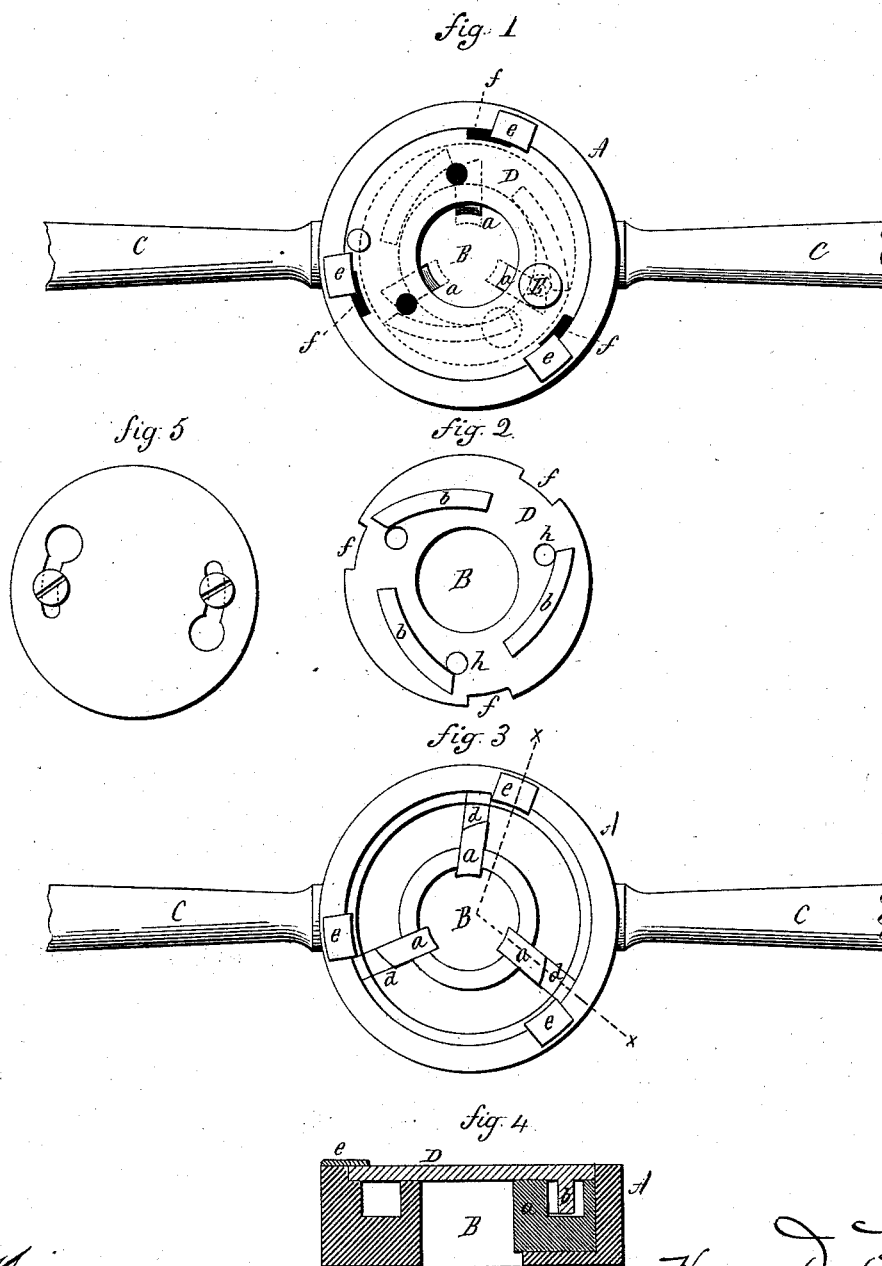


H. D. BARNES.
Screw-Plate.

No. 219,379.

Patented Sept. 9, 1879.



Witnesses:
J. H. Chumney.
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UNITED STATES PATENT OFFICE.

HENRY D. BARNES, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN SCREW-PLATES.

Specification forming part of Letters Patent No. **219,379**, dated September 9, 1879; application filed May 26, 1879.

To all whom it may concern:

Be it known that I, HENRY D. BARNES, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Screw-Plates; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a top view; Fig. 2, the cap inverted; Fig. 3, a top view with cap removed; Fig. 4, a section through lines *xx*, Fig. 3. Fig. 5 is a modification of cap shown in Fig. 2.

This invention relates to an improvement in screw-plates, such as used for cutting the thread on screws; and consists in the construction, as hereinafter described, and particularly recited in the claim.

A is the body of the plate, which is made circular in form, with an opening, B, through its center larger than the largest screw to be cut, and is provided with one or more handles, C, as a convenient means of turning the plate. Within the plate the cutting-dies *a* are arranged to slide in a horizontal plane toward or from the center, and each on a line inclined to the radius, one of which may act as a cutter, while the others act as guides, but each having its face cut according to the thread to be produced. Over these dies, and properly inserted, a cap, D, is placed, which prevents any vertical movement of the dies. The under side of this cap is provided with spiral ribs *b*, in number and position corresponding to the dies *a*, and in the upper edge of each of the dies is a corresponding groove, *d*, so that the ribs *b* on the cap lie in the grooves *d* in the dies; hence, by rotating the cap D, the dies will be moved toward or from the

center, because of the inclined or spiral shape of the ribs.

The cap is held in place by lugs *e*, extending over its surface, and to introduce or remove the cap, notches *f* are made in its edge correspondingly to the lugs *e*, and when the lugs and notches coincide the cap may be removed or replaced, as the case may be, and when the cap is turned beneath the lugs it is held in place.

The construction of the cap so as to be removable is necessary, because the dies are to be changed for the cutting of different threads.

The cap is provided with a knob, E, for conveniently turning it; or perforations *h* may be made for the attachment of a wrench.

To change the dies it is only necessary to remove the cap and replace it when the required dies are in place, and this removal or replacing of the cap is produced by a partial rotation of the cap in one direction to free it, and the opposite to secure it.

Instead of the lugs and notches, the cap may have concentric slots with headed screws or studs through them into the body of the cap, and one end of the slots enlarged, so as to pass over the heads, as seen in Fig. 5.

Other means than the spiral or inclined ribs may be employed for moving the dies.

I claim—

A screw-plate consisting of the body A and dies *a*, arranged to slide therein, and a rotating cap, D, to hold the said dies in place or permit them to be removed by a partial rotation of said cap, substantially as described.

HENRY D. BARNES.

Witnesses:

JOHN E. EARLE,
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