

(No Model.)

C. M. EMERSON.  
DETACHABLE SAW TOOTH.

No. 262,024.

Patented Aug. 1, 1882.

Fig. 1.

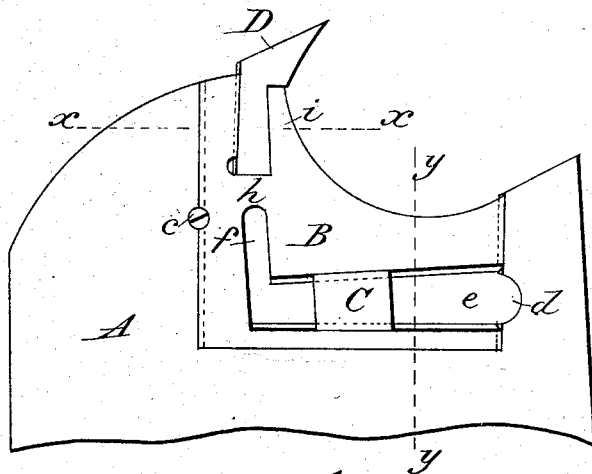


Fig. 2.

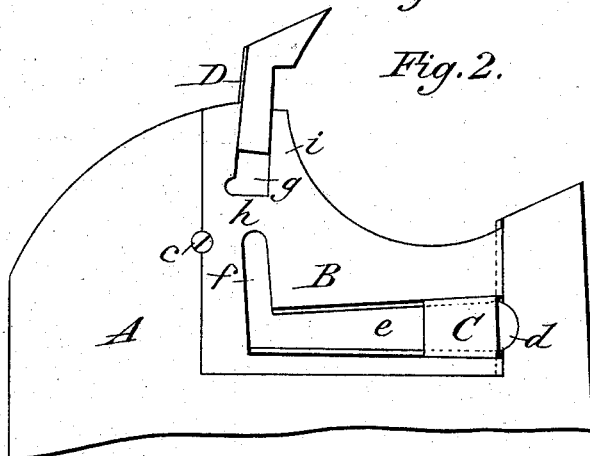


Fig. 3.

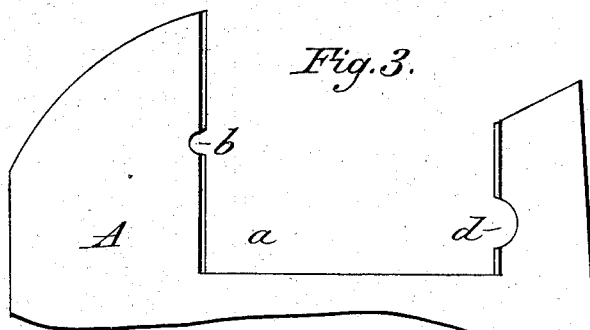
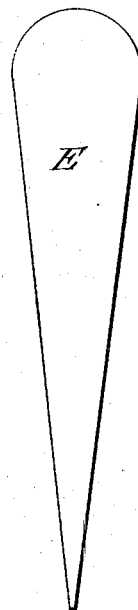


Fig. 5.



Attest

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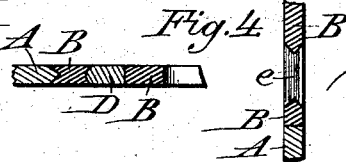


Fig. 4.

Inventor:

Charles M. Emerson  
per J. C. Parker  
att'y

# UNITED STATES PATENT OFFICE.

CHARLES M. EMERSON, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO ELIAS C. ATKINS, OF SAME PLACE.

## DETACHABLE SAW-TOOTH.

SPECIFICATION forming part of Letters Patent No. 262,024, dated August 1, 1832.

Application filed May 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES M. EMERSON, 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 Detachable Saw-Teeth; 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved means of securing detachable saw-teeth; and it consists in certain novel features of construction, as hereinafter more fully set forth.

The invention is illustrated in the annexed drawings, in which Figure 1 is a side view of a section of a circular saw, showing the arrangement of the detachable tooth, locking-plate, and key or wedge, the parts being locked. Fig. 2 is a similar view, showing the tooth partly detached. Fig. 3 is a view of the saw-plate with the mouth-piece or locking-plate and connections removed. Fig. 4 represents sections on the lines *xx* and *yy* of Fig. 1; and Fig. 5 is a view of the lever employed to move the locking-wedge.

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

The saw-plate *A* is provided upon its edge, at suitable intervals, with recesses *a*, only one of which is shown in the drawings. This recess *a* is rectangular in form, its edges being preferably beveled to fit corresponding grooves formed in the edges of the mouth-piece or locking-plate *B*. At one end of the recess *a* is a half-round opening, *b*, which corresponds with a similar one formed in the end of the locking-plate, the two serving to receive the screw *c*, by means of which said plate or mouth-piece is secured. At the opposite end of the recess *a* is a larger half-round opening, *d*, which coincides with the end of an elongated slot or recess, *e*, that is formed in the mouth-piece. The slot or recess *e* has inclined sides with beveled edges, which fit corresponding grooves in the

edges of a movable key or wedge, *C*, that is adapted to slide in said slot or recess, the key or wedge being tapered to fit the slot in which it operates. At the inner end of the slot or recess *e* is an offsetting-slot, *f*, that assists in imparting the requisite degree of spring and elasticity to the locking-plate. Near the outer end of this offsetting-recess *f*, in the edge of the locking-plate, is formed a recess, *g*, for the reception of the tooth, bit, or cutting-point *D*, which fits therein. That portion *h* of the smooth plate between the adjacent ends of the recesses *f* and *g* serves as a spring in conjunction with the spring-projection *i* in front of the tooth, whereby the latter is held securely in position without the use of screws or rivets. The shank of the tooth *D* is preferably tapered, being larger at its lower end, the form of the shank corresponding with that of the recess *g*, in which it fits.

If desired, the edges of the tooth-shank and also those of the recess may be made parallel instead of tapering, the latter, however, being preferred, as the tooth is thus more readily secured. The front edges of the recess and tooth-shank are plain or square; but the rear edge of the tooth is rounded and fits in the similarly-formed grooved back edge of the recess.

In operating these devices for the purpose of securing the tooth, the wedge or key *C* is pushed as far as possible toward the end *d* of the recess *e*, which allows the small spring portion *h* of the mouth-piece to throw down the spring-projection *i*, thus rendering it possible to drop the tooth or bit into the recess *g*. The wedge *C* is then forced back by means of a lever, *E*, or other suitable instrument, so as to press the spring-projection *i* firmly against the front of the tooth-shank, thereby securing the tooth in position.

It will be seen that the bit is held entirely in a mouth-piece or locking-plate made separate from the saw-plate, so that if the said mouth-piece is broken by any accident it may be readily replaced without necessitating the cutting down of the saw-plate. The recesses formed in the saw-plate for the reception of the locking-plates, being rectangular in shape, are more readily and cheaply made, the liability of

breakage or other liability of injury to the saw-plate being also thus greatly reduced. It will also be seen that the force exerted upon the wedge in the act of securing the tooth does not  
5 affect the strain of the saw-plate, as all the strain comes upon the mouth-piece only.

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

10 The combination of the saw-plate A, having recesses *a*, the locking-plate B, having recesses

*e* and *g*, and provided with spring-projection *i*, the tooth D, inserted in the recess *g*, and the wedge or key C, adapted to slide in the recess *e*, whereby the tooth is secured, substantially 15 as described.

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

CHARLES M. EMERSON.

Witnesses:

C. BRADFORD,

CHAS. L. THURBER.