A. S. SPINNEY.

COMBINATION THREAD TAP.

APPLICATION FILED NOV. 19, 1917.

1,281,683. Patented Oct. 15, 1918.

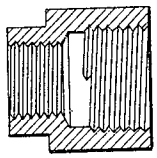


Fig. 1.

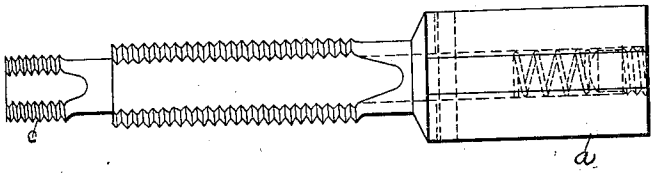


Fig. 2.

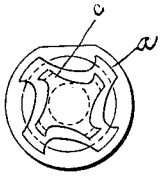


Fig. 3.

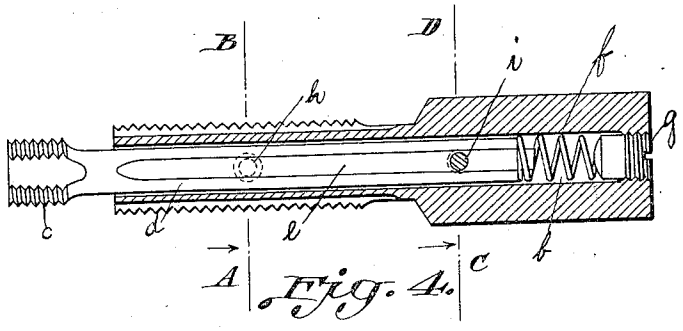


Fig. 4.

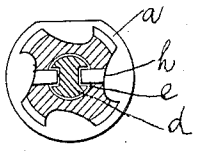


Fig. 5.

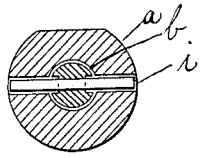


Fig. 6.

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UNITED STATES PATENT OFFICE.

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COMBINATION THREAD-TAP.

1,281,683. Specification of Letters Patent. Patented Oct. 15, 1918.

Application filed November 19, 1917. Serial No. 202,889.

To all whom it may concern:

Be it known that I, ALBERT S. SPINNEY, a citizen of the United States, residing at Portsmouth, in the county of Rockingham and State of New Hampshire, have invented a new and useful Combination Thread-Tap, of which the following is the specification.

This invention relates to the cutting of two or more different threads in and by the same operation by means of a special tool or tap, so devised that a spring, or springs, furnishes the pressure necessary to start one of the taps, and compensates for the difference in the leads. This has as its object the elimination of one or more operations, saving time and energy.

I attain these objects by the mechanism illustrated in the accompanying drawing in which—

Figure 1 is a longitudinal section through the work.

Fig. 2 is a view in side elevation of the combination thread tap.

Fig. 3 is an end view of the tap.

Fig. 4 is a section lengthwise through the outer tap, the inner tap being shown in elevation.

Fig. 5 is a cross section on the line A—B of Fig. 4.

Fig. 6 is a cross section on the line C—D of Fig. 4.

The combination thread tap consists of an outer tap (*a*) provided with a longitudinal bore (*b*) in which is seated the shank (*d*) of the inner tap (*c*). To prevent relative rotation between the taps, the shank (*d*) is provided with longitudinal grooves (*e*) engaged by pins (*h*) projecting inwardly into the bore of the outer tap. A pin (*i*) extends transversely through the outer tap and through an elongated slot in the shank (*d*). This pin allows for the differences in the lead of the two taps. To provide the necessary starting pressure for the inner tap, a spring (*f*) is interposed between the end of the shank (*d*) and a plug (*g*) threaded into the end of the bore (*b*). The described construction permits the simultaneous cutting of two different threads in axially alined bores, the spring together with the pin and slot connection between the two taps compensating for any difference in the lead of the taps.

I claim:

In a threading tool of the class described in combination, an outer threading tool and an inner threading tool slidably mounted therein and a yieldable connection between said tools whereby differences in lead are compensated for, and pressure is furnished to start the inner threading tool on its work.

ALBERT S. SPINNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."