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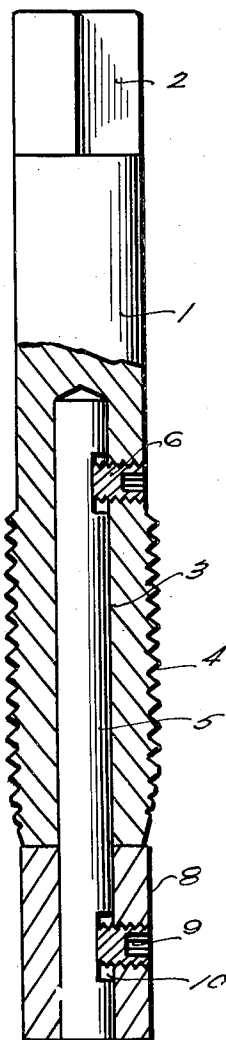


Fig. 1.

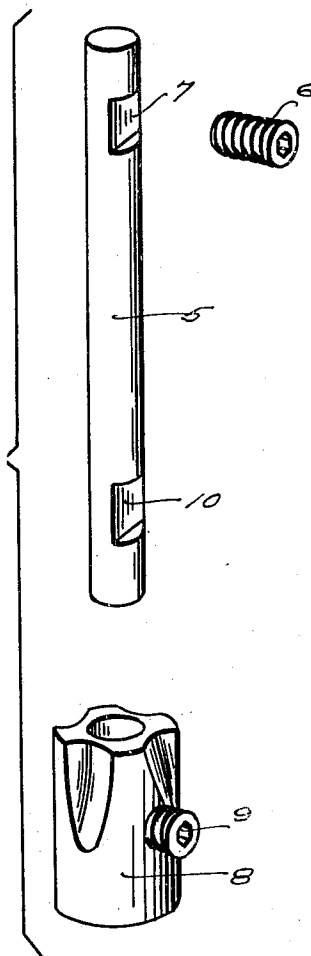


Fig. 2.

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TAP

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1 Claim. (Cl. 10—147)

My invention relates to improvements in taps, the principal object in view being to equip the usual tap with a detachable pilot of simple, practical form and whereby in hand tapping the tap may be started and then withdrawn and the pilot detached so as not to obstruct tapping of blind holes to the bottom thereof.

Other and subordinate objects are also comprehended by my invention, all of which, together with the precise nature of my improvements, will be readily understood when the succeeding description and claim are read with reference to the drawing accompanying and forming part of this specification.

In said drawing:

Figure 1 is a view partly in longitudinal section and partly in elevation illustrating a tap equipped according to my invention, and

Figure 2 is a view in perspective of the parts of the tap detached.

Referring to the drawing by numerals, according to my invention, the usual tap 1 with the wrench or tool engaging end 2 is provided with an axial bore 3 extending inwardly from the leading end of the tap for a suitable distance beyond the threading portion 4 of the tap. The bore 3 is designed to receive with a sliding fit a pilot spindle 5 designed to extend to the inner end of the bore 3 and to project out of the same for a substantial distance. An "Allen" type of set screw 6 threaded into the tap 1 radially beyond the threading portion 4 of the tap is designed to bear against a flattened portion 7 of the spindle 5 adjacent the butt end of the latter and lock said spindle 5 in the bore 3. A pilot sleeve 8 is fitted

over the extending portion of the spindle 5 and detachably secured thereto by an "Allen" type of set screw 9 threaded radially into said sleeve and bearing against a flattened portion 10 in the spindle 5 adjacent its outer end.

The manner in which the described invention is designed to be used will be readily understood. In hand tapping a blind hole, the tapping operation is started with the described pilot attached to the tap, it being understood that the pilot sleeve 8 is of the proper diameter as compared to that of the hole. The tap 1 is then withdrawn, the pilot sleeve 8 detached from the spindle 5 by removing the "Allen" screw 9, and the pilot spindle 5 detached from the tap by removing the "Allen" screw 6. The tap is then reinserted in the hole and the tapping operation completed.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention without further explanation.

Manifestly, the invention, as described, is susceptible of modification without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the appended claim.

What I claim is:

A tap having a threaded end portion and an axial bore extending therein from the leading end thereof and past said portion, a pilot spindle removably inserted in said bore and having an outer end extending out of the same, and a pilot member detachably attached to said end, and a set screw extending into said tap in the rear of said portion and engaging said spindle.

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