No. 641,258. Patented Jan. 16, 1900.

# J. A. BECHER.

## SCREW CUTTING MACHINE.

(Application filed Sept. 22, 1899.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

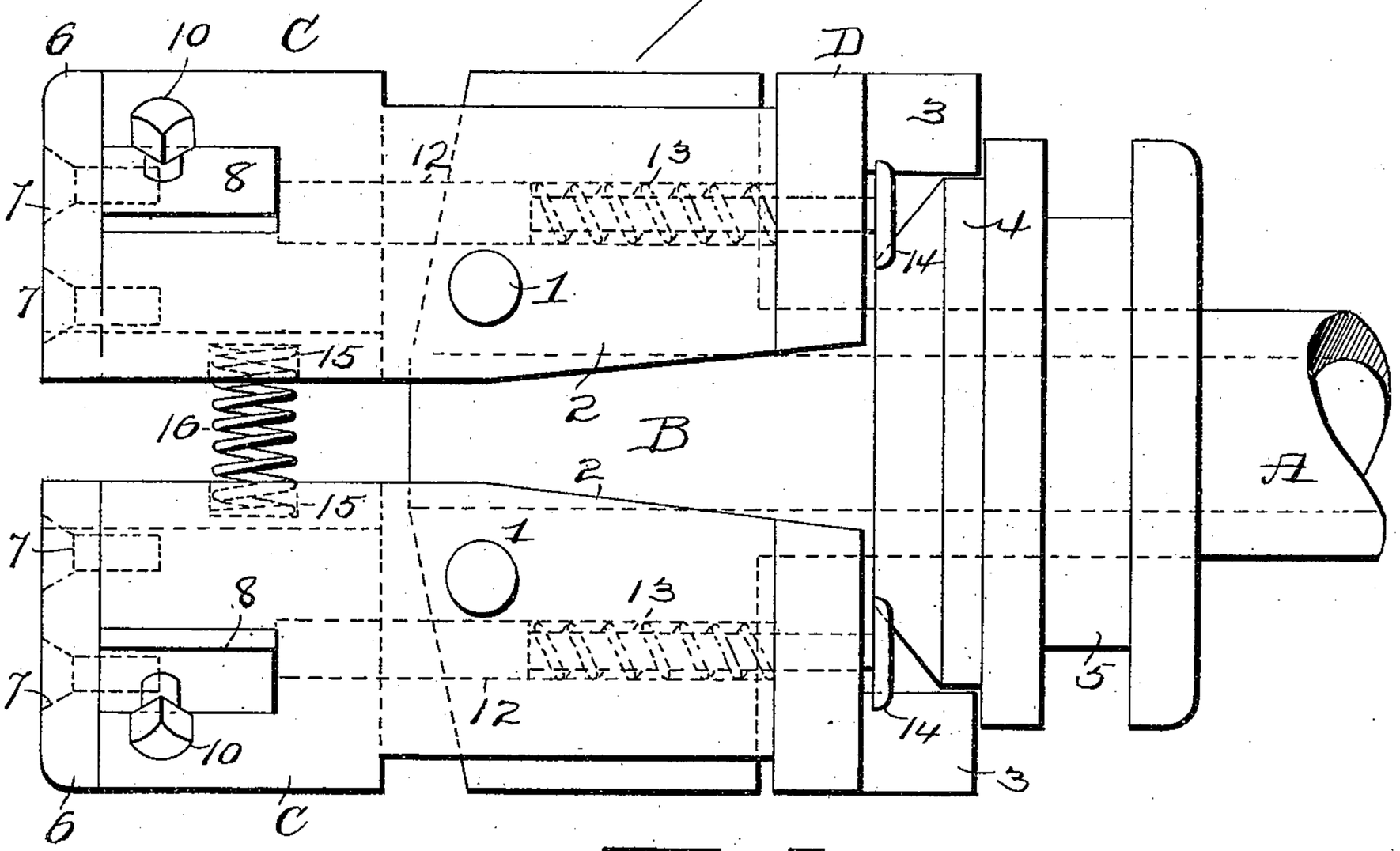


FIG. 2.

