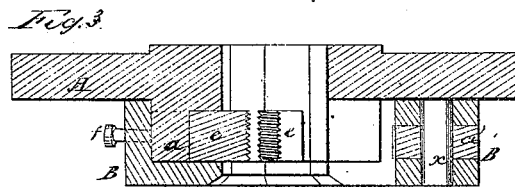
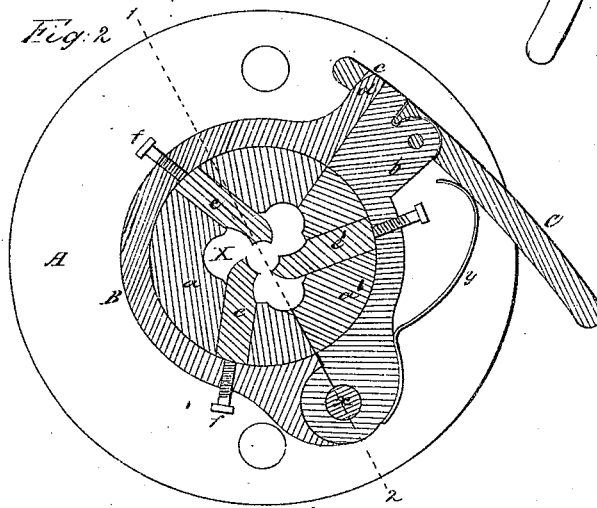
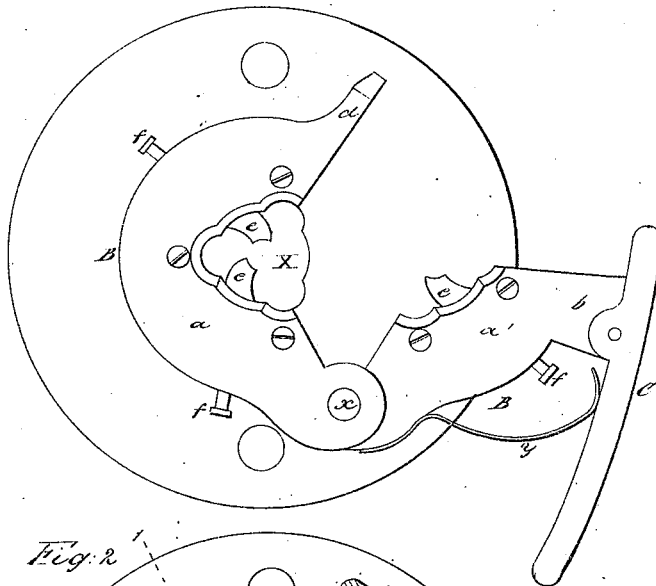


F. H. Higgins.

Die for Cutting Screws.

N^o 52, 247.

Patented Jan. 23, 1866.



Witnesses
Wm. Albert Luce
John Tucker

Inventor
F. H. Higgins
By his Atty
H. Howson

UNITED STATES PATENT OFFICE.

FRANCIS H. HIGGINS, OF BORDENTOWN, NEW JERSEY, ASSIGNOR TO HIMSELF AND ALFRED THOMSON, OF SAME PLACE.

IMPROVED SCREW-CUTTING CHUCK.

Specification forming part of Letters Patent No. 52,247, dated January 23, 1866.

To all whom it may concern:

Be it known that I, F. H. HIGGINS, of Bordentown, New Jersey, have invented an Improved Cutter-Head for Screw-Cutting Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improved cutting-head consists of two sections, each carrying a cutter or cutters, one section being hinged to the other, and the whole being constructed and combined with a spring-locking lever or its equivalent, substantially as described hereinafter, so that the delay in withdrawing the screwed bolt from the cutting-heads of ordinary screw-cutting machines may be avoided.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side view of sufficient of the cutter-head of a screw-cutting machine to show my improvement; Fig. 2, a sectional view of the same, showing the parts in a position differing from that exhibited in Fig. 1; Fig. 3, a transverse section on the line 1 2, Fig. 2.

Similar letters refer to similar parts throughout the several views.

A is a circular plate, which is bolted to the frame of the screw-cutting machine in such a position that the center of the plate shall coincide with the axis of the usual revolving bolt-holder.

In the center of the plate A is a projection, B, which consists of two portions or sections, *a* and *a'*, the section *a*, which forms about two-thirds of the projection, being secured to the plate A, while the section *a'* is hinged at *x* to the section *a*.

A central opening, X, of the form illustrated in the drawings, is continued through the plate A and projection B.

To a projecting portion, *b*, of the section *a'* is hinged a lever, C, in one end of which is an opening, *e*, and into the latter (when the sec-

tions *a a'* are in contact, as shown in Fig. 2) projects a lug, *d*, on the section *a*, so that the two sections remain locked together until the lever is depressed and free from contact with the lug *d*.

In the section *a* are recesses adapted for the reception of the usual thread-cutters *e e*, the ends of which project into the central opening, X, and which are rendered adjustable by set-screws *f f*.

A spring, *y*, secured to the section *a'* and bearing against the lever C, serves to maintain the same in its elevated position. A cutter, *e'*, is fitted in a similar manner in the section *a'*.

In the ordinary bolt-cutting machines all the cutters are secured firmly to the plate A, and their position on the same is only changed when they have to be removed, sharpened, or replaced by others, the blank-bolt being rotated and fed slowly toward the cutters, and passing between the latter until a screw-thread of the required length is cut; the bolt is then withdrawn by imparting to it a rotary motion in the opposite direction, the cutters acting as a nut, from which the bolt must be gradually unscrewed. It will be apparent that much time is lost in withdrawing the bolt in this manner.

In the device above described the parts are brought to the position shown in Fig. 2, and the bolt is fed forward and the thread is cut in the usual manner to the desired length, after which the lever C is depressed until it is free from the lug *d*, when the section *a'* of the projection B will at once fall to the position illustrated in Fig. 1, leaving the bolt free from the control of the cutters and at liberty to be quickly withdrawn, together with the bolt-holder, by any of the appliances employed in ordinary screw-cutting machines. After this another blank-bolt is applied to the holder and the section *a'* of the projection B locked to the section *a* by the lever C, as before.

It will be evident that by the use of the above-described device the operation of cutting threads on bolts is facilitated.

I claim as my invention and desire to secure by Letters Patent—

the within-described cutter-head, composed of the section *a* with its cutters, and the section *a'* with its cutters, the latter being hinged to the former, and the whole being constructed in combination with the locking-spring lever substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS H. HIGGINS.

Witnesses:

G. S. CANNON,
EUGENE AYERS.