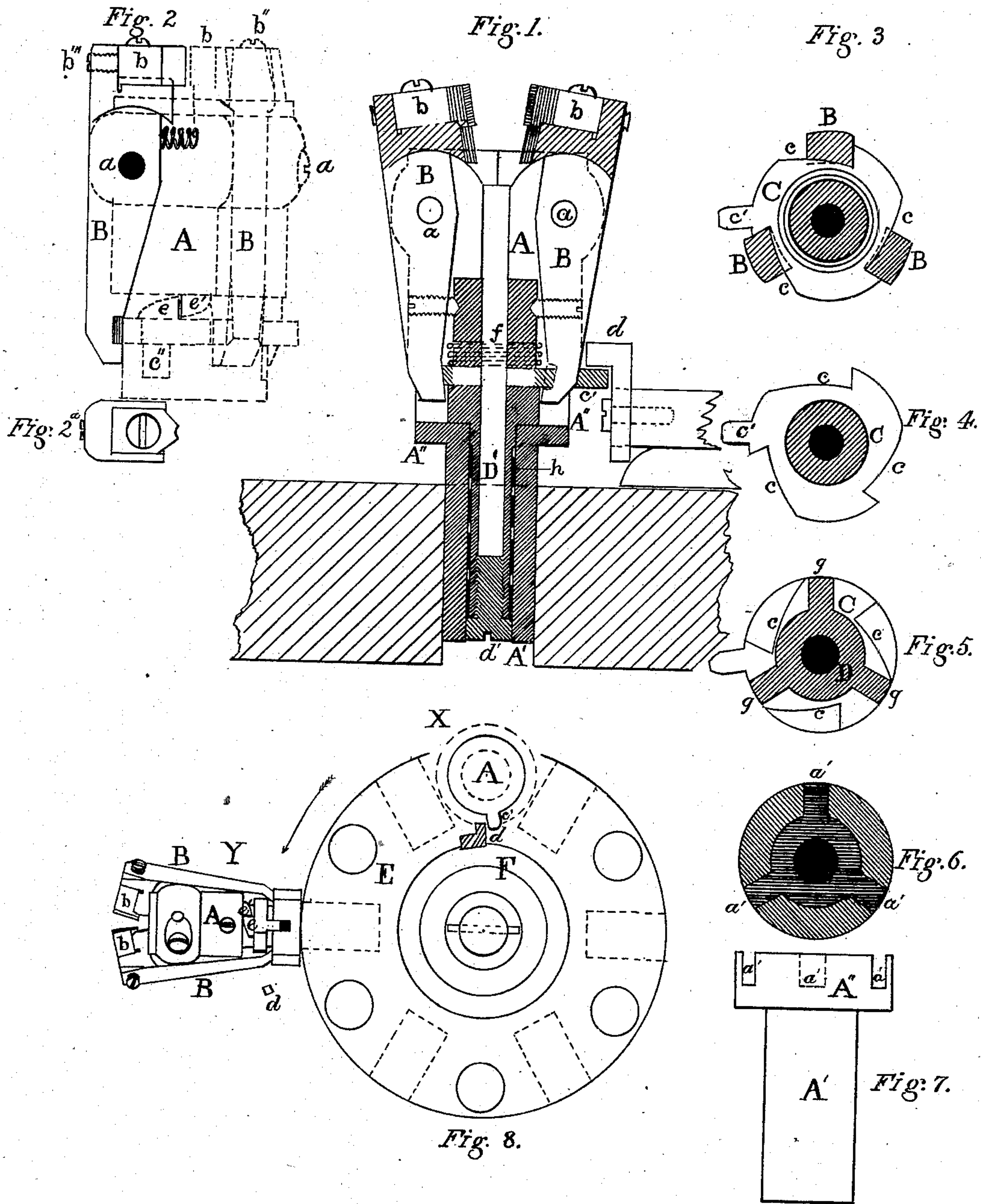


E. WILDER & L. M. NUTTING.
Machine for Cutting Screws.

No. 238,191.

Patented Feb. 22, 1881.



Witnesses
C. M. Connell
W. R. Singleton

Inventor
Elihu Wilder and
Luther M. Nutting
By Blanchard & Singleton

UNITED STATES PATENT OFFICE.

ELIHU WILDER AND LUTHER M. NUTTING, OF MANCHESTER, N. H.

