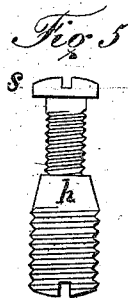
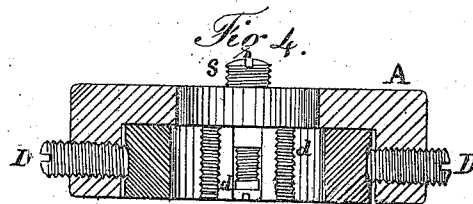
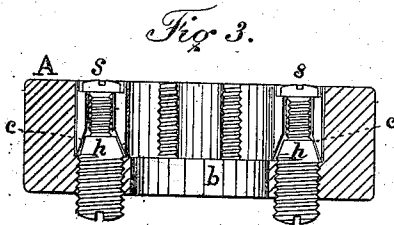
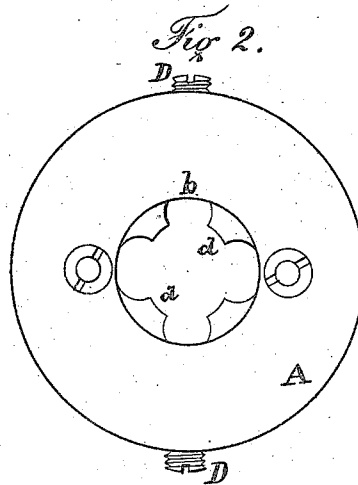
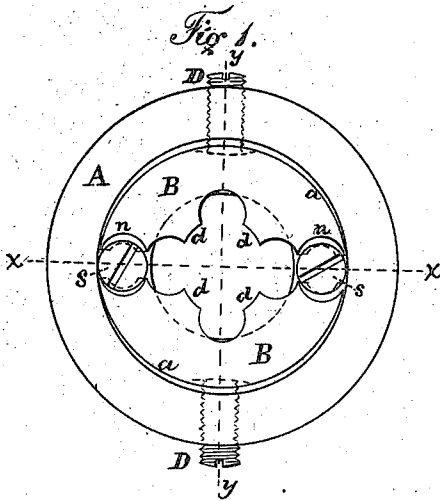


J. J. GRANT.

Dies for Cutting Screw-Threads.

No. 140,133.

Patented June 24, 1873.



Witnesses.

Wm. H. Young

H. A. Daniel

Inventor.

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Charles S. Whitman
Attorney.*

UNITED STATES PATENT OFFICE.

JOHN J. GRANT, OF GREENFIELD, MASSACHUSETTS.

IMPROVEMENT IN DIES FOR CUTTING SCREW-THREADS.

Specification forming part of Letters Patent No. 140,133, dated June 24, 1873; application filed April 18, 1873.

To all whom it may concern:

Be it known that I, JOHN J. GRANT, of Greenfield, county of Franklin and State of Massachusetts, have invented certain Improvements in Dies for Screw-Cutting.

The following description, taken in connection with the accompanying plate of drawings hereinafter referred to, forms a full and exact specification, wherein are set forth the nature and principles of the invention, by which the same may be distinguished from others of a similar class, together with such parts thereof as are claimed as new and are desired to be secured by Letters Patent of the United States.

This invention consists in the arrangement, within the die stock or holder and between the dies, of cones and screws for adjusting and setting out the dies, such screws operating in combination with external set-screws to obtain a perfect and secure adjustment of the dies.

In the accompanying drawing, which illustrates the invention, Figure 1 is a plan of the front side of the die. Fig. 2 is a plan of the back side of the die. Fig. 3 is a transverse section of the same taken at the dotted line *x x* in Fig. 1. Fig. 4 is another transverse section taken in the line *y y* in Fig. 1. Fig. 5 illustrates the screw, upon the top of which is cut the frustum of a cone as arranged with the screw in the front of the die.

In the drawing referred to, A designates the die stock or holder having in its face a cavity, *a*, represented of circular form, for the reception of the dies B B. In the bottom of said recess is a hole, *b*, that extends through the stock to permit the passage of the cut screw from the die. The dies B B are of a size and form externally to fit easily into the cavity *a*, and are provided with recesses *c c* and *n n* on their opposite and adjacent faces at the sides of the cutting portions *d d*. The said recesses *c c* in the back part of the die are of such a shape as to receive the conical frustums *h h*,

while the recesses *n n* are of such a shape as to receive the outer screws *s s*. The conical frustums are adjusted in position by means of the screws which are formed upon their bases and which pass through internal screws in the stock. The outer screws *s s* work in internal screws cut in the inner screws, as shown clearly in the drawing, in such a manner as to clamp the die firmly down. D D are screws that form the external adjustment. They screw into the sides of the stock A and bear against the middle portions of the exterior or circular portions of the dies B B.

To adjust the dies to enable screws of different depths and sizes to be cut, the screws which operate the conical frustums *h h* are screwed either further into the stock to separate the dies, or from the stock to allow the set-screws D D to force them toward each other. The set-screws D D are screwed up to hold the dies in any position to which they are adjusted, and the outer screws *s s* clamp the dies down firmly to the bottom of the cavity in the stock.

Having thus described the construction and operation of my invention, I claim and desire to secure by Letters Patent—

1. The combination of the conical frustums upon which are formed screws working in internal screws cut in the stock, the outer screws working in internal threads cut in the said conical frustums, and the dies provided with recesses, all operating together as and for the purposes described.

2. The combination of the interposed conical frustums, and outer screws working therein, with the stock and dies and set-screws, when operating together as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 10th day of April, 1873.

JOHN J. GRANT. [L. S.]

Witnesses:

L. L. LUEY,
WENDELL P. DAVIS.