E. M. Mayo,

Bolt Cutter.

No. 71,512. Patented Nov. 26, 1867.

Fig: 1.

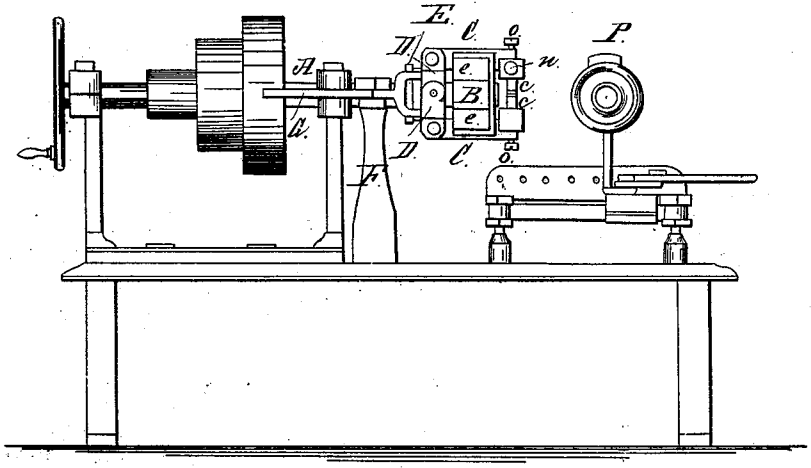


Fig: 2.

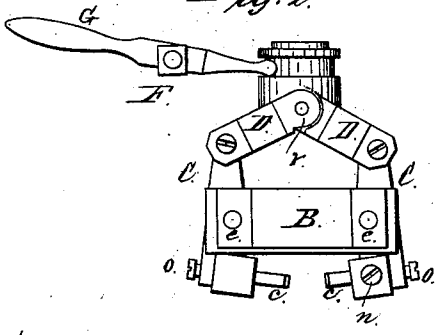
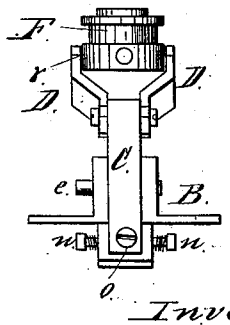


Fig: 3.



Witnesses:

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E. M. MAYO, OF CINCINNATI, OHIO.

Letters Patent No. 71,512, *dated November* 26, 1867.

IMPROVED MACHINE FOR CUTTING THREADS OF SCREW-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, E. M. MAYO, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Machines for Cutting Screws on Bolts; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention consists in a novel arrangement of devices for holding and operating the dies in machines for cutting screws on bolts, usually denominated bolt-cutters, and relates more especially to that class of bolt-cutters in which the blank is held in a longitudinally movable stock, while the cutting-dies are attached to and revolve with a hollow arbor or mandrel.

Figure 1 is a side elevation of a machine with my improvements applied thereto.

Figure 2 is a side view, and

Figure 3 a top plan view of my improved devices detached from the machine.

In the drawings, A represents the mandrel of a bolt-cutting machine, provided with the pulleys, and mounted in suitable bearings in the usual manner. B represents a head, secured to the front end of the mandrel A. On opposite edges of this head B, I form recesses, in which are pivoted the arms C, by means of pins *e*. To the rear ends of these arms C are pivoted two arms or links D, having their opposite ends jointed together, as shown in figs. 1 and 2, and united by means of the joint-pin *r* to a sleeve, E, which slides loosely to and fro on the mandrel A, a pin passing from the sleeve E into a slot in the mandrel on each side, which prevents the sleeve E from turning independent of the mandrel. A circumferential groove is formed in the exterior of the sleeve E, as shown in figs. 2 and 3, to receive the forked ends of a lever, G, pivoted to the top of a post, F, secured to the bed of the machine, as represented in fig. 1, this lever G serving to slide the sleeve E back and forth on the mandrel A. In the outer end of the arms C are secured the cutting or screw-dies *s*, the end of the arms C being enlarged, to form a seat for them, and being provided with set-screws *o* and *n*, for adjusting the dies as may be required. The other parts of the machine are constructed in the usual manner, and need not therefore be described.

The operation is as follows: The bolt being secured in the support P, and the lever G moved so as to open the dies *c*, as represented in fig. 2, the support P, with the bolt, is moved forward, so as to bring the bolt between the dies *c*, when the lever G is moved so as to slide the sleeve E forward, which brings the links D into a straight line, or nearly so, as represented in fig. 1. This moves the rear ends of the arms C apart, and of course causes their front ends to approach each other, and thereby causes the dies *c* to close upon the bolt which has been thrust between them. Then, by rotating the mandrel A, the dies are caused to rotate also, and, of course, cut a thread upon the bolt. The links D, operating on the plane of the knuckle-joint, exert great power, and, when brought to a straight line, will hold the dies securely in place until the lever G is reversed. By these means I construct a machine that can be operated with ease and rapidity, and that performs its operations in a most satisfactory manner.

Having thus described my invention, what I claim is—

The die-holding levers C, pivoted to the head B, secured to the end of the hollow mandrel A, connected by the links D to the sliding collar E and the lever G, all arranged to operate as shown and described.

E. M. MAYO.

Witnesses:

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