

E. McNIEL.

Improvement in Centering-Machines.

No. 115,337.

Fig. 1.

Patented May 30, 1871.

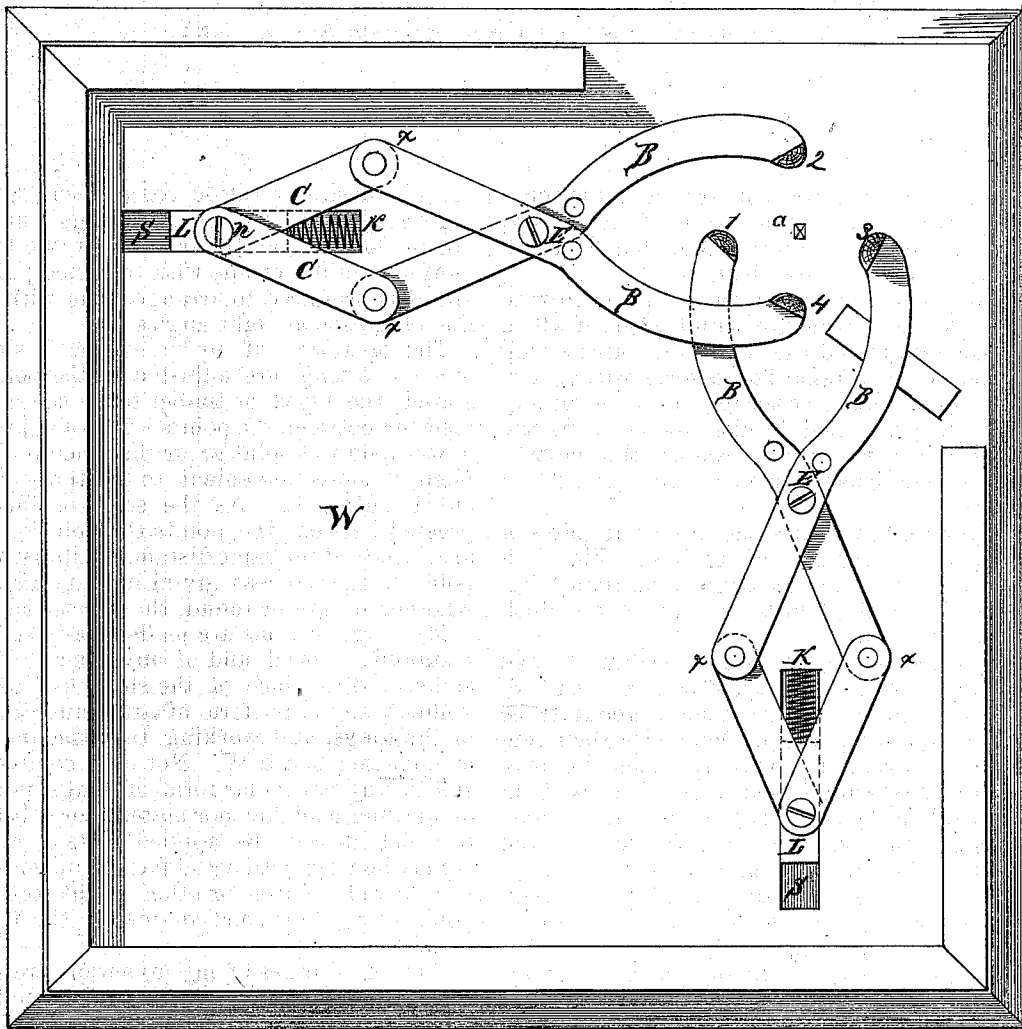


Fig. 2.

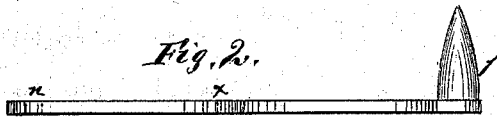


Fig. 3.

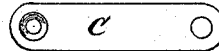
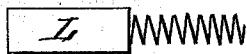


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EUGENE McNIEL, OF GROTON, NEW YORK.

IMPROVEMENT IN CENTERING-MACHINES.

Specification forming part of Letters Patent No. 115,337, dated May 30, 1871.

I, EUGENE McNIEL, of Groton, in the county of Tompkins, in the State of New York, have invented a Centering-Machine, of which the following is a specification:

The purpose of my invention is to provide an implement by the direct application of which can be determined the center of a stick or log of wood without regard to its form, with a view to its adjustment in a turning-lathe, or for any other purpose; and in like manner to fix the center of a bar or rod of iron or other metal.

Reference is had to the accompanying drawing.

Figure 1 represents the operating parts of the machine resting on its base; Fig. 2, a single arm of the tongs or clasp-rod; Fig. 3, the short arm of the tongs; Fig. 4, the block and spiral spring.

To construct my centering-machine I take a board or plank, say a foot square. At S S, Fig. 1, I cut two narrow slots, about three inches in length, cutting them with their center on a direct line with the fixed point *a*. Within these slots I place a small block, L, in length about one-half the length of the hole or slot, with a spiral spring, K, between the block L and the front end of the slot. At A I fix a point, *a*, sharpened for marking. I then prepare two pairs of what are sometimes designated as lazy-tongs, Y Z, as shown in Fig. 1. These are made with short arms *ec*, about two and a half inches in length, and longer arms B B, some five inches long. The short and long arms are united by rivets at *x x*. The two short arms are united by the screw *n*, and by said screw attached to the block L. The long arms cross each other at and are secured by the screw E, and by it firmly attached to the board or plank W. From the point of junction at E the long arms curve outward, coming in at the extremes, making a form similar to that of a pair of tongs. To the extreme ends of the long arms are attached points 1 2 3 4, some two or three inches long, and being so shaped that a stick or block of timber will easily enter between them. Back of the point of junction of the arms B B, at E, small holes, H H, are made in the board W, into which is inserted a peg for holding the

arms in desired position for suitably spreading the points 1 2 3 4. The tongs complete are so located on the board that the line of motion is in direct line with the fixed point *a*, and it is preferred to arrange them with their line of motion at right angles.

The operation of my invention is simple. When the tongs are adjusted to the board as stated, the block or timber to be centered is inserted between the points 1 2 3 4 and pressed down upon the point *a*; or the machine is applied, if more convenient, to the timber without handling it. As the stick or block is pressed between the points the point of each arm is moved the same distance as its associate point, no more or less, giving in every instance, whether square or round, the precise center.

My tongs or arms are made of any suitable metal or material and of any desired dimensions, and in place of the slot I use, as convenient, any other form of attaching the end of the tongs, and working the attachment in or upon the board W. Nor do I confine myself to any particular form of tongs, nor size of working-machine, nor material or substance to which it is to be applied in its operation. It may be used with equal facility in centering bars or rods of iron or other metal, the fixed point being hardened to indent the iron or metal.

The advantages of my invention are apparent. By a single application of the machine the center of the object desired is fixed, avoiding the delay of measuring and testing, hitherto necessary in centering any form of block or stick.

What I claim as my invention, and desire patented, is—

1. The board W, provided with a fixed point, *a*, in combination with the tongs B B, substantially as and for the purpose specified.

2. The board W having a slot, S, in combination with the block L, spiral spring K, connecting-links C C, and tongs B B, all constructed as shown and described, and for the purpose set forth.

Witnesses: EUGENE McNIEL.

ARTHUR HOLMES,
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