(No Model.)

2 Sheets—Sheet 1.

A. D. LAWS.

SCREW CUTTING DEVICE.

No. 599,968. Patented Mar. 1, 1898.

Fig. 1.

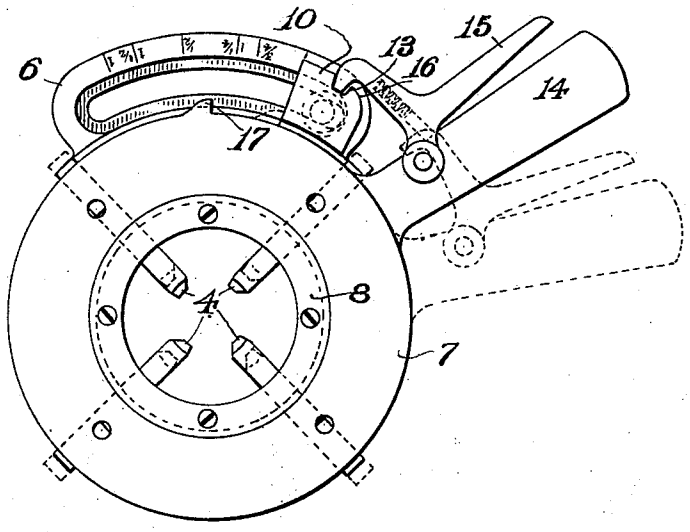


Fig. 2.

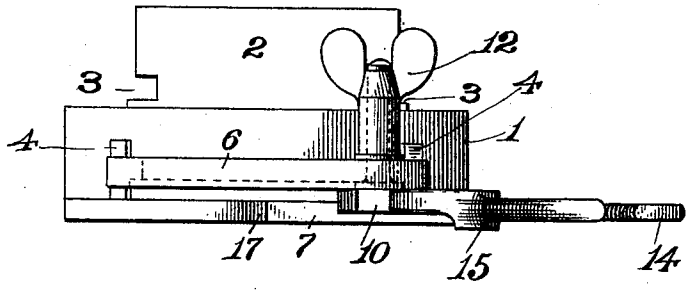
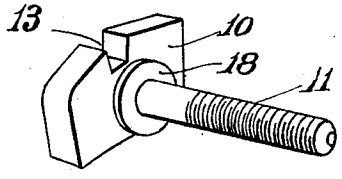


Fig. 3.



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(No Model.)

2 Sheets—Sheet 2.

A. D. LAWS.

SCREW CUTTING DEVICE.

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Fig. 4.

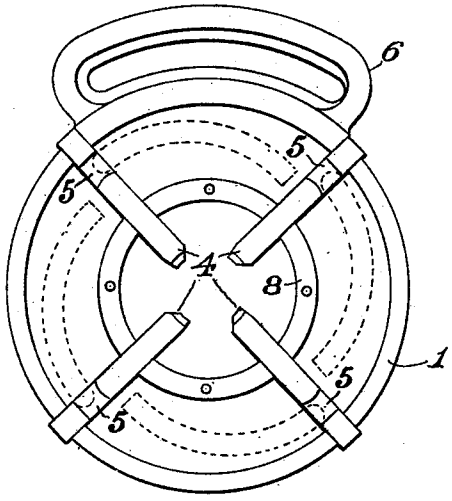
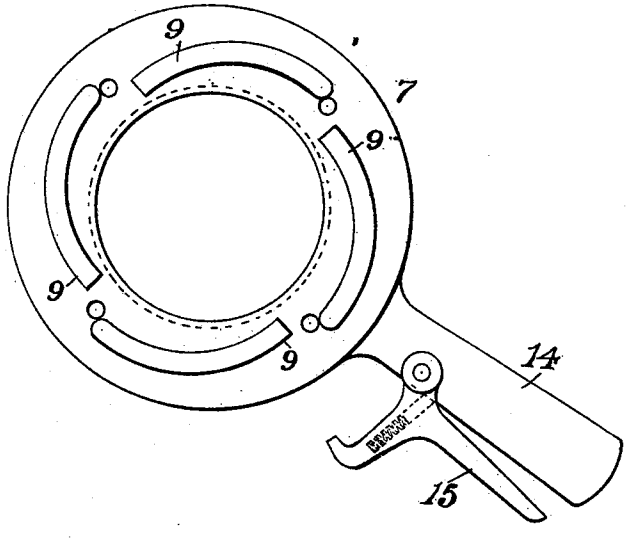


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALBERT D. LAWS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE EATON, COLE & BURNHAM COMPANY, OF SAME PLACE.

SCREW-CUTTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 599,968, dated March 1, 1898.

Application filed October 8, 1897. Serial No. 654,551. (No model.)

To all whom it may concern:

Be it known that I, ALBERT D. LAWS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Screw-Cutting Devices; 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 certain improvements in screw-cutting devices such as are capable of being used by hand or which may be secured in any suitable power-operated lathe.