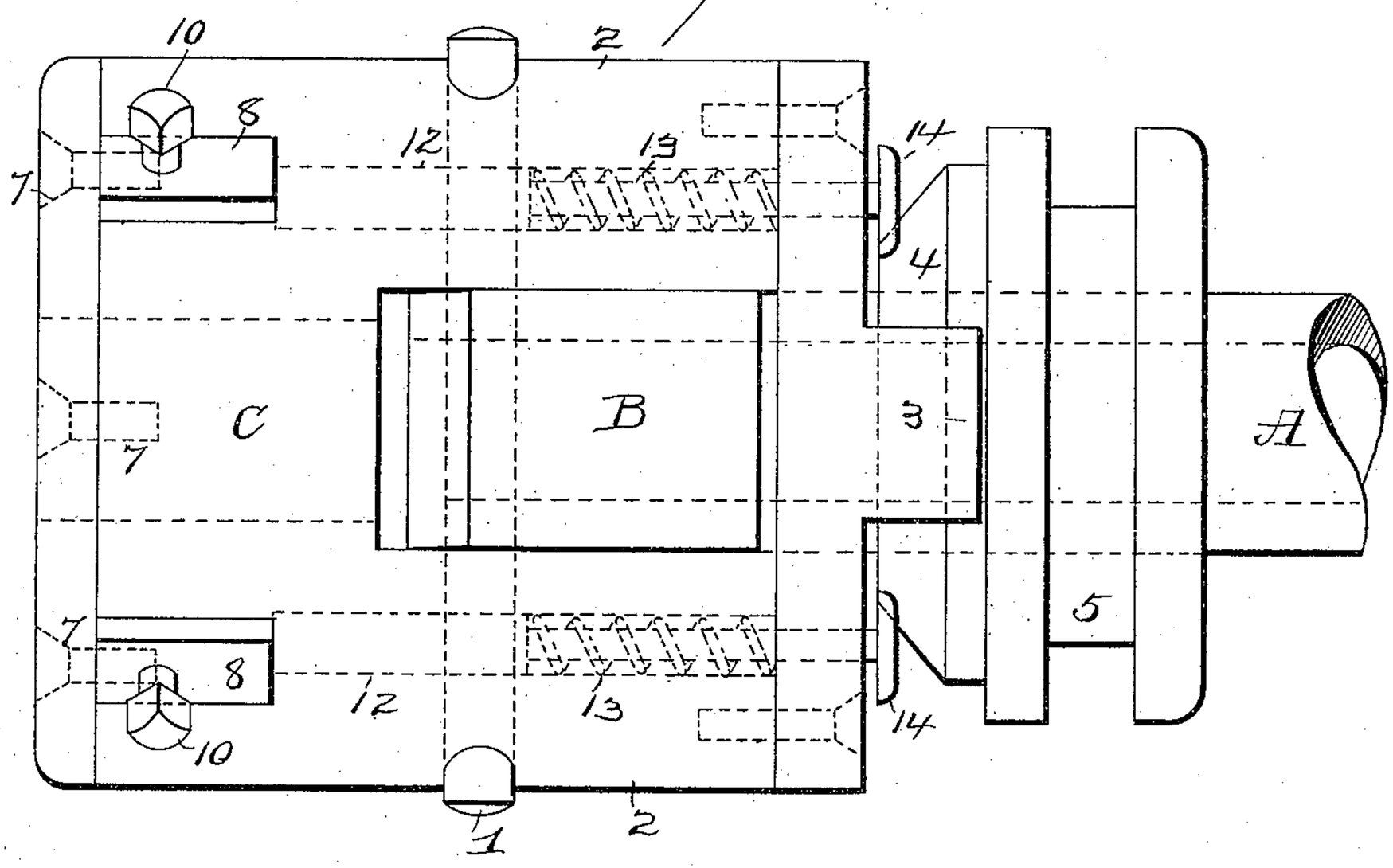


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Fig. 3.

