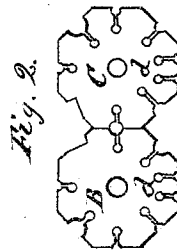
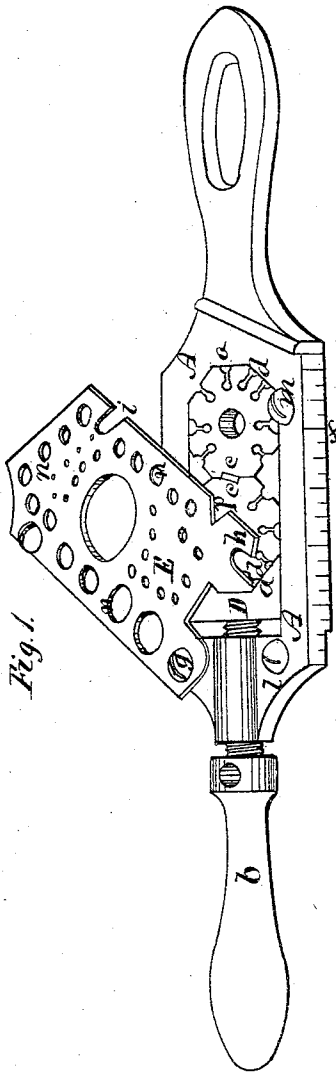


J. W. HARDIE.
Stocks and Dies.

No. 145,500.

Patented Dec. 16, 1873.



Witnesses,
C. M. Gallaher.
R. D. Smith

Inventor,
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UNITED STATES PATENT OFFICE.

JASON W. HARDIE, OF NEW YORK, N. Y.

IMPROVEMENT IN STOCKS AND DIES.

Specification forming part of Letters Patent No. **145,500**, dated December 16, 1873; application filed May 2, 1873.

To all whom it may concern:

Be it known that I, JASON W. HARDIE, of the city, county, and State of New York, have invented an Improved Combination Stock and Dies; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making part of this specification—

Figure 1 being a view in perspective of the instrument complete; Fig. 2, a view of the dies detached, and in different relative positions from those shown in Fig. 1.

Like letters designate corresponding parts in both figures.

My invention consists in an improved stock and dies, having in combination therewith, or performing the additional functions of, the following additional instruments: An adjustable tap-wrench, a wire or drill gage, a thread-gage, and scale, all of which pertain to one line of work, and, therefore, are very desirable to have in connection with the stock and dies. Thus, this single instrument, having no parts additional to the simple stock and dies, takes the place and performs the office of five different tools or instruments.

In the drawings, A represents the stock, and B C two octagonal dies, one die, B, fitting into a seat, *a*, of corresponding form at one end, so as to receive and hold the die exactly in position, and the other die, C, fitting into a similar form, *a*, in a movable block or follower, D, which is pressed against the die by one handle, *b*, of the stock, screwed into the end thereof. In each octagonal face of each die-block is one-half of a screw-cutting form, except one side, *c*, which has one-half of a notch or cavity to form a tap-wrench, Fig. 1 in the drawings showing the two notches put together to form the wrench. Another side, *d*, of each die contains, or may contain, two

screw-cutting forms of small size. Thus, only two die-blocks serve for eight different sizes of screws, say, from one-sixteenth to three-eighths of an inch in diameter. For additional sizes additional dies may be used, the two dies for the next larger sizes cutting screws from above three-eighths of an inch to one inch in diameter. The dies are taken out of the stock and shifted to bring the desired faces opposite to each other, and the octagonal form holds them from turning in the stock. On one edge of the stock a scale, *f*, of inches or other required units, is marked. Upon one face of the stock a cap-plate, E, to hold the dies in place, is pivoted at one corner to a pivot or pin, or screw, *g*; and there are notches, *h i*, near two other corners, which embrace two other screws, *l m*, so that, by swinging the plate under the heads of said screws and tightening the screw-heads down thereon, it is held in place. In this cap-plate is a series of holes, *n n*, which serve as gages for wires or for drills, there being as many of such gage-holes as it is convenient to have therein. In addition to the above, there is in one edge of the cap-plate a triangular notch, *p*, which serves as a thread-gage. Thus the cap-plate E, which is required for simply holding the dies in place, serves as two additional instruments. It is swung off from the stock when used for gages.

What I claim as my invention, and desire to secure by Letters Patent, is—

The improved instrument herein described, composed of a stock and dies, a tap-wrench, a scale, a wire or drill gage, and a screw-thread gage, all substantially as herein specified.

JASON W. HARDIE.

Witnesses:

GEO. W. MCADAM,
CHARLES DUFFY.