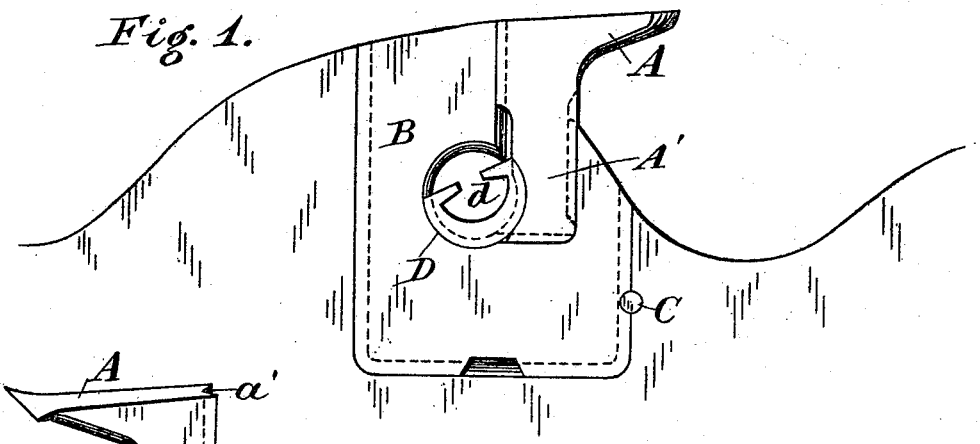
(No Model.)

W. J. ROGERS & J. HOWE.

INSERTED TOOTH FOR SAWS.

No. 458,120. Patented Aug. 18, 1891.

Fig. 1.



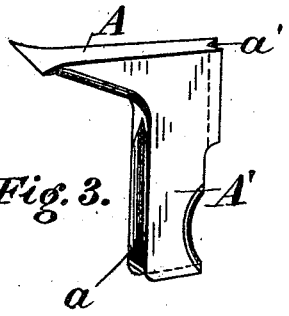


Fig. 3.

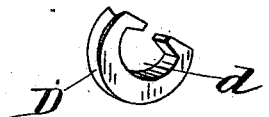


Fig. 4.

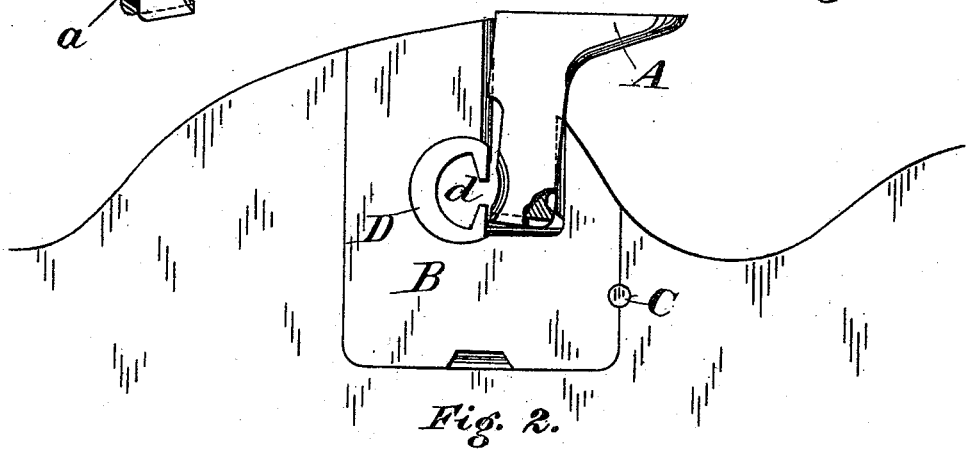


Fig. 2.

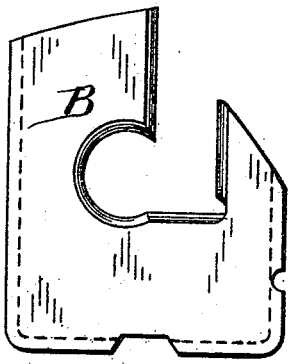


Fig. 5.

Witnesses:
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By their Atty. W. H. Smyth.

UNITED STATES PATENT OFFICE.

WILLIAM JAMES ROGERS AND JAMES HOWE, OF LAUREL, CALIFORNIA.

INSERTED TOOTH FOR SAWS.

SPECIFICATION forming part of Letters Patent No. 458,120, dated August 18, 1891.

