M. C. JOHNSON

Screw Cutting Die.

No. 201,790. Patented March 26, 1878.

Fig. 1.

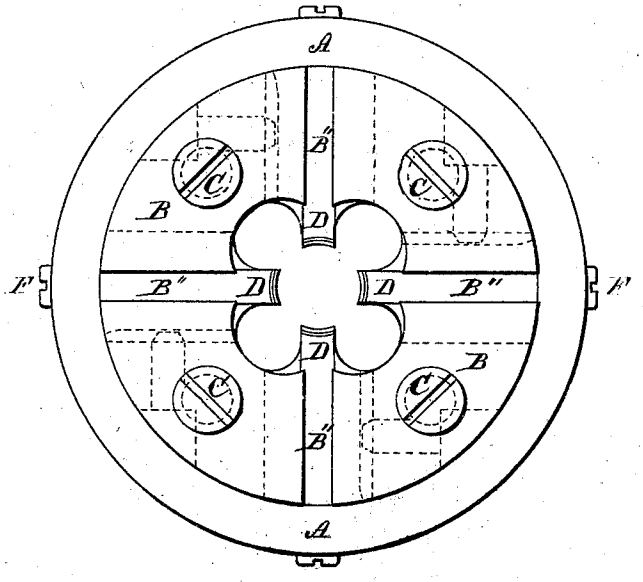


Fig. 2.

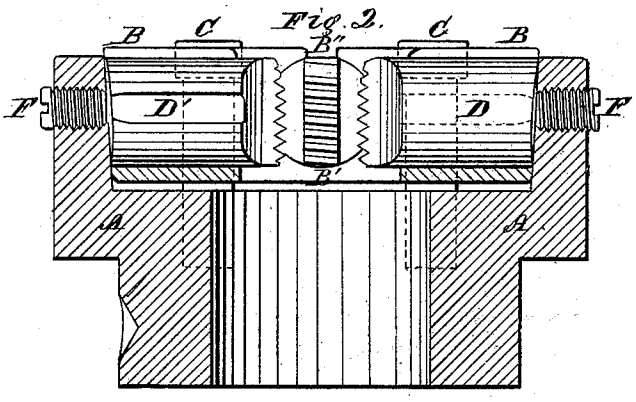
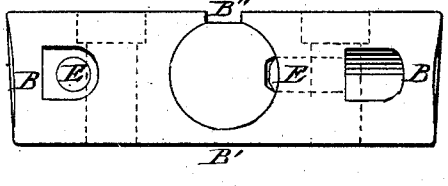


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

M. CARLYLE JOHNSON, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN SCREW-CUTTING DIES.

Specification forming part of Letters Patent No. **201,790**, dated March 26, 1878; application filed September 26, 1877.

To all whom it may concern:

Be it known that I, M. CARLYLE JOHNSON, 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 drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My improvement relates to such screw-cutting dies as are provided with removable and adjustable cutters or chasers.

The object of my invention is to provide a better and more secure method of holding the cutters in their places, and to construct a die which shall be stronger, simpler, and cheaper than those now in common use.

My invention consists in the peculiar construction that will be hereinafter described.

In the accompanying drawings, Figure 1 is a top view of my improved screw-cutting die. Fig. 2 is a cross-section through the middle, showing the two side chasers complete, and also showing the parts beyond the section. Fig. 3 is an edge view of the collet which contains the chasers removed from the outer shell or case.

A is the outer shell or case, which contains the working parts. It is made of any usual form to adapt it to be used in a lathe or in an ordinary die-stock. B is a collet for holding the cutters or chasers. It has its outer circumference tapered or beveled, and fits into a chamber in the shell A. It is of such a size that it rests in the chamber by bearing against the beveled sides, and is not intended to touch upon the bottom. This is shown in the section, Fig. 2. This collet has cylindrical receptacles for the chasers bored entirely through the thickness of the ring. A thin portion of the metal is left at the bottom, as shown at B′ in the drawings; but at the top the metal is cut entirely away, as shown at B″. This is so that when the collet is forced downward into the taper chamber the upper edge is contracted, and the cylindrical openings for the chasers are contracted and made smaller.

C C are screws passing through the collet into the outer case, and are for the purpose of forcing down the collet and holding it firmly in place.

D D are the cutters or chasers. They are formed from a round bar fitted to the openings in the collet. Upon one side they are furnished with the spline D′, into which the ends of the pins E enter, so as to bring the cutting-edges in the proper position.

F F are adjusting-screws for regulating the position of the cutters, so as to cut a thread of the exact diameter required.

By removing the screws C the collet can be taken out from the shell, when the cutters can be readily removed and replaced. When the collet is placed in its receptacle or chamber in the shell, and the cutters adjusted, by turning down the screws C the cutters are firmly clamped by the contraction of the cylindrical sockets, and cannot be displaced.

What I claim as my invention is—

1. The collet B, with its open cylindrical sockets for the cutters and beveled circumference, substantially as and for the purpose herein described.

2. The combination of the shell A with its beveled chamber, the flexible taper collet B, and the screws C, as a clamping device for the cutters D, substantially as set forth.

3. The cylindrical cutters D, in combination with the clamping-collet B, substantially as herein described.

M. CARLYLE JOHNSON.

Witnesses:

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WILMOT HORTON.