

W. HUTCHESON.
SCREW CUTTING TOOL.

Patented May 24, 1892.

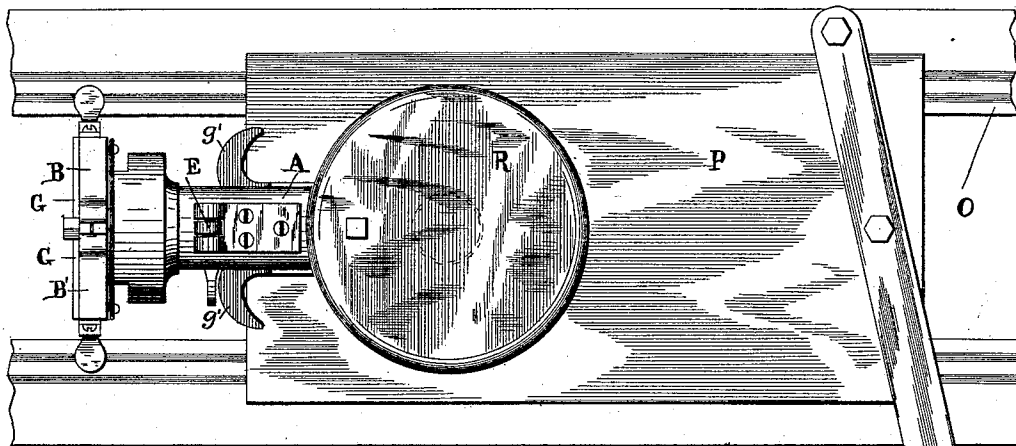


Fig. 1 -

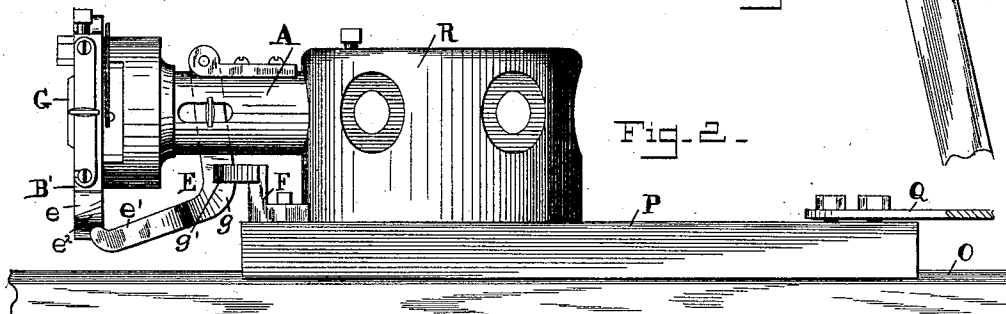


Fig. 2.

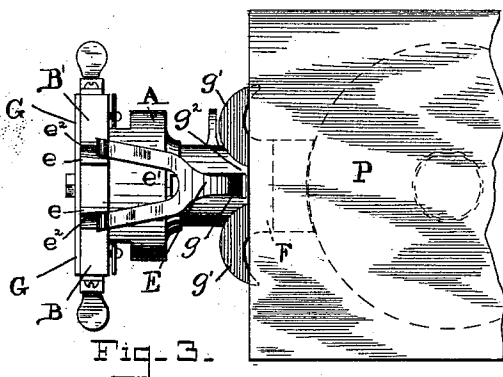


Fig-3.

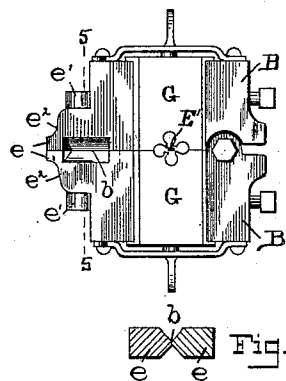


Fig. 4.

Fig. 5.

Witnesses:

Otto H. Ehlers.
Frank Powers

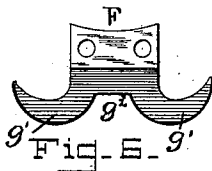


Fig. E-9

Inventory:

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UNITED STATES PATENT OFFICE.

WILLIAM HUTCHESON, OF BALTIMORE, MARYLAND.

SCREW-CUTTING TOOL.

SPECIFICATION forming part of Letters Patent No. 475,564, dated May 24, 1892.

Application filed November 18, 1891. Serial No. 412,279. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HUTCHESON, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Screw-Cutting Tools, of which the following is a specification.

This invention is for an improvement on the screw-cutting tool shown and described in Letters Patent No. 453,811 granted to me June 9, 1891.

