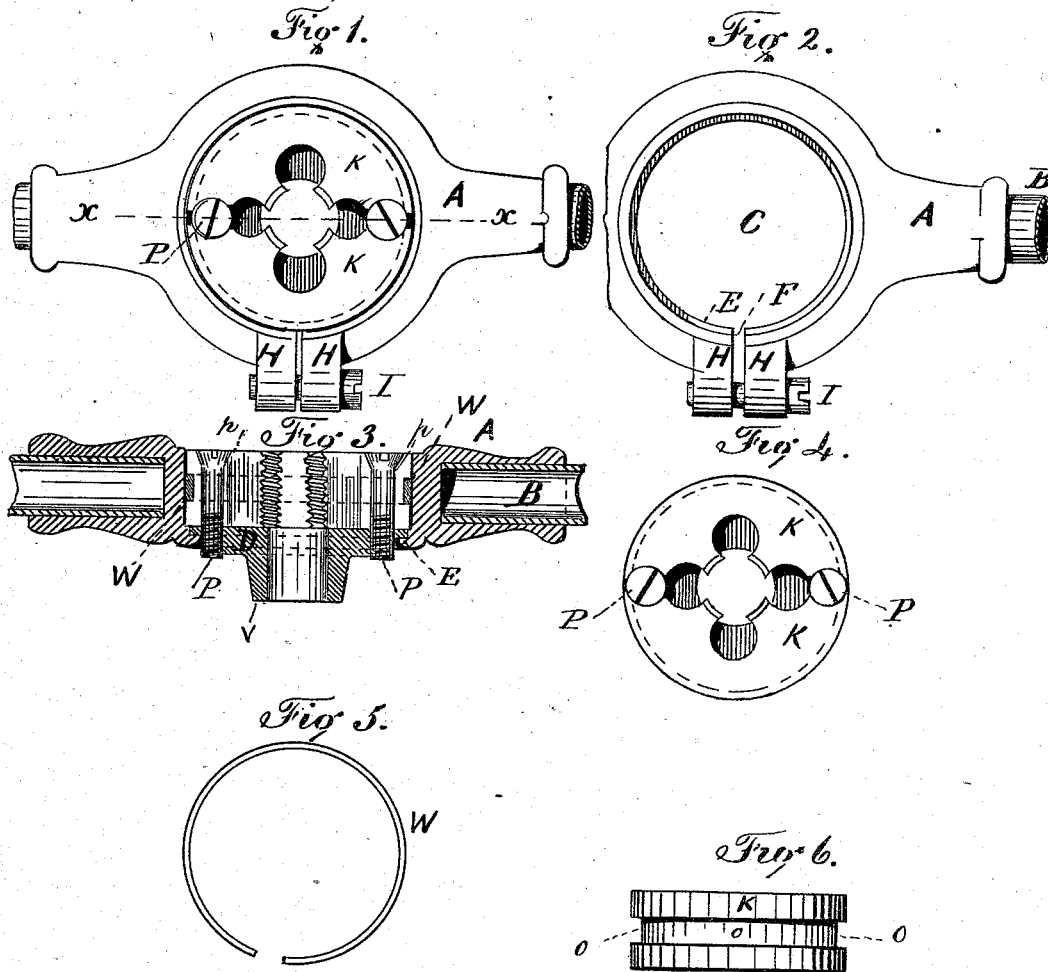


F. E. WELLS.  
Screw-Threading Die.

No. 162,983.

Patented May 4, 1875.



Witnesses  
Benj C. Pole  
Albin H. Parris

Inventor  
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C. S. Whitman  
att'y

# UNITED STATES PATENT OFFICE.

FREDERIC E. WELLS, OF GREENFIELD, MASS., ASSIGNOR TO THE WILEY & RUSSELL MANUFACTURING COMPANY, OF SAME PLACE.

## IMPROVEMENT IN SCREW-THREADING DIES.

Specification forming part of Letters Patent No. 162,983, dated May 4, 1875; application filed December 21, 1874.

*To all whom it may concern:*

Be it known that I, FREDERIC E. WELLS, of Greenfield, county of Franklin and State of Massachusetts, have invented certain Improvements in Screw-Thread-Cutting Dies.

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.

My invention relates to dies for cutting screw threads and stocks, which are made use of for holding them in position; and the nature of my invention consists in certain novel combinations of parts, hereinafter fully described.

In the accompanying plate of drawings, in which corresponding parts are illustrated by similar letters, Figure 1 is a top view of the dies arranged within the stock. Fig. 2 represents the stock or plate with the dies removed therefrom. Fig. 3 is a vertical section taken on the line *x x*, Fig. 1. Fig. 4 illustrates the dies removed from the stock. Fig. 5 is a detached view of the spring. Fig. 6 illustrates the dies with the spring detached therefrom.

In the drawings, A designates the stock, of elastic metal, provided with handles B, and a cylindrical socket or receptacle, C, of suitable size for the reception of the dies. Upon the bottom of the said socket is the flange or rim E, the office of which is to form a support for the said dies. The said stock is divided into two parts or jaws, H H, by the vertical aperture or slit F, which jaws are sprung slightly apart by the force of the elasticity of the metal of which the implement is manufactured. The said dies are secured within the receptacle C by introducing them within the same when the jaws are parted, and then turning the set-screw I, by which the parts are firmly clamped together. When thus secured in position the screw-thread-cutting dies K K are firmly held in place, and the stock and dies act together

upon the bolt to be cut, as if composed of one homogeneous piece of metal. The said dies rest against the circular plate D, which is provided with a projection, V, having an aperture, through which the bolt to be cut is guided to the teeth of the dies.

The dies K K are of a size and form externally to fit accurately into the cavity C, and, except for the recesses *p p*, provided on the opposite or adjacent faces at the sides of the cutting portions for the reception of the taper or conical headed screws P P, they are or may be like the dies in common use for cutting screw-threads. The screws P P have their outer portions or heads made tapering in an inward direction, and they fit within the recesses *p p* in the dies K K, which are of corresponding form, and screw into the said circular plate. The external adjustment of the die is effected by the stock A and spring W, which is fitted in semicircular slots O, cut upon the outer surface of the said dies, in such a manner that the elastic force of the metal of which the spring is composed causes it to press upon the exterior portions of the said dies, and force them toward each other.

To adjust the dies to enable screws of different depths or sizes to be cut, the conical-headed screws P P are screwed either farther into the plate to separate the dies, or from the plate, to allow the spring W to force them toward each other. The spring holds the dies in any position to which they are adjusted by the screws.

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

The interposed taper or taper-headed screws, the dies, the spring, and the circular plate, combined together as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 11th day of December, 1874.

FREDERIC E. WELLS. [L. S.]

Witnesses:

WENDELL T. DAVIS,  
FRANK MCFARLAND.