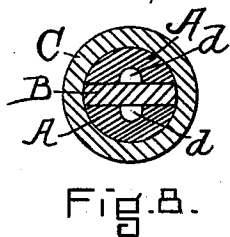
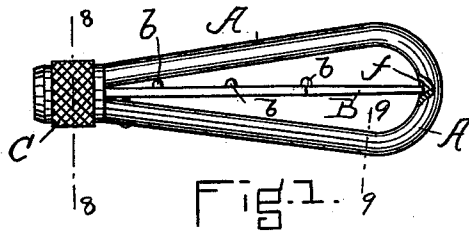
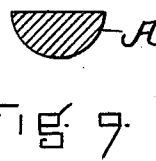
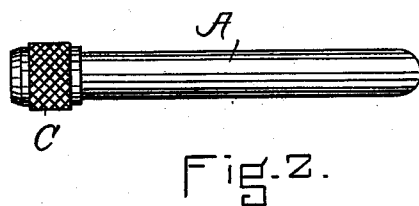
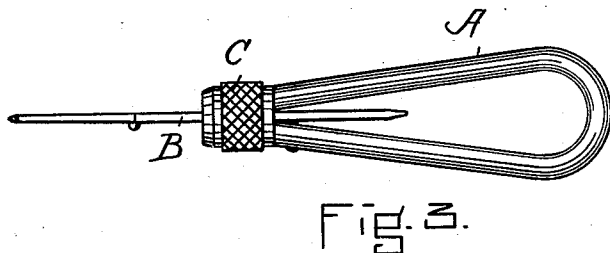
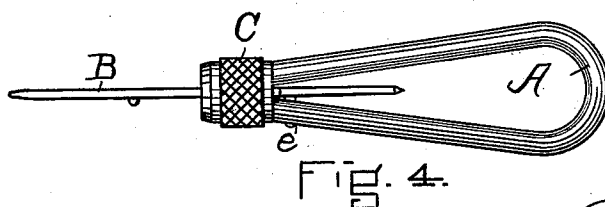
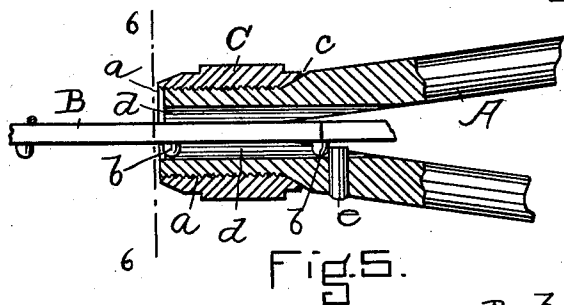
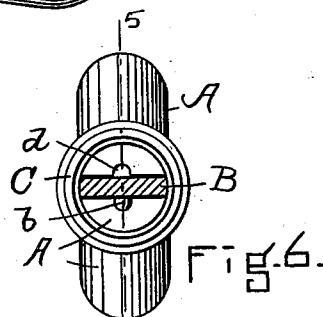
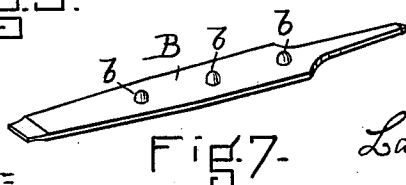


(No Model.)

L. S. STARRETT.
REVERSIBLE POCKET TOOL.

No. 592,176.

Patented Oct. 19, 1897.



WITNESSES.
Matthew M. Blunt,
Ada H. Spencer.

INVENTOR.
Leroy S. Starrett
by A. H. Spencer.

ATT'Y.

UNITED STATES PATENT OFFICE.

LAROCY S. STARRETT, OF ATHOL, MASSACHUSETTS.

REVERSIBLE POCKET-TOOL.

SPECIFICATION forming part of Letters Patent No. 592,176, dated October 19, 1897.

Application filed April 21, 1896. Serial No. 588,441. (No model.)

To all whom it may concern:

Be it known that I, LAROCY S. STARRETT, of Athol, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Reversible Pocket-Tools, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to provide a reversible pocket-tool adapted, when made as herein shown, to form a hole in soft or hard wood and to insert a screw therein, the blade being readily reversible for this purpose and arranged to slip bodily into the handle, so that neither end shall protrude. The handle is of bent metal so formed as to have a tapering lateral opening entirely through it and forms a loose-fitting wrench for nuts of various sizes. This opening lightens the tool and is also convenient to hang it up by. The handle and clamp peculiar to my invention are adapted to receive and hold a reversible or other blade or tool adapted to other purposes when provided with my holding means,