Application filed February 17, 1890. Serial No. 340,815. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM JAMES ROGERS and JAMES HOWE, citizens of the United States, residing in the town of Laurel, in the county of Santa Cruz and State of California, have invented an Improved Inserted Tooth for Saws, of which the following is a specification.

The objects of our invention are, first, to provide an inserted tooth for saws strong and simple in construction, cheap to make, and durable in wear; second, to so construct it that the cutting-bit can be swaged without removal from the saw, and, third, to provide a saw-tooth so arranged that the cutting-bit can be secured to the saw without the necessity of removing the bit-holder. We accomplish these objects by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 shows a portion of the periphery of a circular saw with our improved tooth in position. Fig. 2 shows the tooth unlocked and ready to be removed from the holder. Fig. 3 shows an isometrical view of the cutting-bit. Fig. 4 shows an isometrical view of the fastening device. Fig. 5 shows the bit-holder removed.

Referring to the accompanying drawings, A is a cutting-bit; A′, lug or projection at the base of the bit; A^2, throat-protector; *a*, V-groove on front edge of bit; *a′*, V-groove on back edge of bit; B, bit-holder; C, securing-rivet; D, bit-securing device, and *d* hole in D.

The construction and operation of our device are as follows:

The bit-holder B is made rectangular on three sides, and is secured in the saw by being grooved around the three rectangular sides, the saw being shaped to receive it, the edges of the aperture into which the holder is placed being suitably beveled to fit the groove around the edges of the bit-holder, and a key-rivet C firmly locks the bit-holder in position. The bit is made with parallel edges, the cutting portion projecting forward from the top end of the bit. Both front and rear edges of the bit are provided with V-grooves. A lug or teat projects forward from the front edge at its lower extremity. The projecting portion which forms the cutting-point is ribbed or widened at its lower edge for a suitable distance, commencing near the cutting-edge, to form a wearing-strip or throat-protector.

To receive the bit, a parallel opening is made projecting inwardly from the outer edge in the bit-holder, corresponding in size to the width and depth of the bit. The front portion of the bit-holder is made shorter than the rear and is provided with a recess corresponding to the teat or projection at the lower end of the bit. The inner edges of the recess in the bit-holder are suitably beveled to fit the groove on the edges of the bit and so secure it in place.

To secure the bit in the bit-holder, a circular hole is made in the bit-holder in such a position that a portion of its circumference overlaps the bit, so that when the bit is in position the circular hole is complete. The edges of this circular hole are beveled on each side. The locking device which secures the bit to the holder is a small circular plate having a portion of its periphery removed. A groove is provided around the circumference of this circular locking-plate, so that it will fit snugly into the bevel-edged circular hole in the holder and bit. The removed portion of the circumference of the circular locking-plate permits of the insertion of the bit in the holder and its removal therefrom, for it will readily be seen that when this portion of the circumference of the locking-plate is turned toward the bit the latter is free to be removed; but when the position of the circular locking-plate is reversed it secures the bit firmly in position. The center portion of this locking-plate may be removed, as shown in the drawings, so that it takes somewhat the form of a crescent, and by very slightly spreading the horns of the crescent it becomes a stiff spring which will take up any wear which may be caused by frequent removals of the cutting-bits. The portion of the locking-plate removed may be of such a shape as to form a convenient means of turning the locking-plate by a key having the same exterior shape.

To secure the bit in position, the circular locking-plate being in position, the removed portion of its periphery being turned toward the bit-recess, the bit can now be readily slid into its position, and by turning the locking-

plate it is there secured. To remove it, this operation is simply reversed. When it is desirable to swage or widen the cutting-edge of the bit, it is not necessary to remove it from the holder, owing to the large surface of the back of the bit which is in contact with the bit-holder.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of a saw-plate, an inserted tooth suitably fitted into it, and a securing or locking device consisting of a circular plate having a portion of its periphery removed, the removed part extending into the circular plate, thereby forming the locking-plate approximately into the shape of a crescent, the horns of the crescent-shaped locking device being very slightly spread from a true circle to form a spring and located in such a position that a portion of it extends into the inserted tooth, substantially as described.

2. The combination of a saw-plate, a parallel-sided bit-holder suitably secured therein, an inserted tooth suitably fitted in the bit-holder, and a crescent-shaped securing or locking device, the horns of which are spread to form a spring, inserted into a circular hole so located in the bit-holder that a portion of its circumference overlaps one of the sides of the bit, and any suitable means for holding the locking device in position, substantially as described.

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Witnesses:
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