

(No Model.)

H. WESTBROOK & R. BURNS.
SCREW CUTTING DEVICE.

No. 451,790.

Patented May 5, 1891.

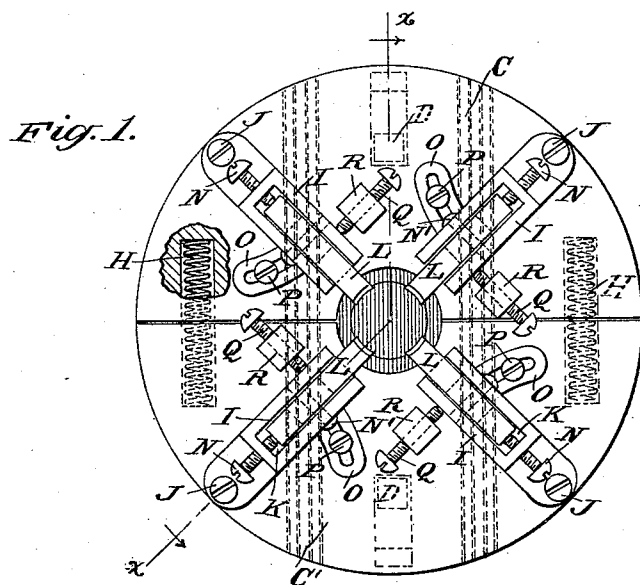


Fig. 2.

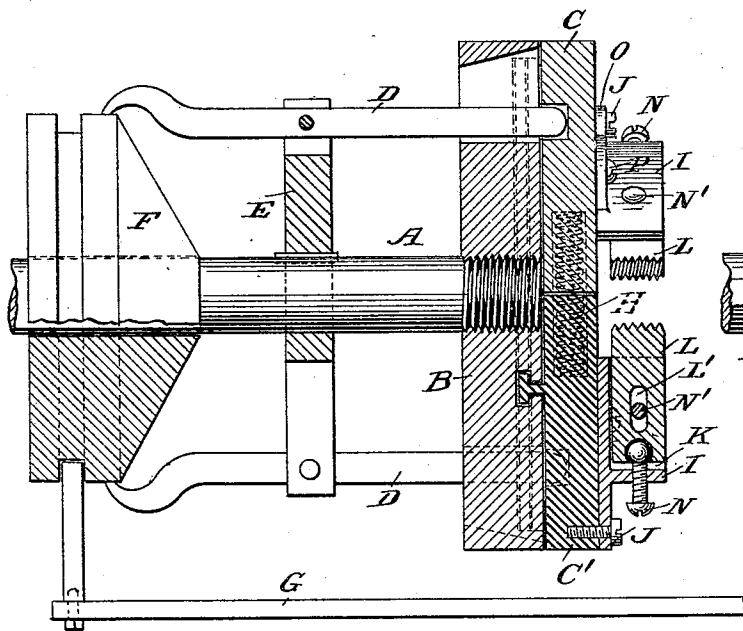
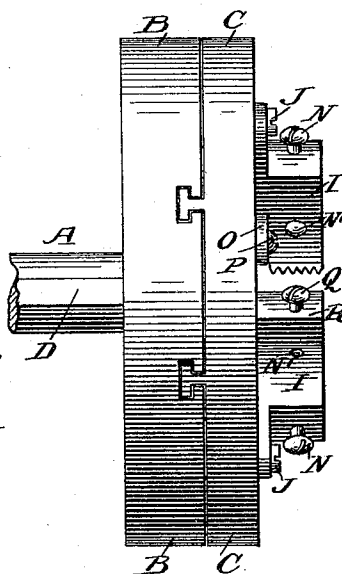


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY WESTBROOK AND ROBERT BURNS, OF WOODSTOCK, CANADA.

SCREW-CUTTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 451,790, dated May 5, 1891.

Application filed August 23, 1890. Serial No. 362,893. (No model.)

To all whom it may concern:

Be it known that we, HENRY WESTBROOK and ROBERT BURNS, both of Woodstock, in the county of Oxford, Province of Ontario, and Dominion of Canada, have invented a new and Improved Screw-Cutting Device, of which the following is a full, clear, and exact description.

The invention relates to screw-cutting devices such as shown and described in United States Letters Patent No. 430,358, granted to us June 17, 1890.

The object of the present invention is to provide a new and improved screw-cutting device which is simple and durable in construction and very effective in operation.

The invention consists of a series of die-holders pivotally connected to a divided face-plate and held adjustably thereon and a die held in each of the said holders.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of the improvement. Fig. 2 is a sectional side elevation of the same on the line *xx* of Fig. 1, and Fig. 3 is a plan view.

