

(No Model.)

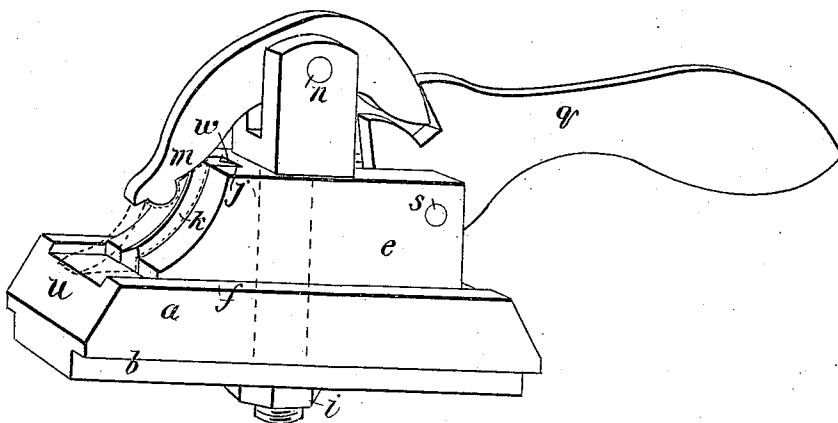
S. J. CHALFANT.

SAW TOOTH SWAGE.

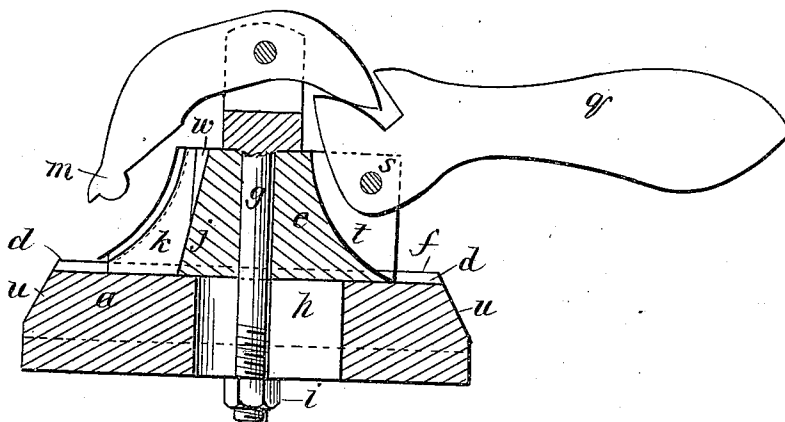
No. 292,097.

Patented Jan. 15, 1884.

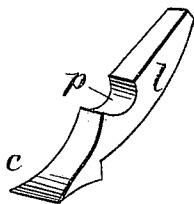
*fig 1*



*fig 2*



*fig 3*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

SAMUEL JESSE CHALFANT, OF ALBION, CALIFORNIA.

## SAW-TOOTH SWAGE.

SPECIFICATION forming part of Letters Patent No. 292,097, dated January 15, 1884.

Application filed June 2, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL J. CHALFANT, of Albion, Mendocino county, California, have invented a new and Improved Saw-Tooth Swage, of which the following is a full, clear, and exact description.

My invention consists of an anvil-block adapted for being held in a vise and contrived with jaws and a clamping-lever for holding the "Hoe" and other removable saw-teeth with the points on the anvil suitably for being swaged or drawn by a light hammer to widen and sharpen the points, the dies being removable for changing them for different forms of teeth, all as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved swage with a tooth represented (dotted) in the position for being swaged. Fig. 2 is a sectional elevation, and Fig. 3 is a perspective view of a removable saw-tooth such as the swage is designed for sharpening.

I make an anvil-block, *a*, of steel, with rabbeted lower edges, *b*, to adapt the block to be firmly held in the jaws of a vise, so that it will sustain the blows of a hammer in swaging the points *c* of the teeth on the upper surface at the ends *d*.

In the wide groove of the upper surface of the block *a*, a die and lever holding block, *e*, is placed between the marginal ribs *f*, where it is to be held by a bolt, *g*, which extends down through the slot *h* to the lower side of the anvil-block, where it is secured by a nut, *i*, the block *e* being adjustable along the anvil *a*. The front end of this die-block has a groove, *j*, in which a die, *k*, having a  $\Lambda$ -shaped and curved face in conformity with the shape of the back of the tooth *l*, is placed, to lay the teeth on it so that the points *c* will lie flat on the surface of the anvil, and a clamping-lever die, *m*, is pivoted at *n* in the slotted head of the bolt *g*, suitably to be pressed down upon

the upper side of the teeth and into the notch *p* of such teeth as have such a notch by the cam-lever *q*, pivoted at *s* in the slot *t* of the back end of the die-block. The block *e* is to be adjusted so that it will hold the teeth *l* so that the points *c* will be drawn out to the angle between the upper surface and the bevel end *u* of the anvil, which may serve for a gage by which to make the teeth all exactly the same length. The block *e* may be shifted around to use either end of the anvil-block, as desired, and the dies *k* and *m* are so applied that they may be taken out and others adapted to teeth of different forms put in. The back of the upper portion of the die *k* has a V-groove, *w*, in it for inserting the point of a punch to start it when said die is to be changed, and the pivot-pin *n* is fitted so as to be readily driven out when the die *m* is to be changed. With this simple device these teeth, which are generally thrown away when worn dull, or at most are very imperfectly refitted in the points, may now be quickly made as good as when new several times before they become worthless.

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

1. The combination, in a saw-tooth swage, of the anvil *a*, die-block *e*, bed-die *k*, clamping-die *m*, and the cam-lever *q*, substantially as described.

2. The combination, in a saw-tooth swage, of the anvil-block *a*, having rabbet-grooves *b*, grooved upper surface or marginal ribs, *f*, and slotted hole *h*, the die-block *e*, fitting in and adjustable along the groove of the anvil, the clamping-bolt *g*, dies *k* and *m*, and the operating-lever *q*, substantially as described.

3. The combination of the anvil-block *a*, having beveled end *u* and grooved upper surface, die-block *e*, clamping-bolt *g*, dies *k* and *m*, and the lever *q*, substantially as described.

SAMUEL JESSE CHALFANT.

Witnesses:

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CHARLES O. PACKARD.