

J. E. Weaver,

Screw Cutting

No. 104,234.

Patented June 14, 1870.

Fig. 1.

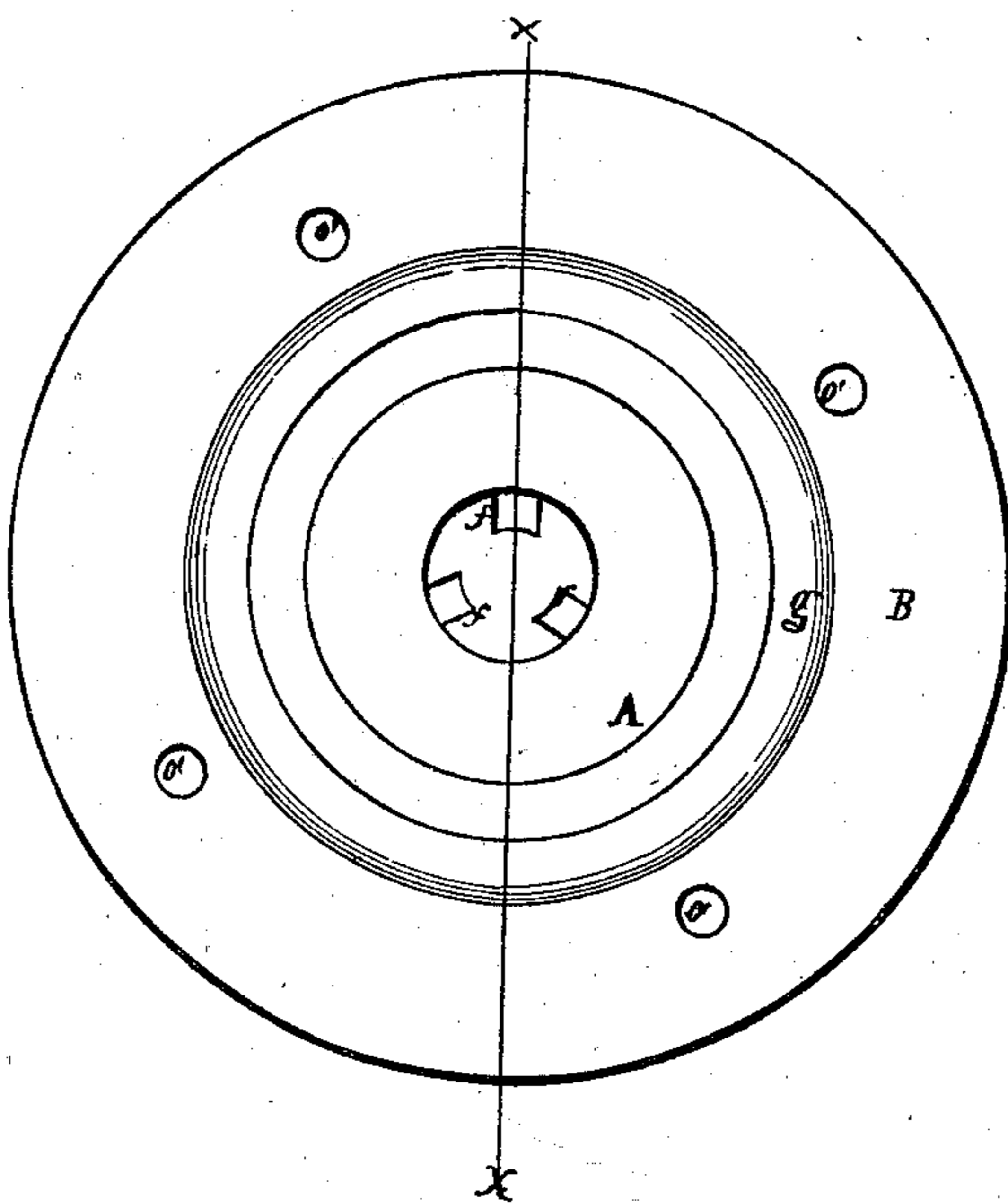
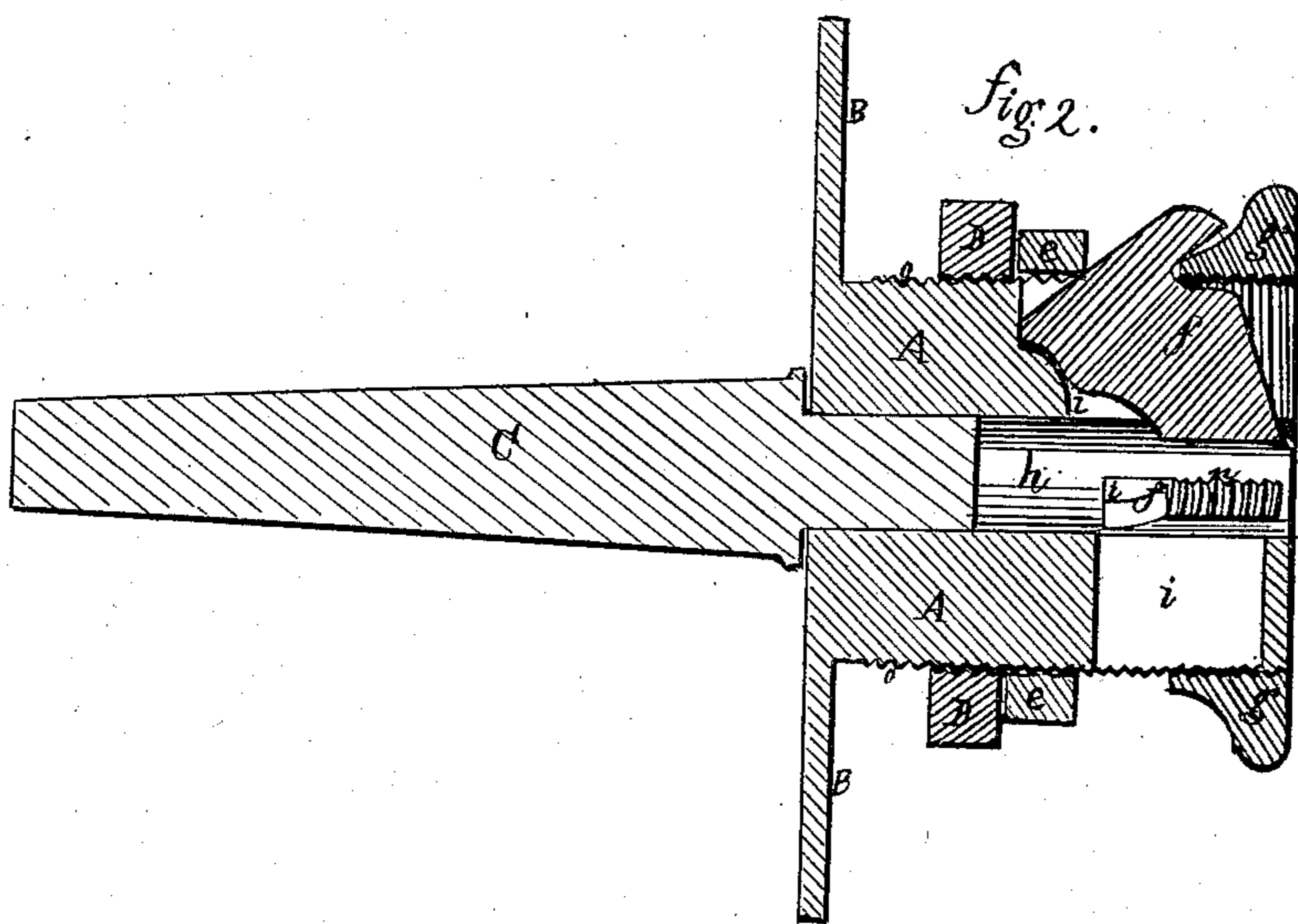


