

Z. L. JACOB.
SCREW PLATE.

No. 28,279.

Patented May 15, 1860.

Fig. 1

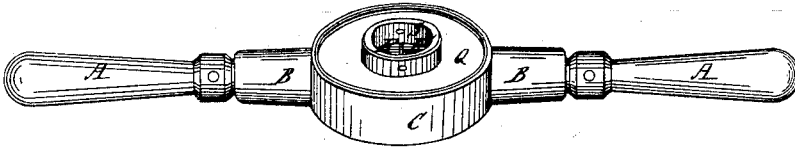


Fig. 2

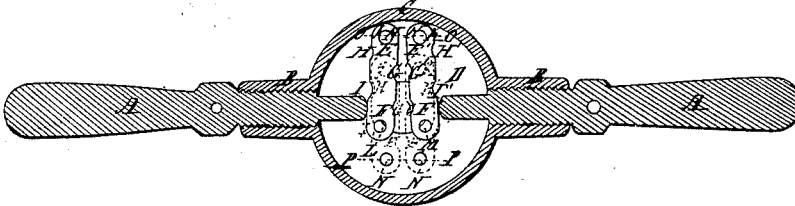


Fig. 3

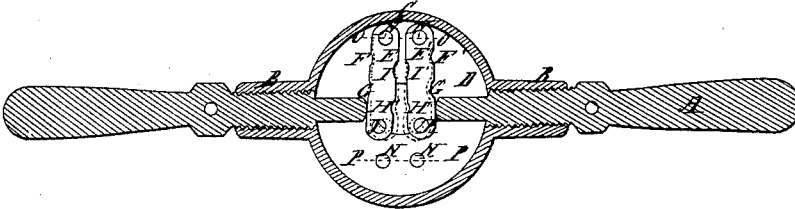
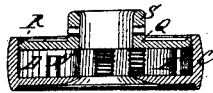


Fig. 4



Witnesses
Orrin C. White
John T. Lewis

Inventor.
Zalmon L. Jacob

UNITED STATES PATENT OFFICE.

ZALMON L. JACOBS, OF HEBRON, CONNECTICUT.

SCREW-PLATE.

Specification of Letters Patent No. 28,279, dated May 15, 1860.

To all whom it may concern:

Be it known that I, ZALMON L. JACOBS, of Hebron, in the county of Tolland, in the State of Connecticut, have invented a new and useful Improvement in Screw-Plates; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Figs. 2 and 3 longitudinal sections; and Fig. 4 a transverse section.

Similar letters of reference indicate like parts in all the figures.

To enable others skilled in the art to which my invention appertains, to make and use the same, I will proceed to describe its construction and operation.

The screws A A Figs. 1, 2, 3, are fitted loosely into the hubs B B, of the body of the stock C, so that their axes being extended toward each other will meet and form one straight line passing through the center of the circular chamber D Figs. 2, 3, 4.

Within the chamber D, and between the screws A A, are arranged the dies E, E', having cutting edges formed in the usual manner, in pairs, at F F', G G', H H', I I', any desired pair of which edges may be made to face each other, and to be in a line with the axes of the screws A A, which is the position in which they are required for use. To prevent longitudinal movement of the dies, and yet, to permit those portions thereof required for use to occupy positions more or less remote from each other, as represented by the full and dotted lines of Fig. 3, the said dies E E', are pivoted to the body of the stock C, near those ends of the dies most remote from the portions required for use. For this purpose the holes J, K, L, M are made in the dies near their ends, and the pins or pivots N N N N, of a size to fit the said holes, are firmly fixed in the body of the stock C, and project a suitable distance into the chamber D. Of those pins two are arranged on the line O O, and two on the line P P, which lines are parallel to the axial line of the screws A A, and at such distances therefrom, that when the holes J K receive the pins on the line O O the cutting edges at F F' will be in line with the axes of the screws, as represented by the full lines in Fig. 2; and when the holes L M re-

ceive the pins on line P P the edges at G G' will occupy that position, as represented by the dotted lines of the same figure. The cutting edges on one side of each die alternate with those on the opposite side thereof, and all of them are so arranged, that when the position of the dies is reversed, as represented in Fig. 3, the edges at H H' and I I' will occupy the positions before occupied by those at F F' and G G' respectively. In order to prevent the movement of the dies in the direction of the axes of the pivots to which they are attached, the annular plate Q, Figs. 1 and 4, is made use of; being attached to the body of the stock by means of a screw thread R, formed on its periphery, which fits into a screw formed on the inner periphery of the circular chamber D; and, to facilitate the turning of said plate, a rim or flange S is cast, or otherwise made, thereon. The dies are of an equal thickness and lie upon the plane surface of the bottom of the chamber D, and the said plate Q is screwed into the said chamber until it touches the dies and produces the effect for which it is intended. Such is the form and arrangement of the several parts of my device. The manner of using it may be briefly stated, as it differs in no important particular from that of using the screw plates in common use. The dies are arranged with any desired pair of their cutting parts facing each other and in line with the screws A A; the plate Q is made to secure said dies in their places; and the screws A A are turned outward sufficiently to allow the dies to be opened so as to receive the bolt or rod to be operated upon. The said screws are then turned inward so as to press the edges of the dies into the bolt or rod aforesaid, and the plate is made to revolve around the said bolt or rod, when the desired thread will be formed thereon.

Having completed the description of the construction and operation of my invention, it may be proper to point out some of its advantages. It will be observed that the forms of the body of the stock C and the plate Q are such, that they may be turned and finished throughout in a lathe, the pins being afterwards secured in their places. This feature enables me tastefully and accurately to fit and finish those parts at a small cost. The form of my dies, and the mode described of attaching them to the body of the stock, also possesses advantages

in regard to cost of construction, as well as
in the small quantity of steel they contain
in comparison with the number of their cut-
ting parts, in the facility with which their
5 positions may be changed so as to bring any
required parts into the proper position for
use, and in the convenience of having so
many cutting parts within the stock where
they are least likely to be lost or mislaid.
10 The alternate arrangement of the cutting
parts of the dies is preferred, for the reason
that the die, so made, is stronger than if it
were cut away at opposite points, and be-
cause the intermediate pieces are required

between the screws and dies, as would other- 15
wise be necessary to protect the dies.

Having thus described my invention what
I claim and desire to secure by Letters Pat-
ent as an improved article of manufacture—

A screw plate provided with changeable 20
pivoted dies E, screws A, stock C, pins N,
and plate Q, substantially as herein shown
and described.

ZALMON L. JACOBS.

Witnesses:

ORRIN C. WHITE,
WM. T. JONES.