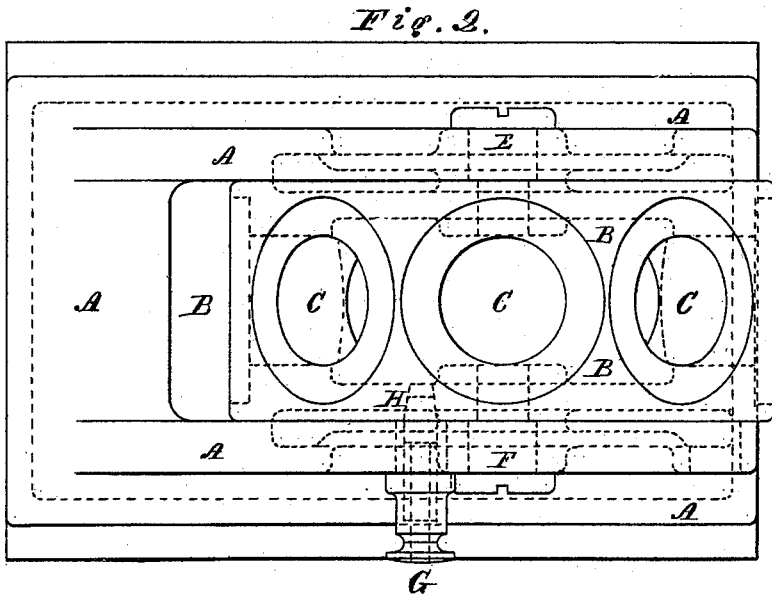
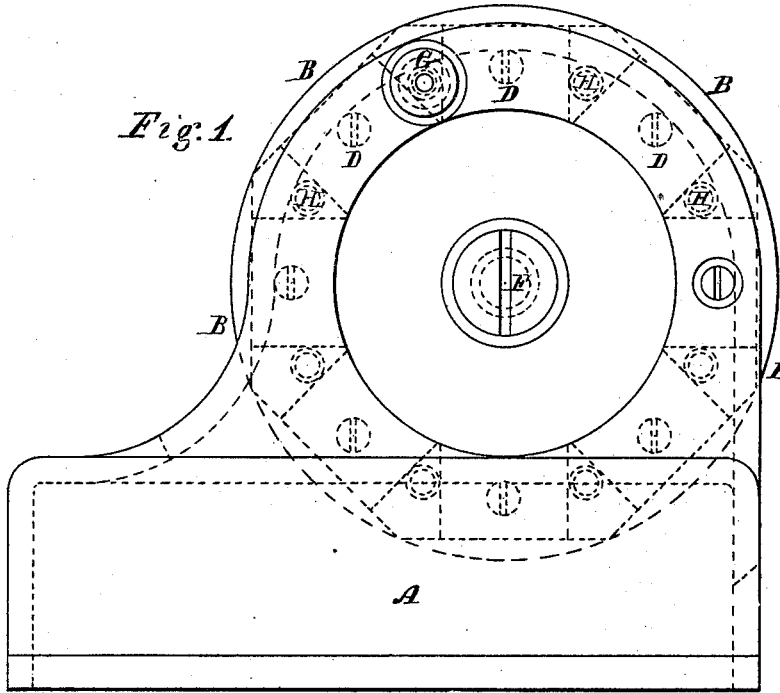


J. J. GRANT.

SCREW-CUTTING DIE HOLDER.

No. 170,949.

Patented Dec. 14, 1875.



Witnesses.

Frederic R. Curtis
John S. Peters

Inventor.

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by Theo. G. Ellis attorney

UNITED STATES PATENT OFFICE.

JOHN J. GRANT, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PRATT
& WHITNEY COMPANY, OF SAME PLACE.

IMPROVEMENT IN SCREW-CUTTING-DIE HOLDERS.

Specification forming part of Letters Patent No. **170,949**, dated December 14, 1875; application filed
November 15, 1875.

To all whom it may concern:

Be it known that I, JOHN J. GRANT, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Screw-Cutting Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to such machines as are used for cutting screw-threads upon bolts by means of suitable dies fixed in one part of the machine, while the bar upon which the thread is to be cut is rotated by suitable mechanism, so as to pass through the die. The bolt is usually turned by a mechanism similar to the head of a lathe, while a number of dies are held in sockets around the circumference of a rotating disk or barrel, so as to cut different threads in the same machine by placing the proper die opposite the end of the bolt. These rotating disks have been heretofore constructed with an axis passing through their centers, and resting in the frame of the machine, or a sliding block, which advanced as the thread was cut. This axis prevents the bolt from passing beyond it, and limits the length of thread that can be cut.

My invention consists in suspending the rotating barrel holding the several dies upon trunnions, so that the bolt can pass entirely through it when desired, and cut a thread of any required length.

In the accompanying drawing, Figure 1 is a side view of my improved mechanism, and Fig. 2 is a top view of the same.

A is the head or slide which carries the rotating die-holder B. This die-holder B is a short hollow cylinder, with circular openings C around its circumference, in which the

screw-cutting dies are placed and secured by set-screws D. There are an even number of these openings C, so that one is always diametrically opposite to another, to permit of passing a bar or bolt entirely through the barrel B. E and F are trunnions, forming the axis of the barrel B, upon which it rotates. In the drawing they are represented as attached to the box A, with journal-bearings in the sides of the barrel B; but they may form part of B, and rest in bearings in A. In either case the central part of the cylinder B is left open, so that a bar can be passed through one of the apertures C, and out through the opposite one across the center of B.

This construction permits of any length of screw being cut upon a bar or bolt. One end of a bar, or the head of a bolt, is secured in the jaws of the head in the usual manner, and as it revolves the die is pressed up to the other end. As the screw is cut the end of the bolt passes into the barrel B, and, if a long screw is required, out through the opposite opening to any length desired.

G is a locking-bolt attached to the box or frame A, which is actuated by a spring, and is pressed into one of the holes H, when the dies are in a proper position to operate. In this case two of the openings C are horizontal, and in line with the axis of B; but, as the trunnions E F do not cross the interior part of B, the bolt can pass horizontally through it, in the manner described.

What I claim as my invention is—

The revolving die-holder B, when provided with trunnions E F, which leave the center unobstructed, and an even number of openings, C, for holding the dies placed diametrically opposite each other on the barrel, substantially as and for the purpose herein described.

JOHN J. GRANT.

Witnesses:

THEO. G. ELLIS,
WENDELL R. CURTIS.