T. A. FLEMING.
Screw Tap.

No. 228,882. Patented June 15, 1880.

Fig. 1.

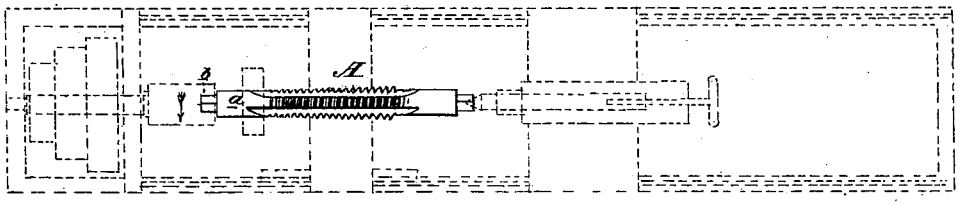


Fig. 2.

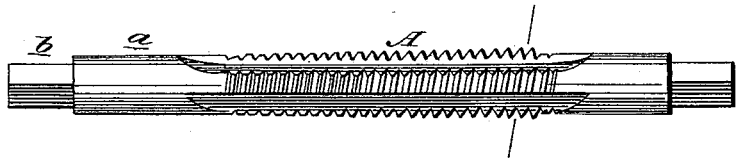


Fig. 3.


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# UNITED STATES PATENT OFFICE.

TIMOTHY A. FLEMING, OF HOOSICK FALLS, NEW YORK.

## SCREW-TAP.

SPECIFICATION forming part of Letters Patent No. 228,882, dated June 15, 1880.

Application filed January 14, 1880.

*To all whom it may concern:*

Be it known that I, TIMOTHY A. FLEMING, of Hoosick Falls, Rensselaer county, State of New York, have invented a new and useful Improvement in Screw-Taps, of which the following is a specification.

Figure 1 represents the screw-tap in position in a horizontal lathe on a reduced scale. Fig. 2 is a longitudinal view of the tap, and Fig. 3 is an end view of the tap.

Similar letters of reference indicate corresponding parts.

In the ordinary vertical machine, head of machine being downward, running a gang of right-hand taps—say four or six—the large end of right-hand tap is attached to head of machine. The article to be tapped is placed on the small end of the taper and descends and crowds on its own chips and cuttings in the ordinary process of tapping, which clogs the tap and interferes greatly with its action, for the reason that the larger end of the tap is downward and attached to head of machine, and the article which is being tapped therefore crowds on its own chips and cuttings. But by taking one or more of those taps away, placing my taps in their place, and reversing the small end of the taper, with spindle attached to the head of the machine, they will tap a left-hand thread with the same motion—that is, cut a left and right hand thread on the same machine at the same time.

The object of my invention is to cut a right and left hand thread in the same machine without reversing the motion, as is customary, by additional shafting and pulleys. I accomplish this by the change which I have made in the form of my machine-tap. Of course I use two taps—the ordinary right-hand tap, together with my new left-hand tap. It is equally applicable to vertical and horizontal tapping-machines, either single or in gangs.

A represents the tap, with its large end formed as usual. At the small end of the taper it is prolonged into a cylindrical shank, *a*, whose outer end is made square to fit into the socket in the head of the lathe-spindle, as shown in Fig. 1. By use of this tap on the ordinary upright gang tapping-machine, a left and right screw thread can be cut with equal facility and at the same time without reversing the motion of the screw-cutting machine.

The cylindrical shank *a* on the small end of the taper of tap guides the tap on the object to be tapped, which nothing at present in use will accomplish, as all machine-taps, right and left hand, now in use are tapering, and for that reason will not fit the hole in the article to be tapped, and therefore will not guide it to cut a true thread.

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

Jointly with a rotatable socket and center point, interchangeable right and left threaded taps, tenoned at the ends, as described.

TIMOTHY A. FLEMING.

Witnesses:

JOHN J. MADDEN,

FREED GREEN.