J. E. Emerson,

Saw Tooth Blank.

No. 108,990. Patented Nov. 8. 1870.

Fig. 1.

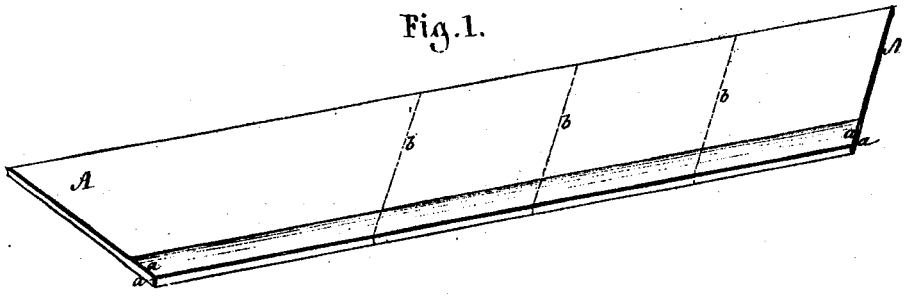


Fig. 2.

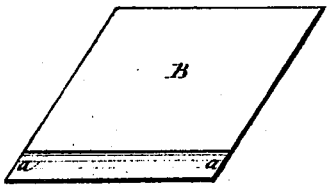


Fig. 3.

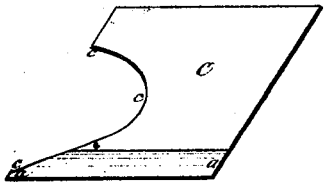


Fig. 4.

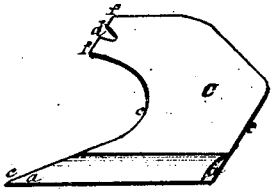
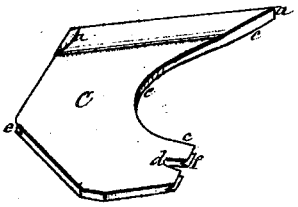


Fig. 5.



Witnesses.
Henry A. Wiggatt
Edmund Masson

James E. Emerson.
By Atty. A. P. S. Stoughton.

United States Patent Office.

JAMES E. EMERSON, OF TRENTON, NEW JERSEY.

Letters Patent No. 108,990, dated November 8, 1870.

IMPROVEMENT IN BLANKS FOR SAW-TEETH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES E. EMERSON, of Trenton, in the county of Mercer and State of New Jersey, have invented a certain new and useful Improvement in Making Removable Teeth for Saws; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a rolled plate or bar of steel, from which the blanks that are to form the teeth are cut;

Figure 2 represents one of the blanks as sheared from the bar.

Figure 3 represents the blank in one of its advanced stages; and

Figures 4 and 5 represent the finished saw-tooth.

Similar letters of reference, where they occur in the separate figures, denote like parts in all cases.

Saw-teeth of almost all kinds, but removable saw-teeth in particular, require more metal, more thickness of metal, at the point than in the body of the tooth; and this increased thickness has heretofore been attained by placing the blank under a drop-die and upsetting the metal, and so thickening it at the part that makes the point of the tooth; or else the blank was forged out, both of which required the heating up of the steel to a degree that endangered the overheating of the metal, and so injuring it for its purpose; or the blank was ground, so as to reduce it in thickness in the body and leave it full at the cutting-part of the tooth. This latter plan avoided the risk of overheating, but was very expensive.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

A represents a plate of steel, which, in being rolled, has rolled upon it a flange, swell, or enlargement, *a*, on or near one of its edges, and on both sides thereof, as seen in the drawing. This plate or bar, so rolled, is put under the shears and cut off at the lines *b b*, so as to form diamond-shaped blanks, as at B, fig. 2.

This blank B may then be put under a drop-die, and a portion, *c*, cut out therefrom, so as to make it of the form shown at C, fig. 3; or the plate A may be put under the drop-die, and the blanks produced at once thereby, as shown at C, fig. 3; but I prefer the first-described plan of shearing, and then the drop-die. Figs. 4 and 5 represent how these blanks may be shaped or filed up to fit similarly-shaped recesses in the saw-plate, having a notch at *d* and grooved edges at *e f*. Other-shaped fittings may be used; but these I have shown answer a good purpose, and make a firm and substantial union with the saw-plate.

I am aware that it is a common practice to roll out plates of metal so as to impart to them thickened margins, and then to divide the same into blanks for plowshares, mold-boards, &c; and I do not, therefore, claim the application of this method to the making of blanks for saw-teeth; but

What I do claim is—

Blanks for saw-teeth cut obliquely from a rolled steel plate, of the shape in cross-section, herein described and shown; that is to say, a plate having a marginal swell or enlargement on both sides thereof at and near one edge, but otherwise of uniform thickness.

JAMES E. EMERSON.

Witnesses:

A. B. STOUGHTON,
EDMUND MASSON.