The improved screw-cutting device is provided with a spindle A, mounted to turn, and driven in the usual manner. On the front end of the spindle A is secured a head B, on the face of which are mounted to slide by suitable guideways the two parts C and C' of the divided face-plate carrying the dies. The two face-plate parts C and C' are adapted to be moved toward or from each other by means of levers D, engaging at one end with the parts C and C' and extending laterally through the head A, being fulcrumed on a collar E, fastened on the spindle A.

The inner ends of the levers D are adapted to be engaged by a cone-shaped collar F, mounted to slide longitudinally on the spindle A and connected with the shifting-arm G, under the control of the operator, so that the said operator can open and close the divided face-plate whenever desired. In order to hold

the inner ends of the levers D in contact with the cone-shaped collar F, springs H are employed, which are preferably arranged in suitable recesses formed in the face-plate parts C and C', as is plainly shown in Figs. 1 and 2.

On the front of the divided face-plate are arranged a series of die-holders I, each pivotally connected by a pin J with the respective face-plate part C or C'. On the top of each die-holder I is formed a recess K, in which is fitted to slide a screw-cutting die L, the inner end of which is provided with the usual thread-section for cutting the thread on the bolt or screw. The outer end of each die L is connected by a ball-and-socket joint with a set-screw N, screwing in the end of the holder I and serving to adjust the die in the holder. In each die is formed a slot L', through which passes a pin N', fixed in the holder I, so that the die is prevented from falling out of the latter.

On one side of each die-holder I is formed a slotted segmental flange O, through the slot of which passes a screw P, screwing into the face-plate part C or C', respectively. The opposite side of each die-holder is adapted to abut against a set-screw Q, screwing into a short post R, arranged on the face-plate part C or C'. By loosening the screws P the die-holders I can be readily swung into any desired position, turning on the pins J, the screws Q being adjusted so as to support the die-holder in the proper position at one side, after which the screws P are screwed up to securely fasten the die-holders in place on the face-plate. By this means the cutting-edge of each die L can be brought into the proper position for cutting the pin or bolt. The dies are radially adjustable in their respective holders, according to the size of the bolt or pin to be cut.

It will be seen that when the operator shifts the arm G the parts C and C' are caused by the springs H to slide from each other, so as to open the face-plate for the introduction of the bolt or pin to be cut. As soon as this is done the operator shifts the arm G in an opposite direction, so that the cone-shaped collar, acting on the levers D, closes the parts of the face-plate, and by revolving the spindle A the thread is cut on the pin or bolt.

Having thus fully described our invention,

we claim as new and desire to secure by Letters Patent—

1. In a screw-cutting device, the combination, with a series of die-holders pivotally
5 connected to a divided face-plate and held adjustably thereon, of a die held in each of the said die-holders, substantially as shown and described.

2. In a screw-cutting device, the combination, with a head mounted to turn, of a divided face-plate fitted to slide on the said
10 head, and a series of die-holders pivotally connected to the said divided face-plate and held adjustably thereon, substantially as
15 shown and described.

3. In a screw-cutting device, the combination, with a head mounted to turn, of a divided face-plate fitted to slide on the said
20 head, a series of die-holders pivotally connected to the said divided face-plate and held adjustably thereon, and means, substantially as described, for opening and closing the said divided face-plate, as set forth.

4. In a screw-cutting device, the combination, with a face-plate, of a holder pivoted
25 thereon and adapted to support the screw-cutting die, a slotted segmental arm formed on the said holder, a screw screwing into the said face-plate and passing through the slot
30 in the said arm, and a set-screw arranged in a post in the said face-plate and adapted to engage the holder opposite the segmental arm, substantially as shown and described.

5. In a screw-cutting device, the combination, with a pivoted holder, of a die fitted to

slide in the said holder and provided with a transverse slot, a pin held in the said holder and passing through the said slot, and a set-screw screwing into the said holder against
40 the outer end of the said die, substantially as shown and described.

6. In a screw-cutting device, the combination, with a spindle and a head held thereon, of a divided face-plate fitted to slide on the
45 said head, die-holders pivoted on the said divided face-plate and supporting the screw-cutting dies, levers engaging the said divided face-plate and fulcrumed on the said spindle, and a cone-shaped collar fitted to slide loosely
50 on the said spindle and adapted to engage the said levers, substantially as shown and described.

7. In a screw-cutting device, the combination, with a spindle and a head held thereon, of a divided face-plate fitted to slide on the
55 said head, die-holders pivoted on the said divided face-plate and supporting the screw-cutting dies, levers engaging the said divided face-plate and fulcrumed on the said spindle, a cone-shaped collar fitted to slide loosely on
60 the said spindle and adapted to engage the said levers, and springs for moving the parts of the said divided face-plate from each other, substantially as shown and described.

HENRY WESTBROOK.
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Witnesses:

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