S. W. BISHOP & M. C. JOHNSON.

SCREW CUTTING DIES.

No. 187,248. Patented Feb. 13, 1877.

Fig. 1.

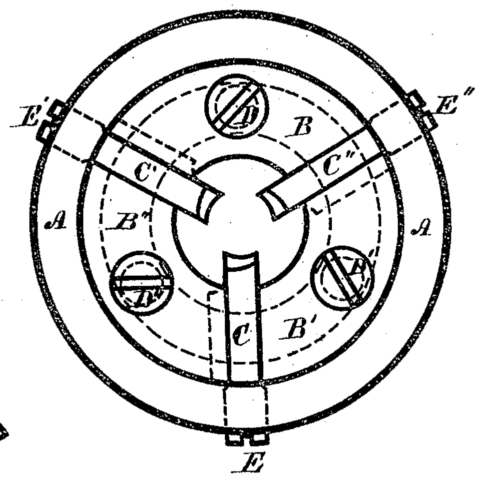


Fig. 3.

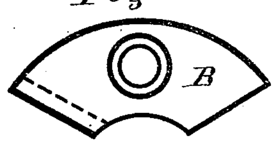


Fig. 5.

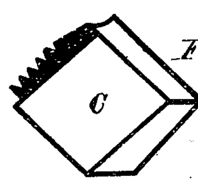


Fig. 4.

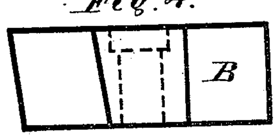
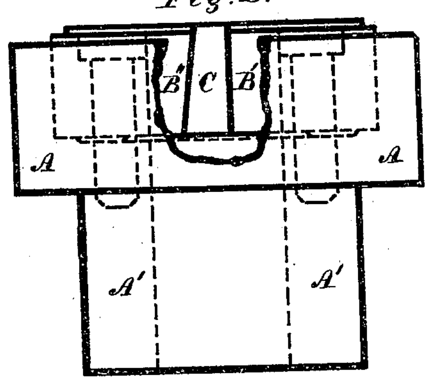


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

SETH W. BISHOP AND M. CARLYLE JOHNSON, OF HARTFORD, CONNECTICUT, ASSIGNORS TO THE PRATT AND WHITNEY COMPANY, OF SAME PLACE.

IMPROVEMENT IN SCREW-CUTTING DIES.

Specification forming part of Letters Patent No. **187,248**, dated February 13, 1877; application filed January 22, 1877.

To all whom it may concern:

Be it known that we, SETH W. BISHOP and 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 we 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.

Our invention relates to dies such as are used for cutting screw-threads, and are furnished with removable and adjustable cutters.

Heretofore the cutters or chasers in such dies have been arranged in slots of fixed dimensions, and have depended upon the nicety of their fit in these slots for their stability. They must be fitted so as to be removed easily and at the same time they must be sufficiently tight to hold the cutter firmly in place, which is a very difficult and expensive operation.

By means of our improvement a die is produced which, when the parts are in place, is as firm as a solid die, and which permits the adjustment or removal of any of the parts with the greatest ease, at the same time it requires no nice fitting of the cutters in fixed or unchangeable slots.

In the accompanying drawing, Figure 1 is a top view of our improved die, with the concealed parts shown in dotted lines. Fig. 2 is a side view of the same, with a portion of the outer shell removed to show the interior parts. Figs. 3 and 4 are a top and side view of one of the blocks which hold the cutters in place. Fig. 5 is a perspective view of one of the cutters removed from the die.

A A′ is the case or holder for containing the several parts of the die. It is composed of two parts, A and A′, of different diameters, as shown in the drawing. B B′ B″ are three segmental blocks, fitting the interior of the hollow cylindrical part A, and leaving an opening in the center of the same diameter as the opening through the lower part of the shell A′. These blocks are attached to the case A, and are held in place by means of the screws D D′ D″. C C′ C″ are the cutters, which are of the usual construction except that they are inclined upon the side, as shown in the drawings, but more particularly at C in Fig. 2. The blocks B B′ B″ have an inclined face upon the end, as shown more particularly in Figs. 4 and 5, which fits upon the inclined side of one of the cutters. The opposite ends of the blocks are square with the top and bottom surfaces, and fit against the flat sides of the cutters. E E′ E″ are adjusting-screws, which press against the outer ends of the cutters to regulate their distance from the center and hold them in position.

When the cutters have been properly placed and adjusted the segmental blocks are screwed firmly down by means of the screws D, &c., and, by the operation of the inclined faces against the cutters, wedge them securely in their places. The lower sides of the blocks do not quite reach the bottom of the chamber in the shell A, so as to allow for any variation of thickness in the cutters, and act only by their ends to hold the cutters firmly.

When it is desired to adjust the cutters by means of the screws E, the pressure upon their sides can be slightly relaxed by turning the screws D.

It will be observed that by means of our invention, all nice fitting of the cutters in their sockets is avoided; at the same time they are held firmly in place when in use, and that the mechanism of the die will accommodate itself to any wear of the several parts and to any variation of thickness in the cutters.

What we claim as our invention is—

The combination of the inclined-faced cutters C with the inclined-ended segmental holding-blocks B, when arranged as described in an outer shell or chamber A, to serve as a screw-cutting die.

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Witnesses:
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