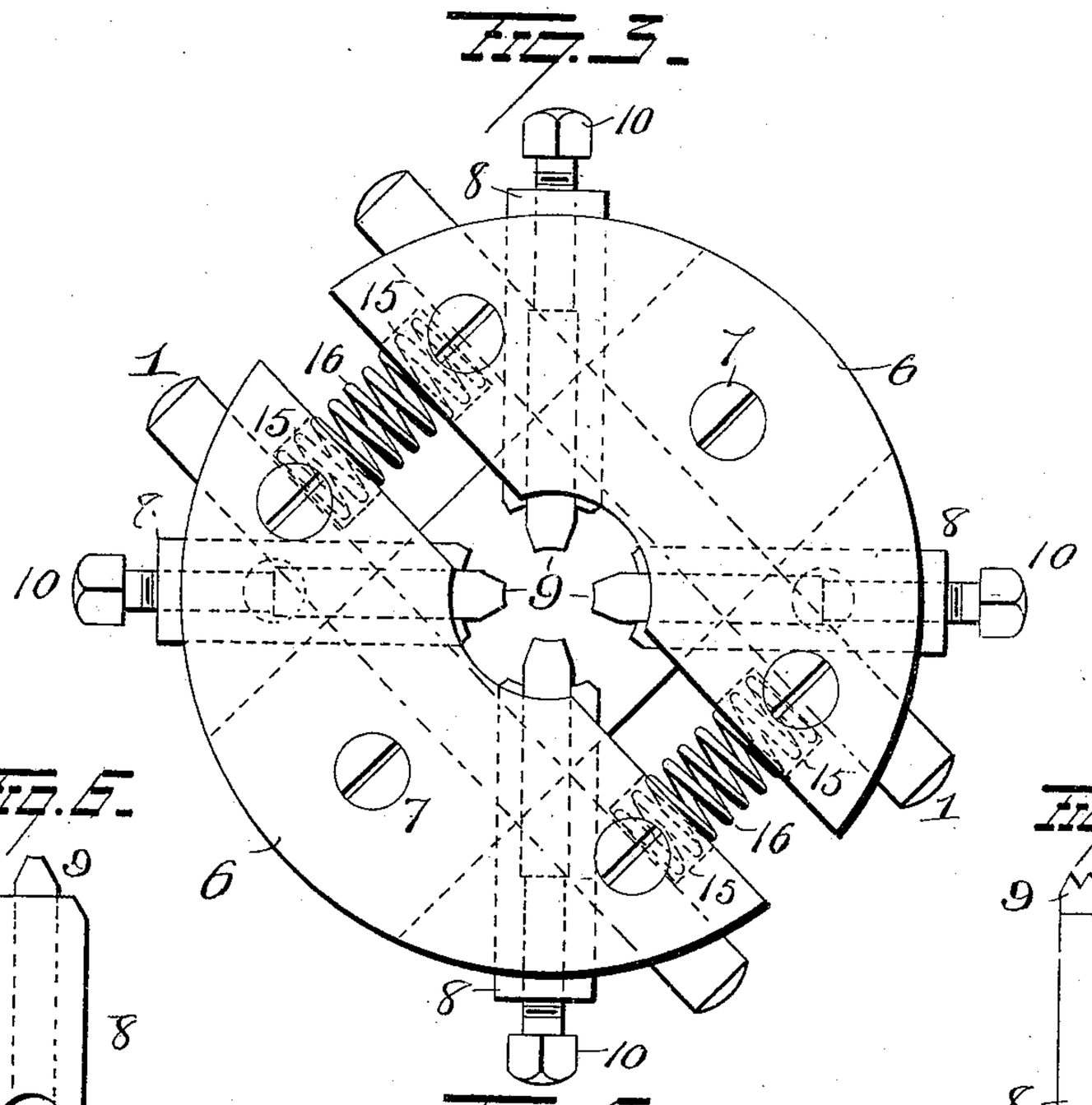


Fig. 5.

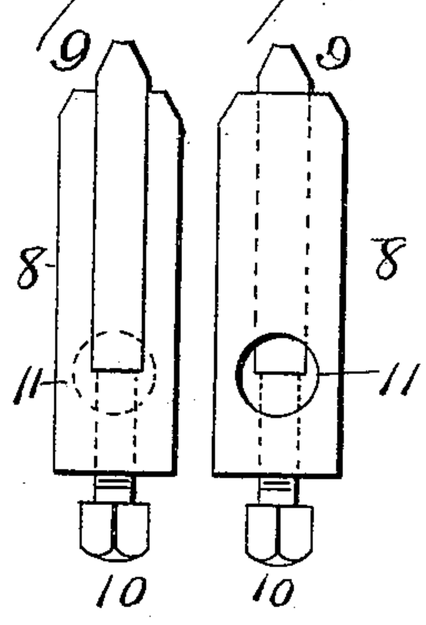


Fig. 6.




