole *b*. At the end of the arm *c* the edge *d* projects beyond the curved edge *a*, and is provided with a V-shaped edge and a shoulder, *e*, which, engaging a shoulder, *f*, on the tooth C, serves to draw the tooth into place. At the lower part of the curved edge *a* or at the heel of the plate a cam, D, is recessed in the saw-plate and extends for one-half its diameter into the locking-plate B. A straight line, *g*, forms the base of the plate, and at the toe *g'* of the plate a rivet, *b*, passes through the line of contact of the plate B and the saw-plate A. The curved edge *a* and the corresponding edge of the recess in the saw-plate are provided with grooves, into which a spline, *i*, is inserted, and the cam D has a groove about its entire periphery, to receive a tongue formed upon the inclosing-edges of the plate B and saw-plate A. The tooth C has a V-shaped groove in its back to fit a V-shaped projection on the opposing edge of the recess, and at *j* a shoulder on the tooth rests against the end of the arm *c* of the plate B.

The spline *i* holds the curved edge *a* of the plate B coincident with the edge of the recess, while the toe *g'* of the locking-plate may be pushed laterally so it may be carried past the edge of the saw-plate and the plate B removed.

In use the toe of the locking-plate B is held in position by countersinking the ends of the rivet-hole *b'* and heading the ends of the rivet *b*, which may readily be driven out and the plate B removed.

The left of Fig. 1 shows the position of the locking-plate B and cam D with the tooth C removed. When the tooth is inserted, a wrench is placed in the opening *k* and the cam D turned, the "throw" of the cam carrying the heel of the locking-plate downward and causing the arm *c* to bear firmly against the tooth C. The locking-plate B, as it is actuated by the cam D, is fulcrumed at the toe; but a similar action of the plate B upon the tooth C could be secured by placing the cam beneath the toe of the plate B, in which case the plate would be fulcrumed at the heel. I prefer, however, the arrangement as shown, which also permits the embodiment of my further invention—viz., the removal of the locking-plate by the lateral movement of the toe, while the curved edge *a* is held by the spline *i*, or by a tongue and groove coincident with the opposing edge of the saw-plate.

Saw-teeth have been made with a transverse recess in the front edge to receive a projection on the locking-plate; but in my invention the projecting edge *d* of the arm *c* fits a recess in the front of the tooth, so that it not only serves to draw the tooth downward, but it also prevents any lateral movement of the tooth.

The teeth are easily removed by turning the cam D into the position shown in the left of Fig. 1, and with a sharp point inserted in the hole *l* the heel of the locking-plate may be raised and the tooth C released.

Wedges, bolts, buttons, or rivets have been used for the purpose of securing the locking-plate into its position in the recess formed in

the saw-plate; but in my invention the essential feature consists in actuating the locking-plate by a cam so as to bring it to bear firmly against the tooth, whether said cam be applied at the heel of the plate or elsewhere.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the saw-plate A, of a locking-plate, B, fitting a corresponding recess in the saw-plate, rivet *b*, attaching the toe *g'* of the locking-plate to the saw-plate, curved side *a*, held from lateral motion by a spline, *i*, arm *c*, having a projecting rib, and a shoulder, *e*, adapted to engage the bit, and a cam, D, recessed in the saw-plate and acting against the side *a* to bring the locking-plate B downward and carry the arm *c* against the bit, substantially as described.

2. The combination, with a saw-plate, A, having a recess to receive a locking-plate and a bit or tooth, of a locking-plate, B, having its toe *g'* held from lateral motion and its side *a* curved so the plate may be moved about the toe *g'* as a fulcrum, and an arm, *c*, adapted to engage the bit or tooth, and a cam, D, held in the saw-plate and acting against the side *a* of the locking-plate so as to bring the arm *c* firmly against the bit or tooth, substantially as described, and for the purpose set forth.

JOHN A. DEAN.

Witnesses:
RUFUS B. FOWLER,
S. B. I. GODDARD.