(No Model.)

# E. H. PERKINS.

## RIVET BURR REMOVER.

No. 385,133. Patented June 26, 1888.

*Fig. 1.*

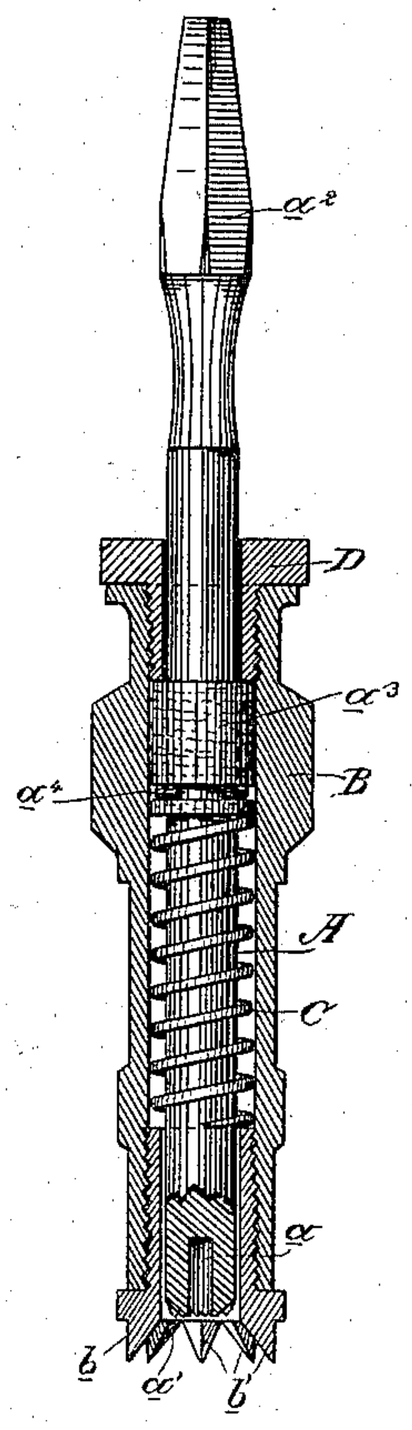



*Fig. 2.*

Witnesses,
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# UNITED STATES PATENT OFFICE.

ELIJAH H. PERKINS, OF VISALIA, CALIFORNIA.

## RIVET-BURR REMOVER.

SPECIFICATION forming part of Letters Patent No. 385,133, dated June 26, 1888.

Application filed March 22, 1888. Serial No. 268,135. (No model.)

*To all whom it may concern:*

Be it known that I, ELIJAH H. PERKINS, of the city of Visalia, Tulare county, State of California, have invented an Improvement in Rivet-Burr Removers; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a new and useful tool or implement the object of which is to remove the burrs of rivets, whereby said rivets may be taken out; and my invention consists in a bit having on its lower end cutters, said bit being mounted and adapted to rotate within a casing or stock, the lower end of which is provided with teeth for holding the stock stationary around the rivet-burr, while the cutter within operates upon the burr and cuts off the swaged portion of the rivet, all of which I shall hereinafter fully describe, together with details of construction.

Referring to the accompanying drawings, Figure 1 is a vertical section through the stock B, showing the bit in elevation, with the exception of its lower end, which is in section, showing the hole *a*. Fig. 2 is a perspective view of the lower end of the bit.

A is the bit of the tool, having its lower end made with an aperture or hole, *a*, which is surrounded by an annular series of cutting-lips, *a'*. The upper end of the bit is squared off at $a^2$, so as to receive a brace, by which it may be rotated. B is the tubular stock in which the bit is fitted and adapted to rotate on a suitable journal, such as is shown at $a^3$. Within the tubular stock is the spring C, bearing on the lower end of the stock and against a shoulder or pin, $a^4$, on the bit; and D is a nut, which is fitted upon the bit just above its journal, and is adapted to be screwed into the interior threaded upper end of the stock, whereby the bit is confined, though adapted to move longitudinally, within the stock. The lower end of the stock is provided with gripping or holding teeth *b*.

The operation of the tool is as follows: It is set down over the burr of the rivet so that the holding-teeth *b* of the stock encircle said burr, and by means of pressure upon the brace, which is transmitted through the spring within the stock, are pressed down onto the material around the burr, so that it remains stationary. The bit is rotated by the brace, and, pressing down against the spring, operates on the burr and cuts off the swaged portion on the end of the rivet, which end passes up into the opening or hole in the end of the bit until, the swaged portion being entirely cut off, the burr can readily be removed and the rivet then taken from its place.

In order to cause the stock to better hold and also to grip the burr on its edges, so that by turning the stock by hand the burr can be readily removed from its place, I make the teeth *b* of a triangular shape in cross-section, with outwardly-inclined inner cutting-edges at *b'*, which adapts the stock to fit different sizes of rivets because of the taper of the teeth, and also to bite into the edge of the burr because of the sharp edges of their inner sides, and this grip of the burr is sufficient, after the swaging of the rivet has been cut off, to enable it to be readily removed by turning the stock.

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

1. A tool or implement for removing the burrs of rivets, consisting of a tubular stock having holding-teeth upon its lower end for encircling the burr, and a bit fitted within the stock so that it may be rotated, said bit having cutters upon its lower end for cutting the swaged portion of the rivet, substantially as herein described.

2. A tool or implement for removing the burrs of rivets, consisting of a tubular stock having holding-teeth on its lower end for encircling the burr, and a bit fitted within the stock so that it may be rotated therein, said bit having on its lower end cutting-lips for cutting the swaged portion of the rivet and an aperture or hole for receiving the end of the rivet, substantially as herein described.

3. A tool or implement for removing the burrs of rivets, consisting of a tubular stock having holding-teeth on its lower end for encircling the burr, a bit fitted within the stock so that it may be rotated, said bit having cutting-lips and a hole in its inner end, and the spring within the stock, whereby said stock may be pressed down and held stationary while the bit is rotated, substantially as herein described.

4. A tool or implement for removing the burrs of rivets, consisting of the tubular stock having holding-teeth on its lower end, the bit fitted within the stock so as to be rotated therein and having a hole in its lower end and surrounding cutting-lips, the spring within the stock, whereby the stock may be pressed down and held stationary while the bit is rotated, and a nut fitted around the bit and seated in the upper end of the stock for holding the bit in place, substantially as herein described.

5. A tool or implement for removing the burrs of rivets, consisting of a tubular stock having teeth on its lower end, made with outwardly-inclined sharp edges for gripping the edge of the burr, and the rotary bit within the stock having a hole in its lower end, and surrounding cutters, substantially as herein described.

In witness whereof I have hereunto set my hand.

ELIJAH H. PERKINS.

Witnesses:
S. H. NOURSE,
H. C. LEE.