(No Model.)

W. SNEE.

METAL PUNCH.

No. 378,341. Patented Feb. 21, 1888.

Fig. 1.

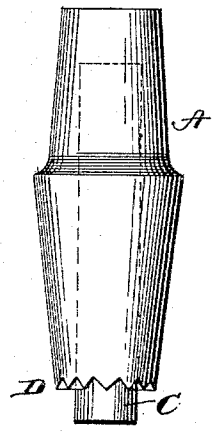


Fig. 2.

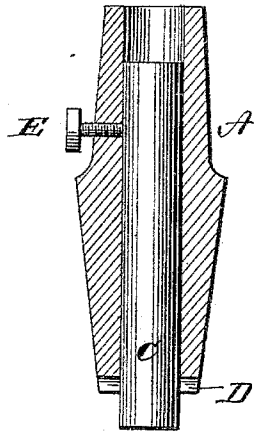


Fig. 3.

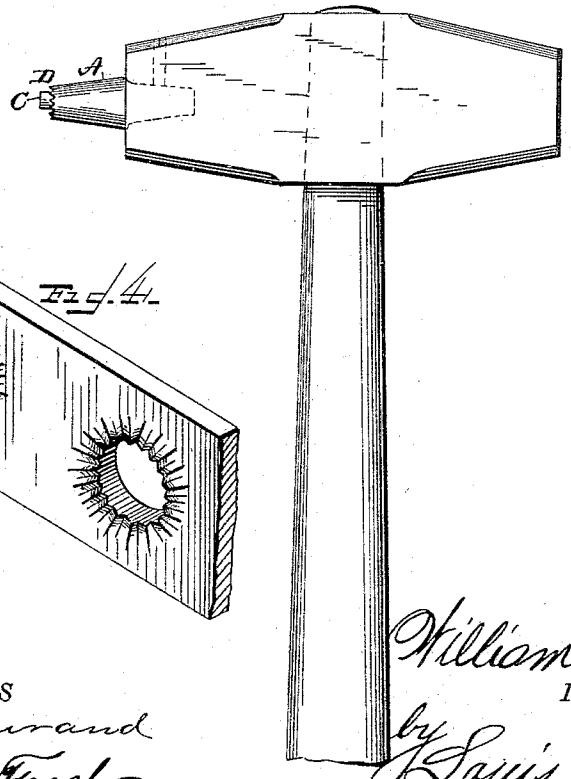


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM SNEE, OF PITTSBURG, PENNSYLVANIA.

METAL-PUNCH.

SPECIFICATION forming part of Letters Patent No. 378,341, dated February 21, 1888.

Application filed December 2, 1887. Serial No. 256,760. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SNEE, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metal-Punches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved punch. Fig. 2 is a longitudinal sectional view of the same, showing a modified construction. Fig. 3 shows the punch as applied to a hammer, and Fig. 4 is a perspective view of a portion of a fish-bar through which the holes have been punched by my device.

Like letters of reference denote corresponding parts in all the figures.

The object of my invention is to produce a punch for punching holes in metal and other material which shall accomplish a twofold result at a single operation—viz., punch a hole in the metal or other material subjected to its action, and at the same time form a series of radial grooves or depressions around the aperture formed by the punch, as is shown clearly in Fig. 4 of the drawings, in which I have represented a portion of an ordinary fish-plate through which a hole has been punched, provided with these radiating serrations or indentations.

To this end my invention consists in the improved punch or punching device, which will be hereinafter more fully described and claimed.

On the accompanying drawings, the letter A denotes the body or head of the punch, which has the usual tenon, B, for attaching it either to a hammer or to any ordinary punching-machine in the manner well understood. The punch proper, which is of steel or similar suitable material, is shown at C, and consists in a round bar of suitable dimensions, according to the size of the aperture to be punched. As will be seen from the drawings, this punch C projects downwardly from the head or body A and is encircled by a series of teeth (shown at D) which are integral with the body A and form an annular shoulder encircling the punch C. The latter must of course be of such a length as to enable it to penetrate the plate to be punched before the series of teeth D strike the surface of the same. In using this punch it is used precisely as any ordinary punch; but it will be seen that after the hole has been punched in the plate or other substance subjected to its action the annular series of teeth D, by striking against the surface of the plate, will form a series of radial serrations or indentations radiating from the bolt hole. The object of these serrations is to form a biting or binding surface for the washer, nut, or bolt-head, as the case may be, and operate in conjunction with these devices to form an effectual nut-lock.

Instead of constructing the punch in a single solid piece, as shown in Fig. 1, it may be in two or more pieces, as shown in Fig. 2, without affecting the spirit of my invention. In the last-named figure I have shown the body A and tenon B provided with a central longitudinal bore, into which the punch proper, C, is inserted, and held in place by the binding-screw E. This construction admits not only of the removal of the punch proper after it shall have become worn, but by loosening the binding-screw E the punch may be adjusted so as to project a greater or less distance below the serrations D, so as to adapt it to punch plates of different thicknesses.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A metal-punch consisting of a body, A, having a cutting part, C, at its lower end, the said part C being encircled by a series of downwardly-projecting teeth, D, substantially as set forth.

2. The combination, with the tubular body A, provided with the downwardly-projecting teeth or serrations D, of the removable and adjustable punch or cutter C, substantially as and for the purpose set forth.

3. The combination of the tubular parts A B, provided with an annular series of downwardly-projecting teeth, D, the centeral punch or cutter, C, and the binding-screw E, whereby the same may be adjusted within the body A B, substantially as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM SNEE.

Witnesses:

LOUIS BAGGER,

AUGUST PETERSON.