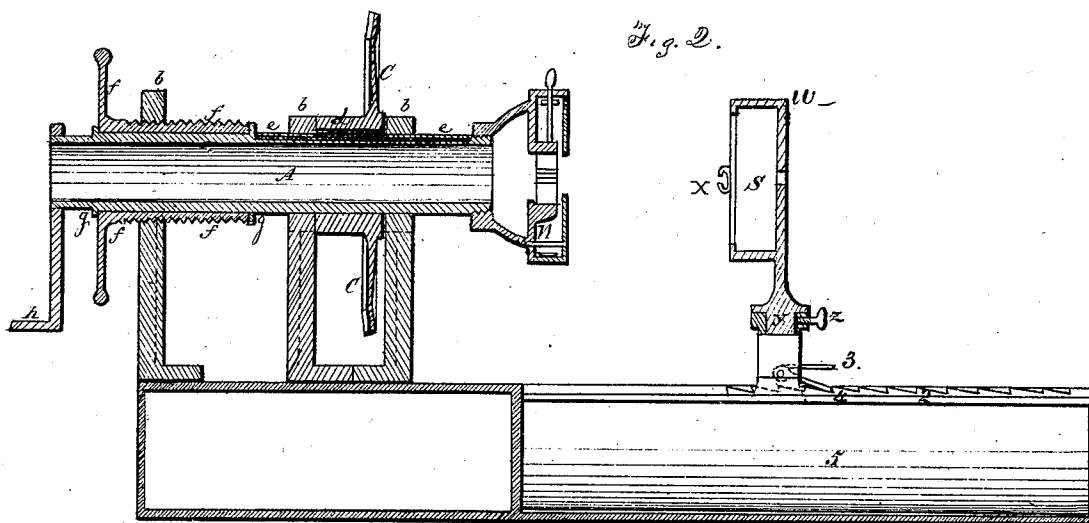
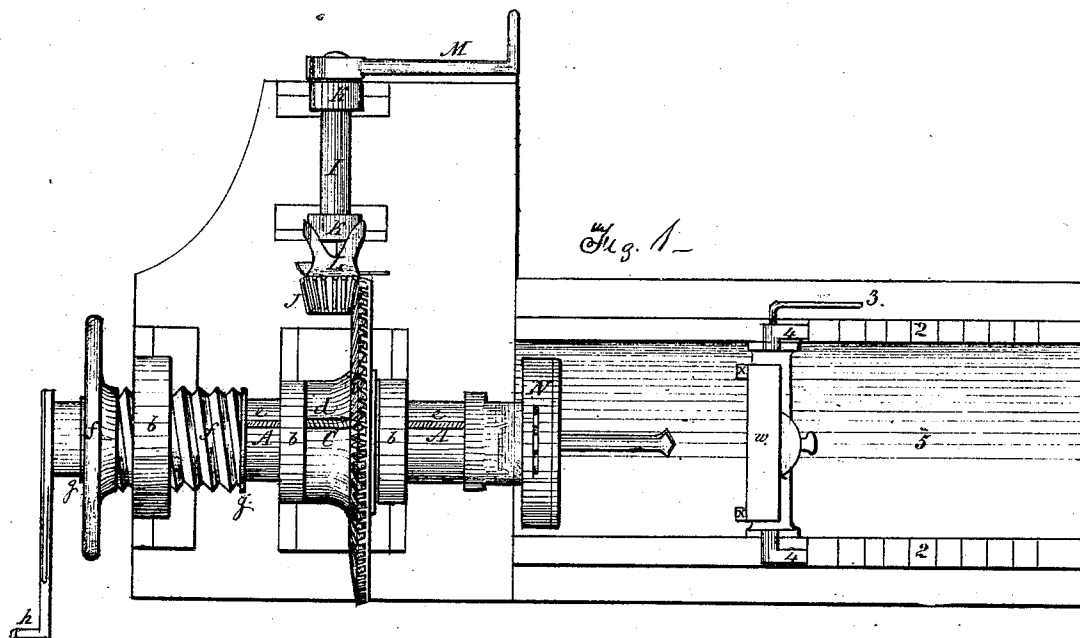


M. Love,

Threading Bolts.

