

J. J. GRANT.  
SCREW-CUTTING DIES.

No. 173,780.

Patented Feb. 22, 1876.

Fig. 1.

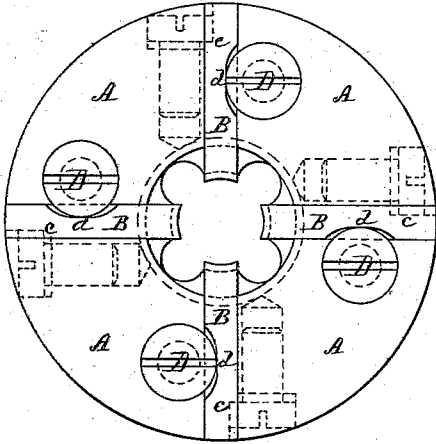


Fig. 2.

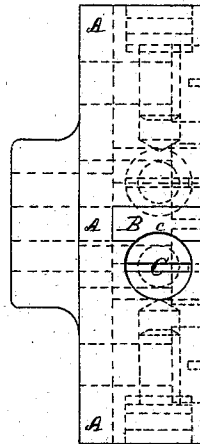


Fig. 3.

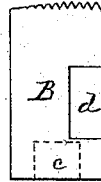


Fig. 4.



Fig. 5.

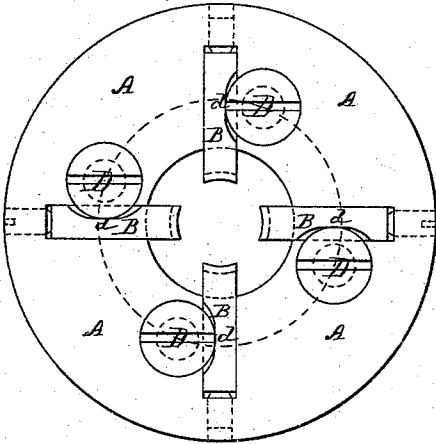
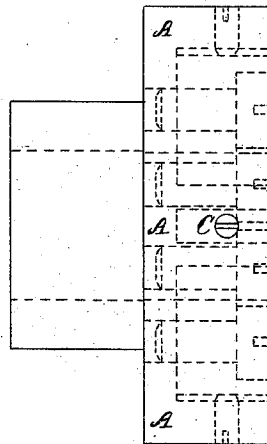


Fig. 6.



Witnesses.

Wendell R. Curtis  
John C. Peters

Inventor.

John J. Grant  
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 DIES.

Specification forming part of Letters Patent No. **173,780**, dated February 22, 1876; application filed December 2, 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 Dies; 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 dies, such as are used in suitable die-stocks or machines, for the purpose of cutting screw-threads upon metallic bars.

The object of my invention is to provide an adjustable die, which can be varied to suit a small difference of diameter in the screw, or to allow for the wear occasioned by use.

In the accompanying drawing, Figure 1 is a top view of my improved die, and Fig. 2 is a side view of the same. Fig. 3 is a side view of one of the chasers or cutters, and Fig. 4 is an end view of the same. Fig. 5 is a top view of another form of my invention, and Fig. 6 is a side view of the same.

A is an annular collet. B B B B are cutters or chasers, fitting in grooves upon the upper side of A sufficiently deep to admit of the upper side of the cutter being flush with the top of the collet A. These cutters and grooves may be of a taper or dovetailed section, as well as rectangular, as shown in the drawing. The inner end of the cutter B is furnished with the usual teeth or cutting-edges, forming part of a screw-thread, as shown in Fig. 4. C C, &c., are adjusting-screws, for pressing the cutters inward when desired.

In Figs. 1 and 2 the head of the screw acts upon a shoulder, *c*, and in Figs. 5 and 6 the point of the screw acts directly upon the rear end of the chaser or cutter.

D D, &c., are clamp-screws for holding the cutters firmly in place when properly adjusted by means of the screws C. The head of the screw D laps over the cutter, and rests in a notch, *d*, which is elongated in the direction of the length of B, to allow of the requisite longitudinal motion.

In order to adjust the cutters, the screws D are loosened, and the screws C are turned so as to bring the cutting-edges to the desired position. The screws D are then clamped to hold them in place.

In place of the collet A, my improved cutters, with their adjusting and clamping screws, can be arranged, if desired, in a solid die-stock of any other required form—as, for instance, a square block, and this block may be provided, in the usual manner, with handles for turning.

What I claim as my invention is—

1. A screw-cutting die consisting of the cutters B, moving longitudinally in grooves in the collet A, the adjusting-screws C, and the clamp-screws D, constructed and arranged substantially as herein described.

2. The combination of the cutters B, arranged radially in a die-stock, and moving in suitable grooves, with adjusting-screws C and clamping-screws D, substantially as described.

JOHN J. GRANT.

Witnesses:

THEO. G. ELLIS,  
WENDELL R. CURTIS.