

F. P. SHELDON.
Holder for Screw-Cutting Dies.

No. 197,984.

Patented Dec. 11, 1877

Fig. 1.

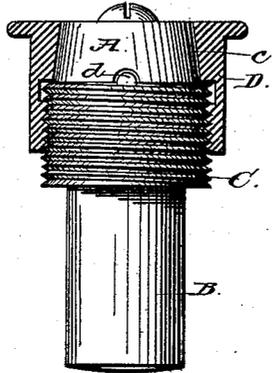


Fig. 2.

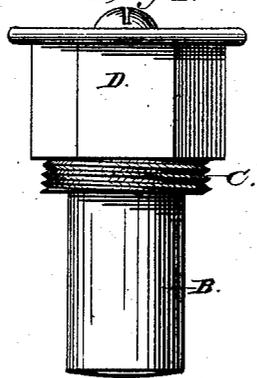
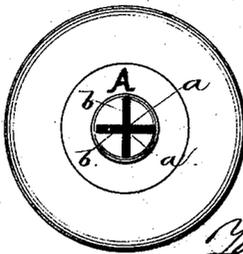


Fig. 3.



Witnesses:

Samuel Arnold.
Thos. S. Cosgrove.

Inventor:

Frank P. Sheldon.

UNITED STATES PATENT OFFICE.

FRANK P. SHELDON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN HOLDERS FOR SCREW-CUTTING DIES.

Specification forming part of Letters Patent No. **197,984**, dated December 11, 1877; application filed June 17, 1875.

To all whom it may concern:

Be it known that I, FRANK P. SHELDON, of the city and county of Providence, in the State of Rhode Island, have made certain new and useful Improvements in Holders for Solid Dies for Screw-Threading Machines; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a longitudinal section through the axis. Fig. 2 is a side view; and Fig. 3 is a front view.

The purpose of my invention is to provide a means for both securely holding a die, such as is used in cutting fine-threaded or machine screws, and also to insure the proper adjustment of the die in the holder, so that its central axis will always coincide with the longitudinal axis of the die-spindle.

Heretofore dies of this character have been set in their holders and secured therein, as well as their proper position determined, by means of an adjusting screw or screws applied to the sides of the die. As a necessary consequence great care is required in setting the dies, and they are very liable to become displaced in position.

In the drawings, *a*, Fig. 3, represents the front view of the cutters of a die, provided with the usual clearances *b* for the chips. I make the die-block *A* frusto-conical in form; and with the tools at present in use in machine-shops it is easy to make the central axis of the die in exact coincidence with the central axis of the die-block.

B is the die-spindle, which is constructed with a screw-threaded end, *C*. The end of the spindle is to be covered with a cap, *D*, a portion of its interior being provided with a thread, which fits the thread on the end of the spindle. Another portion of the cap is formed into a socket, *e*, for the die-block, which is in the form of a hollow frustum of a cone, exactly corresponding with the shape of the die-block, but of somewhat less thickness than

the die-block, in order that when the die-block, the cap, and the spindle are combined, as shown at Fig. 1, and the cap screwed down hard, the walls of the socket will be sure to clamp the die-block firmly against the end of the spindle, and wedge the die-block securely in the socket.

For preventing the die from turning around in its socket, I provide a raised tongue, *d*, across the end of the spindle in a diametrical line, and cut a corresponding groove or channel across the back end of the die-block. It will be possible, however, to employ a part of my invention by making the die-block in the form of two cylinders of unequal diameters and the socket to correspond therewith, so that an annular lip would be made on the front end of the socket, to prevent the die-block from being pulled out of the socket. In such case the tongue-and-groove device to prevent the die from turning would be very important.

With this construction of the die-block and holder, the most inexpert workman can put a die in position, and be certain that the die will be located in its proper working relations. Besides, too, the joint between the socket and the die-block is so close as to prevent any chips from working into the socket, and therefore no time is consumed in cleaning the socket when a new die is to be inserted.

I am aware that threaded stocks and coupling-nuts have heretofore been employed for connecting punches with their stocks in punching-machines; and I do not, therefore, make claim herein to the threaded spindle and the die-socket *per se*.

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

The combination of a die-block, a holding-socket, and a spindle, substantially as described, with a tongue-and-groove connection, *d*, between the spindle and the die-block, as specified.

FRANK P. SHELDON.

Witnesses:

FRANK J. ARNOLD,
THOS. F. COSGROVE.