

N. W. SPAULDING.  
Swages for Saw-Teeth.

No. 200,097.

Patented Feb. 5, 1878.

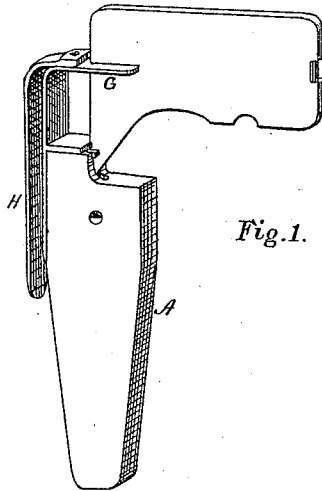


Fig. 1.

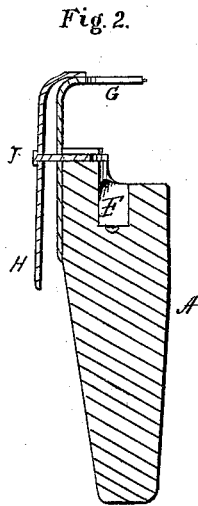


Fig. 2.

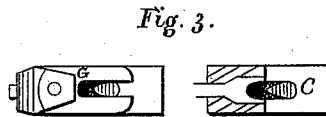


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

NATHAN W. SPAULDING, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN SWAGES FOR SAW-TEETH.

Specification forming part of Letters Patent No. **200,097**, dated February 5, 1878; application filed August 4, 1877.

*To all whom it may concern:*

Be it known that I, NATHAN W. SPAULDING, of the city and county of San Francisco, and State of California, have invented Improvements in Swages for Saw-Teeth; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to an improved swage- implement for spreading, flaring, and expanding the points of saw-teeth.

It consists in the combination, with a swage for expanding, flaring, upsetting, or sharpening saw-teeth, of a lever and centering clamp or holder for preventing lateral displacement by clamping the tooth near its point.

Referring to the accompanying drawings, Figure 1 is a side view, Fig. 2, a vertical sectional view; Fig. 3, a top or plan view.

A represents the bar or body of the tool, in one end of which the die is formed, while the opposite end serves as a handle.

The manner of forming and applying the die can be varied according to the form and style of the tooth-point. In the present instance I have represented a hole, C, which is bored longitudinally into the end of the bar, and a steel die or plug, F, which fits into it. The outer end of the plug or die is beveled off on one or more sides, so as to give the desired shape of countersink or recess to form the tooth-point.

In order to keep the swage or bar A in line with the tooth when the point is inserted in the countersink or female die, I secure a plate, G, to the back edge of the bar, so that it will project to a distance beyond its end. The end of this plate is bent at right angles, so as to stand across the end of the swage-bar, as represented, and this bent portion is slotted or formed into two branches, between which the thickness of the tooth will enter. These branches straddle the back of the tooth at or near its middle when the tooth-point is inserted in the countersink, and serve to keep the implement or bar A in line with the saw and tooth.

H is a spring-lever, the outer end of which is secured to the outer end of the plate G, and

extends alongside the handle at a short distance from it, so that the person who holds the handle or outer end of the bar A in his hand can readily press the lever against the bar with his finger.

A plate, J, has one end attached to the lever H near its middle, and passes through a transverse slot in the bar A or plate G at a short distance from the end of the die or plug F, and at right angles to the top of the tooth. The opposite or inside end of this plate is made forked or V-shaped, so that when the swage is applied to a tooth pressure upon the lever will force the forked or V-shaped end of the plate J against the tooth near the die, and hold it firmly against lateral displacement.

This latter device is quite essential for preventing the tooth from varying from its proper position when the blow which drives it into the countersink is struck, because the slightest variation from the plane in which the saw stands will cause one side of the point to spread or expand more on one side than on the other; but this device holds it firmly, so that, even if one side of the point is thicker or heavier than the other, the two sides will be expanded uniformly.

The particular form or method of applying this brace or holder is not material, the only necessity being that the device shall gripe the tooth near the die, and hold it against lateral displacement.

I have usually used two pins, one of which passed on each side of the saw-tooth, and whose ends were beveled on the inside, so that they pressed against the opposite corners and sides of the tooth.

This device can be used without the slotted plate G, if desired; but I prefer to use both.

It will be noticed that the slotted plate G straddles the same tooth that is being operated upon, so that the point is condensed, flattened, sharpened, or expanded in a direct line with that tooth. It is therefore unlike any device that guides the swage by being applied to an adjoining tooth or to the saw-plate.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

The combination, with a swage for expanding, flaring, upsetting, or sharpening saw-teeth, of a lever and centering clamp or holder, J, for preventing lateral displacement by clamping the tooth near its point, substantially as specified.

In witness whereof I have hereunto set my hand and seal.

NATHAN W. SPAULDING. [L. s.]

Witnesses:

OLWYN T. STACY,  
FRANK A. BROOKS.