E. ANDERSON.

SCROLL SAWING MACHINE.

No. 181,762. Patented Sept. 5, 1876.

Fig. 1.

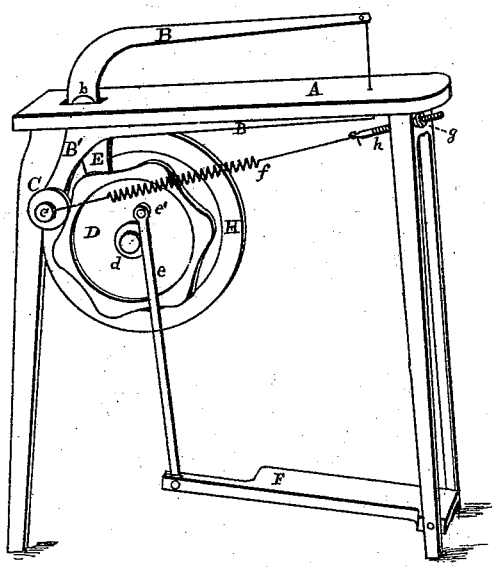
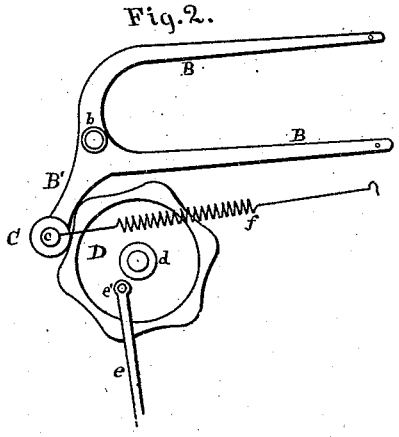


Fig. 2.



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EUCLID ANDERSON, OF PEEKSKILL, NEW YORK.

IMPROVEMENT IN SCROLL-SAWING MACHINES.

Specification forming part of Letters Patent No. **181,762**, dated September 5, 1876; application filed January 17, 1876.

To all whom it may concern:

Be it known that I, EUCLID ANDERSON, of Peekskill, in the county of Westchester and State of New York, have invented an Improvement in Scroll-Sawing Machines, of which the following is a specification:

This invention relates to that class of sawing-machines used mainly by amateurs for scoll and other delicate kinds of sawing, and designed mainly to be operated by foot-power, though not necessarily so.

The object of this invention is to dispense with the generally-used means of imparting reciprocating motion to the saw, and to substitute a movement that shall be simpler, cheaper, and more effectual; and this object is attained by using a polygonal cam to oscillate the saw-frame, which movement also secures other advantages, as by it the friction is reduced and less power is required to do a given amount of work; and as it gives a positive movement to the down or cutting stroke of the saw, metal even may with facility be sawed, and such a cam also prevents the machine stopping on a dead-center.

In the drawings attached, Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a plan, showing the essential parts in a clearer manner.

In Fig. 1, A is the table or top of the machine, which may be supported on three or more legs. B B B′ is the saw-frame, which is attached to the table by and swings on the pivot *b*. The saw is strained between the extremities of the arms B B, in the manner common to saws of this class. The short arm B′ is an extension of the saw-frame, and carries at its extremity the roller C. D is a cam, preferably of six sides, as shown, against which the roller C is caused to press by the spring *f*, so that when the cam D is rotated the saw-frame is caused to vibrate and give a proper motion to the saw. The curves of the circumference of the cam are so made as to give a motion to the saw similar to that derived from the crank. The cam D is carried on the end (in this instance) of a short shaft, that has a bearing in the piece E, which may be a part of the leg or frame of the machine. To the other end of the shaft is attached the fly-wheel H, which gives steadiness of motion to the whole, though the cam and fly-wheel may be cast together; or the cam itself may be made heavy enough to answer the purpose of a fly-wheel.

The cam may be of any number of sides; but six is preferable, as it gives a sufficient speed to the saw without a rapid movement of the foot, and answers best for keeping the treadle off of the dead-center when the machine is at rest. The pressure of the spring *f* on the roller causes the cam to stop with the roller in the most depressed part of one of the sides, and as the crank-pin *e′* is placed with reference to this position of the cam, it follows that it will not stop on the center.

The tension of the spring *f* is regulated by the screw and nut *h g*, Fig. 1.

F is the treadle, and *e* is the pitman, through which motion is communicated to the machine.

I do not claim as new the application of a cam to a saw; neither do I claim the saw-frame swinging on a pivot at or near the surface of the table, as I am aware that both have been in use for years; but my method of arranging and using said devices produces a more simple, easy-working, and perfect sawing-machine for small scroll-work than has heretofore been shown.

I claim as my invention—

1. The saw-frame B B, having projecting arm B′, roller C, spring *f*, and cam D, combined and operating substantially as described.

2. In combination, the cam D, arm B′, spring *f*, crank-pin *e*, pitman *e′*, and treadle F, arranged and operating substantially as and for the purpose hereinbefore set forth.

EUCLID ANDERSON.

Witnesses:

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