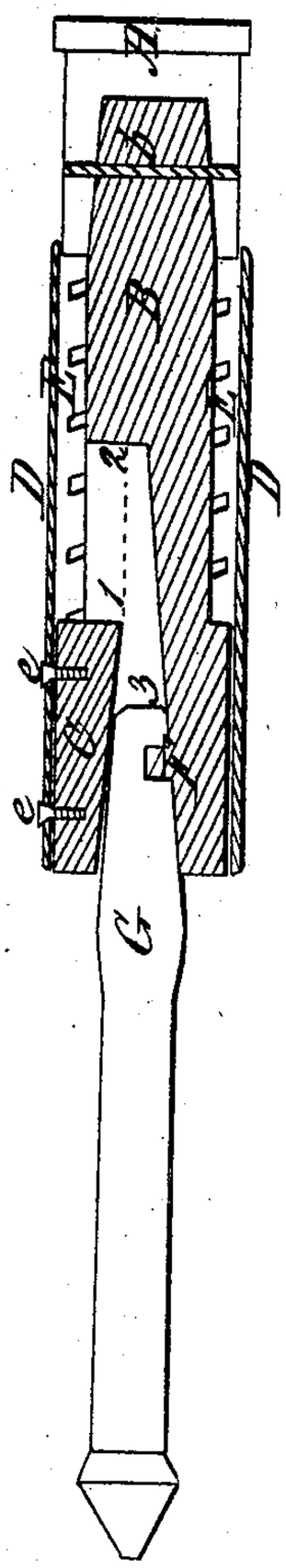
A. J. Smith,

Bit Stock.

No. 17,770. Patented July 7, 1857.



UNITED STATES PATENT OFFICE.

AMOS J. SMITH, OF LYNN, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND GEO. W. OTIS.

BIT OR DRILL HOLDER.

Specification of Letters Patent No. 17,770, dated July 7, 1857.

To all whom it may concern:

Be it known that I, AMOS J. SMITH, of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented a new and useful Bit and Drill Holder; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing, forming a part of this specification.

The figure is a longitudinal, vertical section showing the internal structure of my improvement.

The nature of my invention consists in confining a bit or drill in its socket by means of a stationary catch, or projection, E, and a sliding key, or bar, C, which is attached to a metallic thimble D, said key and thimble being kept in place, as represented in the figure by means of the coil spring E.

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

A is the lower end of a bit stock, or the spindle of a lathe.

B is the bit or drill holder, one end of which enters the spindle A to which it is confined by means of the pin *b*.

1, 2, 3, is the socket or slot for the reception of the bit or drill.

F is the stationary catch, or projection, extending across the bottom of the groove 1, 2, 3, the object of which is to enter the notch in the shank of the bit or drill G, as seen in the figure.

C is the sliding key or bar, whose width is equal to that of the slot 1, 2, 3, in which it slides, and whose inner surface is beveled, as seen in the figure, so as to conform to the shape of the bit or drill. This key or bar C, is confined to a sliding metallic thimble D D, by means of screws or pins *e*, *e*, or by brazing.

E E is a spiral spring playing freely over the smaller part of the holder B, one end resting against the piece A, and the other against the inner end of the key or bar C, the tendency of which spring is always to press the key and thimble into the position shown in the figure.

Thus it is obvious that the bit or drill will be held firmly and securely in its place, without the possibility of dropping or pulling out of the socket while in operation. It is also plain that my invention is very simple in its structure, cheap, and free from liability of getting out of repair.

The operation of the machine is so simple as hardly to need an explanation. The operator grasps the thimble D, in one hand, and draws it backward till the inner end of key C, has passed from 1 to 2, as represented by the dotted line; while with the other hand he places the bit or drill in the socket with the projection F in the notch; when, releasing his hold on the thimble the spring E drives the key back again over the shank end of the bit or drill, as seen in the figure.

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

The above described combination of the sliding key or bar C, and thimble D, with the spring E, and stationary catch or projection F, constructed and operating substantially as described.

AMOS J. SMITH.

Witnesses:

GEORGE W. OTIS,

DEAN PEABODY.