(No Model.)

P. GRABLER.

SCREW CUTTING DIE AND STOCK.

No. 383,354. Patented May 22, 1888.

Fig. 1.

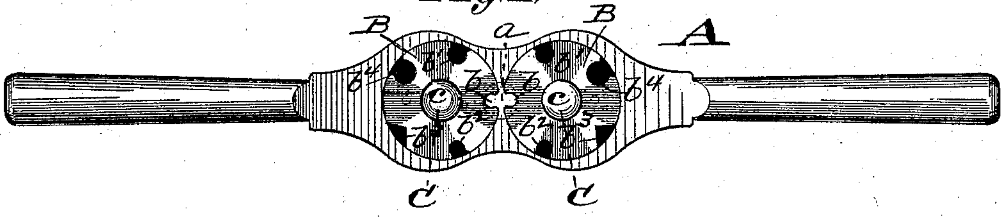


Fig. 2.

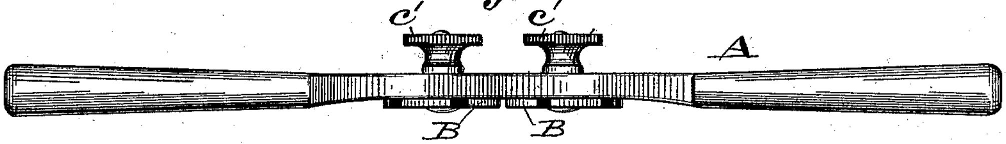


Fig. 3.

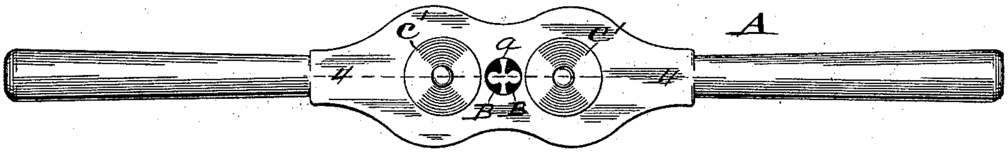
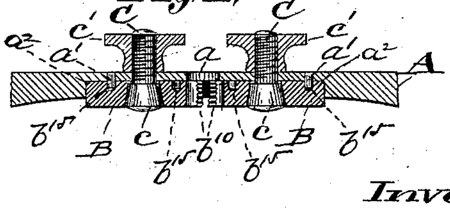


Fig. 4.



Attest:

B. J. Rex.

J. C. Sanford

Inventor:

Peter Grabler

by C D Moody

atty.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

PETER GRABLER, OF ST. LOUIS, MISSOURI.

SCREW-CUTTING DIE AND STOCK.

SPECIFICATION forming part of Letters Patent No. 383,354, dated May 22, 1888.

Application filed December 6, 1887. Serial No. 257,092. (No model.)

To all whom it may concern:

Be it known that I, PETER GRABLER, of St. Louis, Missouri, have made a new and useful Improvement in Screw-Cutting Dies and Tap-Wrenches, of which the following is a full, clear, and exact description.

The improvement relates to what are termed "adjustable" dies and wrenches; and it consists substantially as follows: A pair of similar circular die-plates are pivoted side by side in a two-handled lever or holder. The die-plates are notched at the periphery, and the notches in one of the die-plates are designed to coact, respectively, with the notches in the other of the die-plates in cutting the blank or holding the tap. To this end the lever or die-plate holder is perforated centrally between the die-plates to admit the blank being cut or the tap being held, and the die-plates at those notches intended for thread-cutting have cutting-edges, and at those notches designed for taps they are suitably shaped therefor, and to cut a thread upon a blank or to hold a tap the two die-plates are turned around upon their respective pivots to bring the desired pair of notches into position over the perforation in the lever or die-plate holder. The die-plates are then locked to prevent them from turning or getting out of position and the tool is ready for use, and the thread is produced upon the blank or the tap held by means of the two die-plates in combination. The notches vary in size, and when a differently-sized blank is to be cut or tap held the two die-plates are loosened upon their bearings, then turned around thereon to bring the proper pair of notches over the opening in the lever or die-holder, and then tightened again in position, as before, and so on with each differently-sized blank or tap.

The annexed drawings, making part of this specification, illustrate the most desirable mode of carrying out the improvement.

Figure 1 is a top view of the improved tool; Fig. 2, a side view, and Fig. 3 a bottom view; and Fig. 4 is a cross section on the line 4 4 of Fig. 3.

The same letters of reference denote the same parts.

A represents the die-plate holder, which is preferably in the form of a two-handled lever such as used in tap-wrenches, but modified in its central portion to receive the die-plates B B. The die-plates are arranged, respectively, upon opposite sides of the perforation *a* in the holder A, and are attached to the holder by means of the bolts C C, respectively. The bolt-head *c* is preferably tapered, and is fitted to the die-plate, preferably, as shown, and the bolt passes through the die-plate and holder, and the parts are secured together by means of the thumb-nut *c'*.

The notches in the die-plates are shown at b b' b^2, &c. The notch b in one of the die-plates is designed to coact with the notch b in the other of the die-plates, the notch b' with the notch b', and so on. When a pair of notches, b b, are arranged to come over the holder-perforation *a*, the tool can be applied to the blank or tap, which passes through the perforation *a* and through the opening formed by the two notches b b in combination, and the thread is cut upon the blank by means of the cutting-edges b^{10} of the notches, and in the case of a tap it is held by means of the notches b^3 b^3 in combination.

In the tool shown a portion of the notches are designed for thread-cutting and a portion for holding a tap; but the die-plates may be constructed exclusively for either purpose, and in either case the notches may be varied in size, as may be desired. The blank or tap, when inserted in any pair of the notches, of itself serves to keep the die-plates from turning around upon their respective bearings; but auxiliary means may be resorted to for confining the die-plates more accurately in position, so that the two notches composing any pair may be brought readily and held firmly into opposition. As one means to such end the die-plate holder is provided with a pin, *a'*, Fig. 4, and the die-plate has in its inner face a series of holes, b^{15}, the series corresponding in number with the notches, and the pin and holes are so relatively arranged and the holes and notches are so relatively arranged that when any notch is squarely in position for use the pin engages in one of the holes, and the die-plate is thereby for the time being secured, and before the die-plate can be readjusted it must be detached from the pin.

The holder is preferably shaped to form seats a^2 for the die-plates.

The die-plates can be readily sharpened when separated from the holder.

I claim—

1. The combination of the lever or die-plate holder, perforated centrally and having seats for the die-plates, and a pin for engaging in the holes in the die-plates, with the pair of circular notched adjustable die-plates, and the bolts and thumb-nuts for securing the die-plates to the lever or holder, said die-plates having a series of holes for said pin to engage in, substantially as described.

2. The combination of the die-plate holder, perforated centrally, as described, the pair of notches, adjustable die-plates, and the bolts and thumb-nuts for securing the die-plates to the holder, substantially as described.

Witness my hand.

PETER GRABLER.

Witnesses:
C. D. MOODY,
J. N. TIERNAN.