Fig. 7.

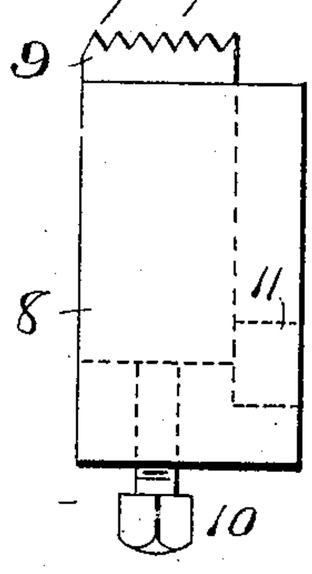


Fig. 4.

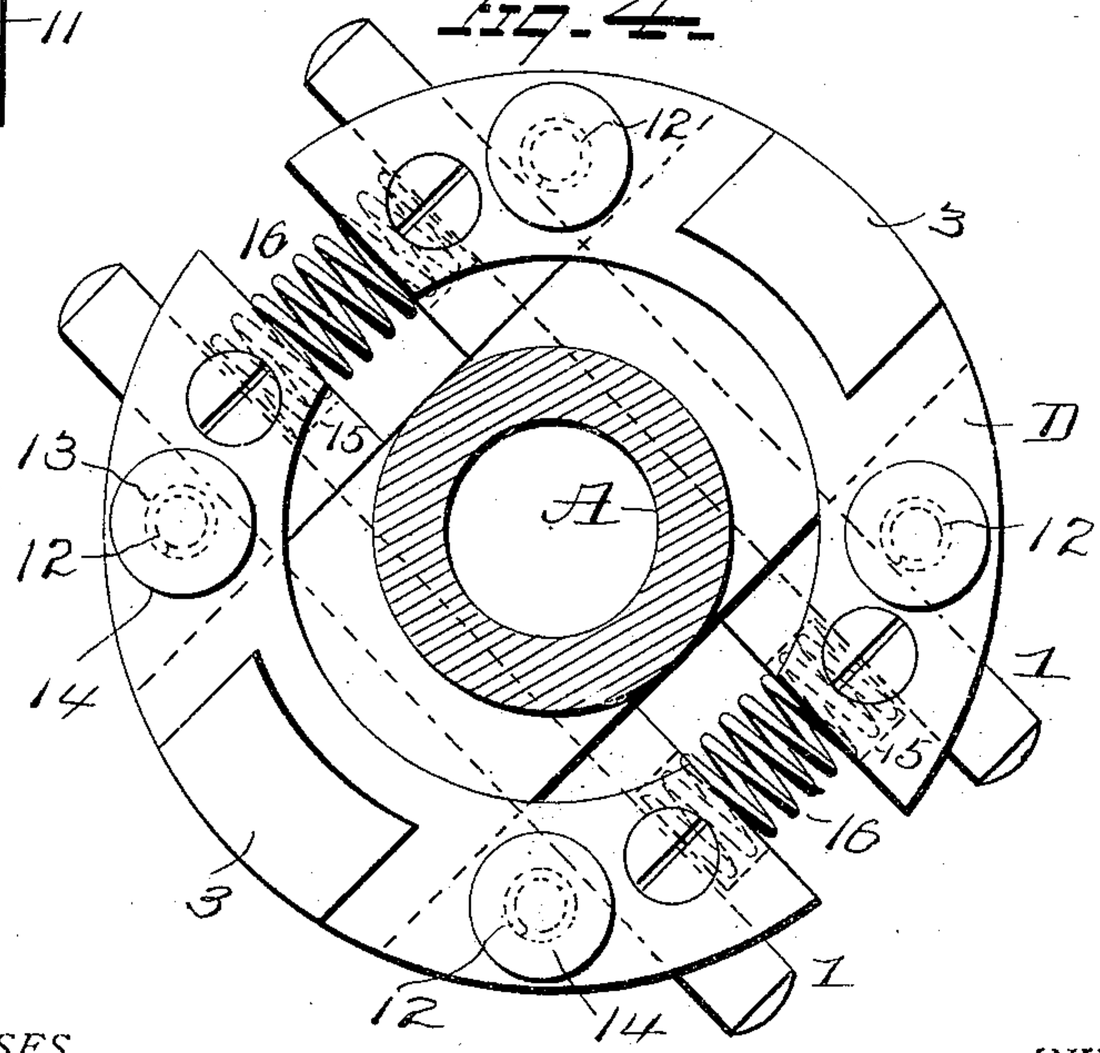


Fig. 8.