The object of the invention is to provide means for automatically closing the die-carrying jaws after they have been released.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a plan view of a portion of a screw-making machine provided with my improvements; Fig. 2, a side view of the same, showing the die-carrying jaws of the screw-cutter open; Fig. 3, a bottom view, also showing said jaws open. Fig. 4 is a face view of the screw-cutting tool; Fig. 5, a cross-section on the line 5 5, and Fig. 6 a detail view of a double-cam device for closing the jaws of the threading-tool.

The letter O designates the slideway of the machine, and P a head or bed-piece fitting the same. This head carries a revoluble turret R, which holds the screw-cutting tools in radial position.

The tool for cutting the threads is constructed substantially as shown in my patent above referred to. A designates the hollow stock; B B', the spring-jaws which carry the cutting-dies G and have extensions *e*; E, the curved lever with the forked end *e'* to embrace the said extensions *e* and thereby hold the jaws together, and F' the trigger which releases the said lever and jaws. By lengthening the fork *e'* and beveling off the extensions *e* on the outer side, as shown at *e*², the jaws may open without said fork being altogether disengaged from them. (See Fig. 3.)

The purpose of this is to facilitate closing the jaws by the action of the forked lever and to hold the jaws more firmly when open.

The threading-tool projects beyond the bed-piece or head O, and its lever E is on the under side with the curve or bend *g* in proximity to said bed-piece. On the upper side

of the latter and at the edge of the same is secured a block F, which has an outward-projecting part comprising two cams *g'* with a depression or recess *g*² between them. This cam-block is centrally located, so that when the threading-tool is in its operative position, as shown in Fig. 1, the bent or curved lever is directly in front of the recess or depression *g*². When the lever is thrown back by the trigger F' to release the jaws it enters said recess, as represented in Figs. 2 and 3. Now upon revolving the turret in either direction one or the other of the stationary cams *g'* will act on the lever—i. e., the part *g* of the lever will ride over the outward-projecting cam-surface of the stationary block F, which will cause said lever to be pushed outward and its forked end to slide over the beveled surface *e*² of the jaw extension *e* and draw the jaws close together again, as in Fig. 4. The tool is now again ready for use.

I preferably mount the tool with the jaws opening downward, so that the cuttings or turnings will fall out, and to prevent such turnings from sticking on the abutting faces of the jaws and interfering with the tight closing of the same I bevel or chamfer the said jaws on each side where they abut, so as to leave only thin meeting edges *b* and no surfaces on which the turnings may lodge.

The construction and operation of the screw cutting or threading tool have been fully set forth in my prior patent, and hence a detailed description of the same has here been omitted.

The letter Q designates a lever for moving the head P on the slideway.

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

1. In a screw-making machine, the combination of a revoluble turret, a thread-cutting tool thereon comprising spring-jaws carrying the cutting-dies, and means for holding and releasing said jaws, and a stationary cam to automatically close the jaws, substantially as described.

2. In a screw-making machine, the combination of a revoluble turret, a thread-cutting tool thereon comprising spring-jaws carrying the cutting-dies, a lever having a forked end

to hold said jaws together, and means for releasing said lever and jaws, and a cam to engage said lever and thereby close the jaws upon the turning of the turret.

5 3. In a screw-making machine, the combination of a bed-piece, a revoluble turret thereon, a thread-cutting tool carried by said turret and comprising spring-jaws holding
10 together said jaws, and means to release said lever and jaws, and a block on said bed-piece comprising two cams with a recess between them to receive the said lever, as set forth.

15 4. In a screw-making machine, the combination of a bed-piece, a revoluble turret thereon, a thread-cutting tool carried by said turret and comprising spring-jaws holding cutting-dies, a bent or curved lever having a
20 forked end to engage and hold together said jaws, and means to release said lever and jaws, and a block on said bed-piece comprising two cams with a recess between them to receive the said lever, as set forth.

25 5. In a screw-making machine, the combination of a revoluble turret, a thread-cutting

tool projecting radially therefrom, said tool comprising jaws which carry the cutting-dies and a holder which closes the jaws and holds them closed and is movable to release the
30 jaws, and means which act on said jaw-holder when the turret is turned, substantially as and for the purpose described.

6. In a screw-making machine, the combination of a slideway, a head or bed-piece
35 thereon, a revoluble turret carried by said head, a thread-cutting tool projecting radially from said turret, said tool comprising jaws which carry the cutting-dies, and a holder which closes the jaws and holds them closed
40 and is movable to release the jaws, and a cam on the head or bed-piece which acts on said jaw-holder when the turret is turned, in the manner and for the purpose substantially as described.

In testimony whereof I affix my signature in
45 the presence of two witnesses.

WILLIAM HUTCHESON.

Witnesses:

JNO. T. MADDOX,
FRANK P. DAVIS.