MACHINE FOR CUTTING SCREWS.

SPECIFICATION forming part of Letters Patent No. 238,191, dated February 22, 1881.

Application filed June 2, 1877.

To all whom it may concern:

Be it known that we, ELIHU WILDER and LUTHER M. NUTTING, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Automatic Screw-Cutting Machines; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a longitudinal section of an automatic die-holder. Fig. 2 represents a lever holding one section of the die in solid lines, in connection with the other parts in broken lines. Fig. 2^a is a top view of one section of the die held in the end of a lever. Figs. 3, 4, 5, 6, and 7 are details of several parts of the holder. Fig. 8 is a plan view of a monitor, showing the holder in vertical and horizontal positions, as may be required.

This invention relates to improvements in screw-cutting machines, by which the dies are automatically opened and closed, to obviate the necessity of reversing the movement of the wire for its withdrawal when the thread has been completed, as will be hereinafter more fully described.

A is the stock or frame in which the working parts are held and secured.

A' is a hollow shank or sleeve, which is inserted in the monitor or other carrying device.

A'' is a flange of A', the purpose of which will be described hereinafter.

B B B are three levers, pivoted at *a* in the stock A. At the outer ends of these levers are dies *b b b*, which are secured in dovetailed grooves and held by set-screws *b'' b'' b''*, and adjusted by end screws, *b'''*.

C is a cam-plate, having three inclined surfaces, *c c c*, to operate upon the ends of levers B B B for the purpose of closing the die.

On the one side of cam C is cog-tooth *c'*, which is designed to engage with a stationary stop, *d*, upon a shaft in the monitor, or at any other suitable stationary point, whereby, as the holder is moved past the same, the cam C

is caused to rotate, and by the inclined surfaces of the cam cause the die *b b b* to be closed.

On the upper side of C is a projecting tooth, *e*, which is designed to engage with a counter-tooth, *e'*, which is attached to the stock A, and which sustains the recoil of cam C as the spring forces it back.

Above the cam C, and between it and the stock A, is a coiled spring, *f*, which causes the cam to return to the stop *e'*.

D is a stem or part of stock or frame A, having projections *g g g*, to fit into notches *a' a' a'* in the lower part, D, extending through the sleeve A', and is secured to it by means of a screw, *d'*, the head of which bears upon a spring, *h*, between the stem D' and the inside of the sleeve A', so that the parts are permitted to move longitudinally.

E is a circular frame, commonly known in the art as a "monitor" to a screw-machine, which has various orifices for the reception of tools to operate successively upon the blanks. Said monitor has a reciprocating movement upon a table or frame, to carry its tools to and from the wire or blank to be operated upon. The distance of travel of the monitor is regulated by stops, so that when it reaches a stop the dies cutting the thread upon the wire continue to travel forward until the ends of the levers B are released by sliding beyond the surface of the sleeve A', as seen in Figs. 1 and 8, and thereby opening the dies to release the wire and permit the monitor to withdraw from the stop without reversing the motion of the wire.

In Fig. 8 the stock A is represented at X in a vertical position, as in Fig. 1, and at Y in a horizontal position, and when in the latter position the stop *d* must be placed at some convenient stationary point, so that as the revolution of the monitor in direction of the arrow brings the stock over the same it will encounter the projecting cog *c'* and close the dies, as seen in Fig. 2. When in the position as at X the same movement of the monitor will carry the stock A around, when the cog *c'* will encounter the stop *d*, which is upon the head of the stationary shaft F, and is represented as having passed the cog *c'* on the stock A.

Having thus described our invention, what

we claim, and desire to secure by Letters Patent, is—

1. The combination of the cam C, levers B, sleeve A', and spring *h*, whereby the levers
5 are opened.

2. The combination of the stem D', spring *h*, sleeve A', screw *d'*, and levers B, holding the dies *b*, substantially as and for the purpose described.

10 3. In a screw-cutting machine, the combination of the stock A, levers B, carrying dies *b*, cam C, sleeve A', stem D', monitor E, and

shaft F, with the stop *d*, substantially as and for the purpose described.

In testimony that we claim the foregoing as
our own we affix our signatures in presence of
two witnesses.

ELIHU WILDER.

LUTHER M. NUTTING.

Witnesses:

WM. R. SINGLETON,

C. M. CONNELL,

HERBERT M. MOODY,

JAMES E. DODGE.