No. 109433.

Patented Nov. 22. 1870.



Witnesses.

*J. W. Powell
Geo. Helmle,*

*Milton Love
Inventor.*

United States Patent Office.

MILTON LOVE, OF CORRY, PENNSYLVANIA.

Letters Patent No. 109,433, dated November 22, 1870.

IMPROVEMENT IN MACHINES FOR THREADING BOLTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, MILTON LOVE, of the city of Corry, in the county of Erie, in the State of Pennsylvania, have invented an "Improved Bolt-Cutter and Drill; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification, in which—

Figure 1 represents a side elevation of the machine.

Figure 2, a longitudinal section of the same.

The nature of my invention consists in the arrangement of the devices of a machine for cutting bolts and burs; also, for drilling by hand or other power.

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

The machine has a hollow shaft, marked A in the drawing, held in position by journals *b b*, with a cog-wheel marked C, held in position by means of journals marked *b b*.

The wheel has a key fastened in it marked *d*, which holds it from turning on shaft A, which fits in a groove or seat, *e*, in shaft A, so as to let the shaft reciprocate backward or forward, and not let the wheel C move with it.

A screw, and wheel marked *f f*, with the hollow shaft A passing through it, form part of one journal *b*.

The rear journal *b* has a screw cut in it to fit the screw with wheel *f f* on the shaft A, so that when in operation it can be used to reciprocate shaft A for drilling purposes.

The hand or crank *h* is fastened to shaft A on the rear end, for use when limited power is required, or when light work is being performed in drilling or cutting small bolts.

I is a horizontal shaft, with bevel-gear J.

The bevel-gear is constructed so as to fit or gear into wheel C.

The whole is held in position by journals marked K K.

The front journal K stands back from wheel C, so as to let shaft I throw in or out of gear.

When the shaft I is thrown into gear it is held in position by means of a forked cap or hood L, which is fastened to the forward journal K in such a manner as to let it move forward into position, the use of which is to hold the shaft I in gear when in operation.

The shaft I has a crank marked M, which is fast-

ened on the rear end of the shaft when greater power is needed.

The shaft A is intended to hold a head, N, on its front end, so constructed as to hold bolts or drills.

For this head N I make a separate application for Letters Patent, and specify in it said application.

The tail-block or rest W, which is used to hold the nut or bur when being cut, or a common stock or die, or a solid die for cutting bolts, or when in a reversed position, is used to drill against, is constructed as follows:

The tail-block or rest marked W is an upright movable square frame, with a mortise through it marked S, so as to hold the die when cutting bolts, or a block to hold the different-sized nuts while being cut.

The front of the block or rest W is so constructed as to hold a common stock or plate by means of open hooks marked X X.

The upper part of block W rests at or near the center, on a pivot, Y.

The end passing through the bottom of the rest W is held in position by means of a thumb-screw marked *z*, in the lower part of the rest.

The lower part of rest W is constructed so as to work backward or forward in grooves marked and numbered 2 2, forming guides or ways to hold rest W in an upright position.

On the top of ways 2 2 are notches or teeth, constructed so as to let a lever marked 3, which has two dogs, marked 4 4, passing through the bottom part of block W, preventing it from sliding back when in use.

The grooved ways 2 2 are fastened on each side of a through marked 5, which is used to catch the waste oil.

When in use the whole machine is intended to stand upon a bench of wood or other material.

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

1. The arrangement of the supports *b*, hollow and slotted shaft A, threaded thimble and wheel *f f*, gearing C and J, shaft I, cap L, and cranks M and *h*, combined, constructed, and operating as described.

2. The reversible tail-block or rest W, constructed as described.

3. The combination of the subject-matter of second claim with the dogs 4, levers 3, and ways 2 2, substantially as and for the purpose set forth.

MILTON LOVE.

Witnesses:

J. FRANKLIN REIGART,
OCTAVIUS KNIGHT.