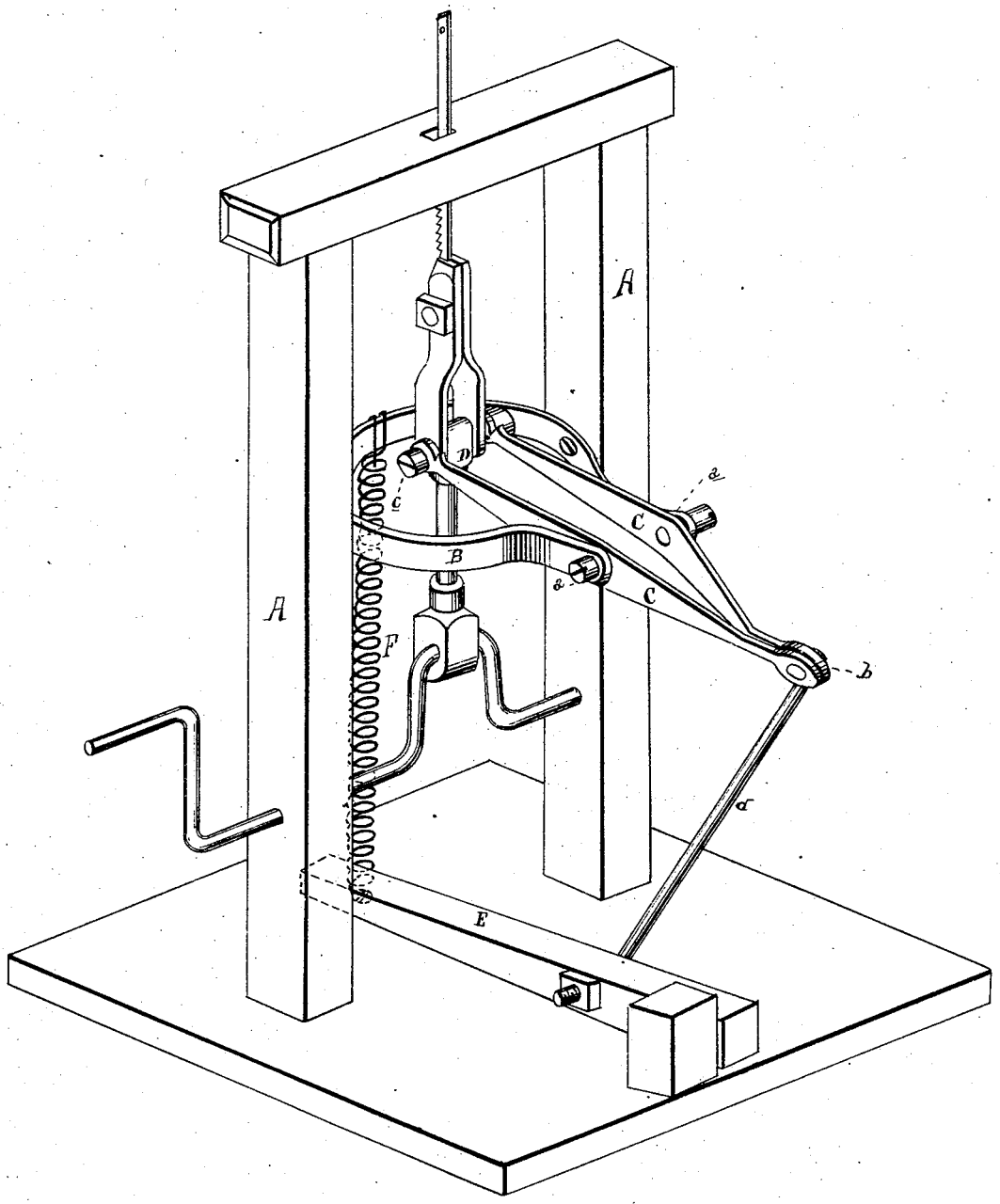
J. M. BEUGLER.

Scroll-Saw.

No. 160,144. Patented Feb. 23, 1875.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES M. BEUGLER, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN SCROLL-SAWS.

Specification forming part of Letters Patent No. **160,141**, dated February 23, 1875; application filed February 4, 1875.

To all whom it may concern:

Be it known that I, JAMES M. BEUGLER, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented a new and useful Improvement in Scroll-Saws; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is an improvement in the application of vertical reciprocating motion to gig, scroll, or upright saws or other tools, which will be simple in construction and effective in result; and my invention therein consists in forming a yoke pivoted at its least diameter in suitable bearings, and also pivoted at its ends to a rocking beam, said beam being pivoted at its center to the ends of the yoke, and provided on its inner end with a suitable clamp to attach to the lower end of the saw or other tool to be worked. The outer end of the rocking beam is connected, by a rod, with a suitable treadle, the movement of which changes the rake of the saw. The inner end of the rocking beam is pivoted to a crank-rod, which gives motion to the machine. And my invention further consists in providing the yoke with a suitable spring to take up the slack in the bearings, and stop or prevent the rattling of the parts, all as is more fully hereinafter explained.

To enable others skilled in the art to make and use my invention, I now proceed to describe the same in connection with the drawings, in which the figure is a perspective view of my machine.

Like letters denote similar parts in the figure.

In the drawings, A represents any suitable frame-work, which may be made differently to adapt it to different machines. In this frame-work, below the table of the machine, is pivoted a yoke, B. This yoke is pear-shaped in its outline, having its ends *a a* projecting, and is pivoted on the line of its least diameter to the frame-work before mentioned. Its greatest diameter is about twice the length of the stroke. To the ends *a a* of the yoke B is pivoted, at its middle point, a rocking beam, C, preferably made in two parts, connected at its outer end *b*, and spreading out to its inner end, where it has a bolt, *c*, passing through both parts. On the bolt *c* is secured the lower end of a clamp, for holding the lower end of the saw or tool to be reciprocated. On the bolt *c* is also sleeved the end of the crank-rod D. To the outer end *b* of the rocking beam C is pivoted a rod, *d*, attached to a treadle, E, which, when depressed, lowers the outer end of the rocking beam and raises the inner end, thus giving a rake to the saw. A spring, F, is secured to the inner end of the yoke, to take up the slack in the bearings, and give the machine an easy motion, and prevent all rattling and jar of the parts.

By the rocking of the yoke the motion given to the rocking beam by the crank-rod is transmitted to the saw or tool in a vertical direction at right angles to the table of the machine, and by moving the treadle the proper rake may be given to the saw or tool which is being operated.

This device is intended more particularly to be applied to gig or scroll saws or filing-tools, but can also be used in sawing or other machinery where a vertical reciprocating motion is required.

It will be seen that the advantages of this improvement consist in its great simplicity of construction and in the firmness of the working parts, which enables it to be readily understood and easily and cheaply made. The absence of all jar and rattle so common to machines gives it an additional value, which can scarcely be appreciated.

Having thus described my invention and explained some of its advantages, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the yoke B, pivoted as described, rocking lever C, and crank-rod D, substantially as and for the purpose set forth.

2. The combination of the yoke B, rocking beam C, crank-rod D, treadle E, and rod *d*, substantially as and for the purpose set forth.

3. The combination of the yoke B, rocking beam C, crank-rod D, and spring F, substantially as and for the purpose set forth.

This specification signed and witnessed this 1st day of February, 1875.

JAMES M. BEUGLER.

Witnesses:

W. P. RILEY,

BERNHARD BERNDT.