My invention consists in an approximately U-shaped handle preferably of half-round material, the ends of the U-arms being brought near together, externally threaded, and inclosed by a milled nut acting upon a beveled shoulder to draw the ends closer together, so as to clamp the blade, in combination with a tool or blade, herein shown as a screw-driver, adapted to slip between said arms, within said nut, and having its other end or shank tapered like an awl or reamer, two or more knobs being formed on one side of said blade in a central longitudinal line, while the adjacent faces of said arms have each a central groove to receive said knobs, one arm or jaw having a stop to limit the inward movement, while the other groove is unobstructed. A central socket in the bend of the handle receives the tapered shank of the blade when sheathed, and the clamp-nut holds the blade firmly in either of its positions. Instead of the awl-like tip of the reverse end it may have a screw-driving tip or be left plain and be held fast or sunken within the handle, as stated.

In the drawings, Figure 1 is a side view, and Fig. 2 an edge view, of the tool closed for the pocket. Figs. 3 and 4 are side views,

the first with the awl and the second with the screw-driving blade protruding. Fig. 5 is an enlarged section on line 5 5 of Fig. 6, and Fig. 6 an end view, the blade in section, on line 6 6 of Fig. 5. Fig. 7 is a perspective view of the blade detached. Figs. 8 and 9 are enlarged sections on lines 8 8 and 9 9 of Fig. 1.

A represents the handle, B the blade, and C the clamping-nut.

The handle is formed, preferably, of polished half-round steel or iron bent centrally until the flat sides of its extremities nearly meet, while at the bend they are, in the ordinary size, perhaps three-fourths of an inch apart, gradually approaching thence to a point about half an inch from their ends, from which point they are parallel and about one-eighth of an inch apart. The two semi-circular outer surfaces of these ends are screw-threaded, as at *a*, Fig. 5, the thread being formed when the ends are at the proper distance apart to receive the blade B. The thread terminates in a beveled shoulder *c*, and the adjacent inner faces of these threaded ends have central longitudinal grooves *d*, Figs. 5, 6, and 8. At the inner end of one of these grooves is a stop-pin *e*, Fig. 5.

The blade B is a flat steel tool having two operating ends, one of which, as represented in Fig. 7, may serve as an awl or reamer to form or enlarge a hole, and the other as a screw-driver. Three projecting studs *b* are formed on or set into one side of the blade in a longitudinal line, one being at the center and the others equidistant therefrom. These studs fit within the grooves *d* to aline the blade, and all three pass freely through one of the grooves to sheath the blade within the handle, as in Fig. 1; but they will not pass through the other, and when the blade is inverted the stop-pin *e* holds the blade protruded at either end, Figs. 3, 4, and 5.

The annular clamping-nut C has a milled periphery, so as to be readily turned by hand to tighten the jaws of the handle upon the blade or to loosen them. Half a turn is sufficient for this when the inner edge of the nut bears upon the beveled shoulder *c*, Fig. 5. The jaws seize the blade flatwise, each side of the studs *b*, and the engagement of the end-most stud with the stop-pin *e* gives a firm sup-

port against the endwise thrust to which the tool is subjected. A socket *f*, in the bend of the handle, receives the tip of the sheathed blade. (See Fig. 1.)

- 5 The handle-arms are sufficiently elastic to yield inwardly when the clamp-nut C is tightened and relax their grip upon the blade when it is loosened.

I claim as my invention—

- 10 1. The described tool - holding handle, formed of suitable material bent to an approximate U form, and provided with the interior socket *f*, the arms approaching each other, externally threaded at their extremities and having beveled shoulders adjoining
15 such threads, in combination with the milled annular clamping-nut engaging said threads and shoulders and adapted to compress the handle-jaws upon the interposed blade, substantially as set forth.

- 20 2. The tapering handle A having the curved external surface and open from end to end, with the adjacent ends parallel, externally threaded and internally grooved longitudinally, in combination with the blade B hav-
25 ing one plane side, and upon the other side

studs *b b b* adapted to traverse said grooves, whereby the blade may be alternately alined and sheathed, and with the clamping-nut C, serving to tighten the handle-jaws upon said blade, substantially as set forth. 30

3. The screw-inserting tool described, consisting of the open, tapering handle A of suitable material, having arms parallel at their outer ends, and externally threaded, their flat inner faces longitudinally grooved and one of such grooves being obstructed by a stop, in combination with the reversible blade B adapted to form a perforation and insert a screw therein and having on one face the alined knobs or studs *b* arranged to pass through one groove and to abut on said stop in the other, and with the annular tightening-nut C, inclosing and clamping the jaws and bar, substantially as set forth. 40 45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LARROY S. STARRETT.

Witnesses:

A. H. SPENCER,
N. K. BAKER.