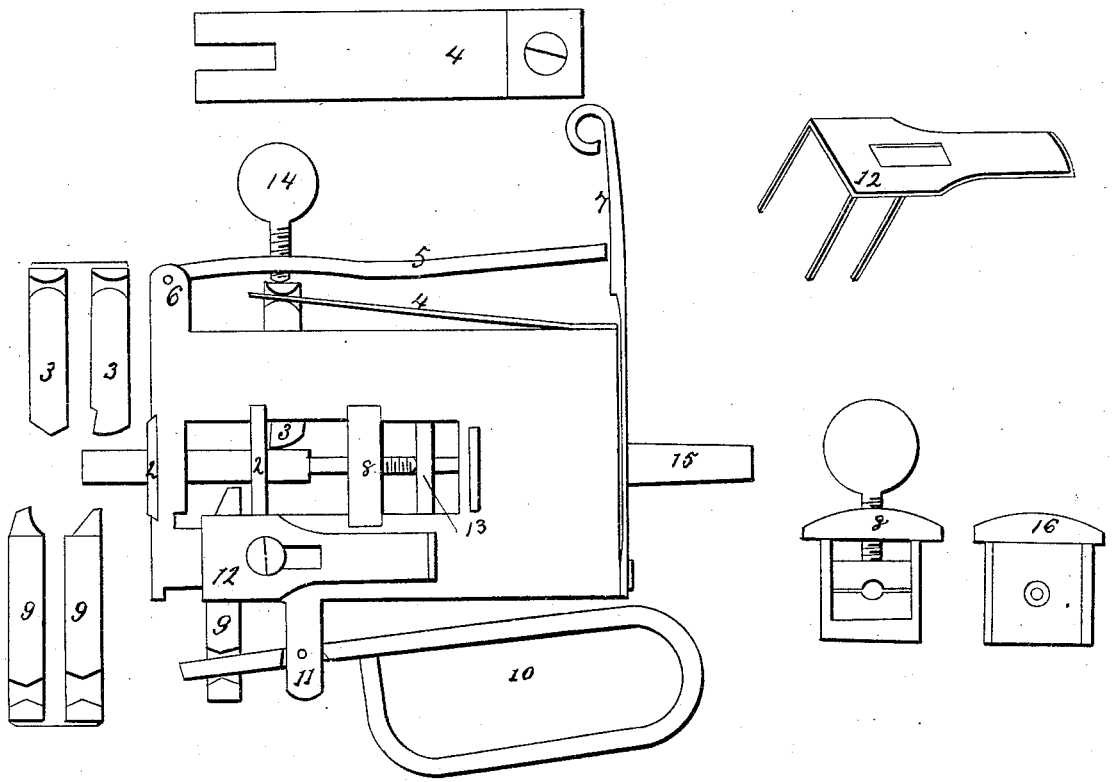
L. D. & J. WALTER.

Machine for Making Screws.

No. 2,453. Patented Feb. 7, 1842.



UNITED STATES PATENT OFFICE.

LORENZO D. WALTER, OF FORT PLAIN, AND JACOB WALTER, OF SPRINGFIELD, NEW YORK.

IMPROVEMENT IN THE MACHINE FOR MAKING SCREWS, BOLTS, PINS, AND RIVETS.

Specification forming part of Letters Patent No. **2,453**, dated February 7, 1842.

To all whom it may concern:

Be it known that we, LORENZO D. WALTER, of Fort Plain, in the county of Montgomery, and JACOB WALTER, of Springfield, in the county of Otsego, in the State of New York, have invented a new and useful Machine for Making Screws, Bolts, Pins, and Rivets; and we do declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

No. 1 is the stock of the machine, which may be made of steel, iron, brass, or any hard metals; No. 2, two slides to guide the rod from which you make the screw, bolt, pin, or rivet; No. 3, cutter for reducing the rod to any size; No. 4, spring to withdraw cutter No. 3; No. 5, lever to propel cutter No. 3; No. 6, joint for lever 5; No. 7, catch to hold lever No. 5 against cutter No. 3; No. 8, press-die, which is movable; No. 9, cutter for cutting off the screw, bolt, pin, or rivet; No. 10, lever to propel and withdraw cutter No. 9; No. 11, joint for lever No. 10; No. 12, gage for moving cutter No. 9 to form the head of the screw, bolt, pin, or rivet to any thickness; No. 13, gage for length of screw, bolt, pin, or rivet; No. 14, screw to gage cutter No. 3; No. 15, shank to steady machine in the lathe; No. 16, close die, which is (when used) stationary.

The spring No. 4, catch No. 7, gage No. 12, and gage No. 13 are all fastened to the stock of the machine by screws.

This machine should be operated by a reversible lathe, but can be used in all lathes.

The manner of operating with this machine is as follows: First, the machine is fastened by the shank in the mandrel of the foot puppet-head of the lathe and is propelled and repelled by a screw running in a nut which is fastened in the mandrel that holds the machine; second, the rod from which the screw, bolt, pin, or rivet is to be made is fastened in the mandrel at the head puppet-head of the lathe and revolves. The foot puppet-head is then screwed fast to the rails or frame of the lathe. The rod from which we make the screws, bolt, pin, or rivet revolves, and the machine is propelled upon the rod by the screw that drives the foot-mandrel, and by so doing the cutter No. 3 is forced against the rod and reduces it to the proper size for entering the die to form the thread of the screw. Then the lever No. 5 is detached from the catch No. 7 and the reacting-spring No. 4 removes the cutter No. 3 back from the rod. Then the movable die is forced against the rod in the same manner that the machine is propelled, and the die is drawn upon the rod by means of the thread of the die. Then the motion of the rod is reversed and the die recedes by means of the thread. When the stationary die is used, the puppet-head must be unscrewed from the rails of or frame of the lathe, and by pushing against the puppet-head the die is forced upon the rod and the thread which is formed on the rod then impels the die. The rod is then revolved, and cutter No. 9 is forced against the rod by lever No. 10, which cuts off the screw, bolt, pin, or rivet. Then the puppet-head is again screwed fast to the rails or frame of the lathe, and cutter No. 9 is forced against the rod by screw No. 10, which cuts off the screw, bolt, pin, or rivet. This cutter is so shaped that when the screw, &c., is cut off it points the end of the rod for the next screw, and likewise the cutter may be so shaped that it will form a bevel or flat on the lower side of the screw, bolt, pin, or rivet, or to form a flat, oval, or bevel on the upper side of the head of the bolt, screw, pin, or rivet. The gage No. 12 slides upon the top of the machine and has prongs that run down and embrace the cutter No. 9, and by moving places the cutter No. 9 so that the head of the screw, bolt, pin, or rivet can be made of any thickness desired. The gage No. 13 runs within the machine back of the dies in a parallel line with the holes in the slides and die. This gage is used to prevent the movable die from going back beyond the required length of the screw.

The die can be removed, so that the operation can make a bolt, pin, or rivet.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The cutter No. 3 for reducing the rod, in combination with the cutter No. 9 for forming

the head of the screw, bolt, pin, or rivet, and with the guides No. 2 for guiding the rod, as described.

2. The shifting of the cutter No. 9 by means of the gage No. 12 so as to form the head and cut off the screw, bolt, pin, or rivet, &c., as described.

3. Making the die No. 8, by which the thread is cut, to slide in the slot of the stock, so as to follow the thread which it cuts on the rod without the necessity of moving forward the stock or the rod, as described.

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Witnesses:
FRANKLIN COLMAN,
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