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# UNITED STATES PATENT OFFICE.

JAMES A. BECHER, OF MISHAWAKA, INDIANA, ASSIGNOR TO THE BECHER MACHINERY COMPANY, OF SAME PLACE.

## SCREW-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 641,258, dated January 16, 1900.

Application filed September 22, 1899. Serial No. 731,298. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. BECHER, a resident of Mishawaka, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Screw-Cutting Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in screw-cutting machines, one object of the invention being to provide a screw-cutting machine in which the dies can be readily removed and replaced and which will comprise great strength and durability.

A further object is to provide a screw-cutting machine which will be extremely simple in construction, neat in appearance, and most effectual when in use.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, illustrating my improvements. Fig. 2 is a plan view of Fig. 1. Fig. 3 is an end view. Fig. 4 is view in section looking from the rear of the head. Figs. 5, 6, and 7 are detached views of the die-holding casing, and Fig. 8 is a detached view of the locking-pin 12.

A represents a shaft to which my improvements are connected, any suitable means being provided for rotating the same. To the end of the shaft A a head B is secured, and said head comprises an approximately oblong block having transverse holes or openings near its forward end for the reception of pins or bolts 1, each of which latter also passes through alined openings in parallel arms 2 2 integral with and forming a part of a jaw C. The two jaws thus mounted are disposed opposite each other, as shown in Fig. 1, and as the general form of each jaw is semicircular the front ends thereon make a complete circle. To the rear ends of the arms 2 2 of the jaws C are secured semicircular plates D, disposed behind the head B, and said plates are each provided with a rearwardly-projecting lug 3, adapted to be engaged by the conical collar 4, loosely mounted on the shaft A, to press the rear ends of the jaws apart and the forward ends toward each other. The collar 4 is made with a peripheral groove 5 for the reception of the bifurcated end of an operating-lever (not shown) for operating it.

To the front end of each jaw C a semicircular plate 6 is secured by means of screws 7 passing through the plates 6 and into the jaws, and each jaw is provided behind the plate 6 with two or more grooves for the reception of die-holding casings 8. The casings 8 are each made with angular recesses or grooves in their front faces for the reception of the dies 9, and each is provided on its outer end with a screw-threaded hole or opening communicating with the groove or recess for the reception of a set-screw 10 to regulate the longitudinal movement of the dies. Each casing 8 is made with a socket 11 in one side for the reception of a pin 12, mounted in longitudinal bores in the arms 2 and jaws C, and said pins 12 are contracted throughout a portion of their length for the reception of a coiled spring 13 to normally hold said pins in engagement with the casings. The inner ends of the pins are provided with suitable enlargements or heads 14 to facilitate the withdrawing of said pins from the sockets when it is desired to remove the casings.

It will thus be seen that as each die-holding casing is of the same size to support any size of die (the angular groove therein being regulated to the size of the die) when it is desired to replace one size of die by another it is simply necessary to withdraw the pins 12 and remove the casings and insert new casings provided with dies of a different size.

The jaws C are provided with oppositely-disposed sockets 15 for the reception of coiled springs 16 to normally press the inner ends of the jaws apart.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations

as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a screw-cutting machine, the combination of a head, jaws pivotally connected therewith, said jaws having a series of radial grooves of equal sizes in their forward ends and extending from the inner to the outer edges of said jaws, plates secured to the forward ends of said jaws, die-casings removably disposed in said grooves and extending through the same, a die-adjusting screw in the outer end of each casing and each casing having a socket in one side, and a series of spring-actuated longitudinally-disposed pins mounted in the jaws and entering the sockets in the removable die-casings.

2. The combination with a shaft having a head at one end, of jaws recessed to receive the head and provided at their outer ends with recesses or sockets, die-casings mounted in said recesses or sockets, spring-actuated locking-pins for locking the die-casings in place, curved plates secured to the rear ends of said jaws, each plate having a rearwardly-projecting lug, a conical collar engaging said lugs and springs tending to normally separate the front ends of the jaws.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES A. BECHER.

Witnesses:
EZRA MASON,
EVA A. MCMICHAEL.