My invention is especially intended as an improvement upon the construction shown and described in Letters Patent of the United States, issued August 4, 1885, to John W. Strong, No. 323,464; and the object of my improvement is to better equip such construction, so that it may be used with greater facility.

In the accompanying drawings, which form a part of this application, Figure 1 is a plan of my improvement; Fig. 2, a side elevation; Fig. 3, a detail perspective of the adjusting-block; Fig. 4, an interior plan view of the head or body with the rotary ring removed, and Fig. 5 a bottom view of the rotary ring.

Similar numbers of reference denote like parts in the several figures of the drawings.

1 is a body or head which in the present instance is provided with a rearward extension 2, having gates 3, whereby said body may be located at the end of any suitable lathe-spindle. Within this head are radially-disposed dies 4, capable of a free movement within suitable ways, said dies having notches 5 at predetermined points.

6 is a slotted segment rigid with the body 1 and extending laterally therefrom.

7 is a rotary ring supported on the body and journaled around a hub 8, which latter is rigid with the body. This ring is provided with curved ribs 9, which depend from the bottom thereof and engage with the notches in the dies, so that when the ring is swung back and forth the dies will be driven inward or retracted, as the case may be, this construction being very ordinary and requiring no further explanation.

10 is the adjusting-block, which has a threaded bolt 11 depending therefrom, which bolt extends down through the slot in the segment 6, while the block 10 rests directly upon such segment. 12 is a thumb-nut which is driven on the bolt 11, from the bottom thereof, whereby the block 10 may be secured in any desired adjustment along the segment. This adjusting-block is provided with a notch 13, while the ring 7 has a handle 14, to which latter is pivoted a spring-latch 15, which engages with said notch, so as to hold the ring rigid with the adjusting-block during the operation of cutting a thread. The end of the block nearest the notch is chamfered off, as seen at 16, so that when the handle 14 is swung toward the block the latch will automatically engage with the notch 13.

17 is a stop which projects from the periphery of the ring and strikes against the block 10 for the purpose of preventing the ring from swinging backward to the extent that the dies will drop out or become displaced.

In the patented construction above referred to the rotary ring itself was provided with a threaded bolt which depended through the slot in the segment, and a thumb-nut was employed to hold the ring in any desired adjustment; but this construction, while fairly well adapted for use when the improvement was used in the form of a die-stock, has been found to be practically unserviceable when the device is equipped, as in the present instance, for use in connection with a power-lathe, this being due to the fact that the thumb-nut had to be loosened and the adjustment practically destroyed whenever a nipple or piece of pipe was threaded or cut off.

In the present improvement the rotary ring is separated from the means for obtaining and securing the adjustment, and the dies are spread for removing the work by simply releasing the latch and throwing back the ring, the latter being put back again in precisely the same adjustment by swinging it forward until the latch again engages with the notch 13. The dies are removed precisely as in the construction shown in the Letters Patent

aforesaid, the adjusting-block being provided on the under side with a shouldered portion 18, which ordinarily abuts against the rear end wall of the segment-slot, so that when the stop 17 strikes the block the ring will not be backed quite far enough to permit the withdrawal of the dies; but when the block is slightly raised, so that the shoulder will clear the slot, thus permitting the ring to swing back a little further, then the dies may be readily removed.

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

1. In a screw-cutting device, the combination of the head which contains the dies, the rotary ring supported and journaled on said head and having extending therefrom a handle, the spring-actuated latch carried by said handle, and the adjustable block supported on said head and provided with a notch with which said latch engages, substantially as set forth.

2. The combination of the head which contains the movable dies and has a slotted segment rigid therewith, the ring journaled and supported on said head and carrying ribs for separating and contracting the dies when the ring is rotated, the adjusting-block provided with a notch and having a threaded bolt depending therefrom through the slot in the segment, the thumb-nut driven on said bolt from the under side, the spring-actuated latch carried by the ring and capable of engaging the notch in the adjusting-block, and the stop projecting from the ring so as to strike against said block, substantially as set forth.

3. In a screw-cutting device, the combination of the head which contains the dies, the rotary ring supported and journaled on said head and having extending therefrom a handle, the spring-actuated latch pivoted to said handle, the block carried by said head and capable of adjustment and provided with a notch with which said latch engages and having its end nearest said latch chamfered, and the stop projecting from the ring so as to strike against said block, substantially as set forth.

4. The combination of the head which contains the movable dies and has a slotted segment rigid therewith, the ring journaled and supported on said head and carrying ribs for adjusting the dies when the ring is rotated, the spring-actuated latch carried by the ring, and the adjustable block seated and operating within said segment and provided with a notch with which said latch engages and having its end nearest said latch chamfered, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT D. LAWS.

Witnesses:

F. W. SMITH, Jr.,

M. I. LONGDEN.