Fig. 2.



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JAMES E. WEAVER, OF TEMPERANCEVILLE, PENNSYLVANIA.

Letters Patent No. 104,234, dated June 14, 1870.

IMPROVED DIE FOR CUTTING SCREW THREADS ON BOLTS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES E. WEAVER, of Temperanceville, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in "Dies for Cutting Screws;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the combination and arrangement of a stock, dies, regulating-nut, clamping-ring and nut, constructed, arranged, combined, and operating in the manner hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification—

Figure 1 is an end view of my improvement for cutting screw-threads on bolts.

Figure 2 is a longitudinal section of the same, cut through at line *x* of fig. 1.

In the drawings—

A represents the stock, which is provided with three openings, marked *i*, for the reception of the dies *f*, and an opening, *h*, for receiving the bolt on which the screw-threads are to be formed. The sides of the dies *f* should fit close to the sides of the openings *i*, so as to prevent any side motion of the dies. The form of the cutting-dies are clearly shown in fig. 2, and provided with ordinary cutters, as shown at *n*.

The stock A is provided with screw-threads *o*, nut D, ring *e*, regulating-nut *g*, flange B, and shank C.

The form and arrangement of the several parts, and the relation that said parts bear to each other, will readily be seen and understood by the skillful mechanic from the foregoing description and by reference to the accompanying drawings.

I will, therefore, proceed to describe the operation of my improvement for cutting screw-threads on bolts, &c.

The shank C is placed in the hollow mandrel of the lathe-head, and the flange B is bolted to the face-plate

of the lathe by bolts placed in the openings *o*. I then adjust the dies *f* to the diameter of the bolt by means of the regulating-nut *g*, which will, by screwing it forward on the stock A, open up the dies *f*, and, by turning it back, allow the dies to close together. Having adjusted the dies through the medium of the regulating-nut *g*, I then secure them firmly by forcing the ring *e* against the back of the dies, by turning the nut D, and thereby clamp them between the ring *e* and regulating-nut *g*, as represented in fig. 2.

The manner of cutting the screw-thread on the bolt will be readily suggested to the skillful mechanic, without further description.

From the foregoing description, and by reference to the accompanying drawings, it will be observed that the dies are arranged for cutting only one size of bolt, but that, by giving to the front and back ends of the dies the same inclined angle, with corresponding inclines in the stock A, the mechanism used for operating them will so move them as to adapt them to cutting screw-threads on bolts of different diameters. As I propose making this arrangement of dies the subject of another application for Letters Patent, I will not further describe them in this specification.

It will also be observed that, by the arrangement of the dies and their working-mechanism, as herein described and represented in the accompanying drawings, my device is well adapted for holding, boring, and turning tools concentric to work to be done in turning or boring-lathes.

I wish it clearly understood that I do not claim, broadly, the use of graduating-dies in a screw-cutting machine.

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention is—

The combination and arrangement of the stock A, dies *f*, nuts *g* and D, and ring *e*, constructed, arranged, and operating substantially as herein described and for the purpose set forth.

JAMES E. WEAVER.

Witnesses:

A. C. JOHNSTON,
GEO. H. THOMAS.