J. A. Talpey,

Scroll Sawing Machine.

No. 51,761. Patented Dec. 26, 1865.

Fig 3

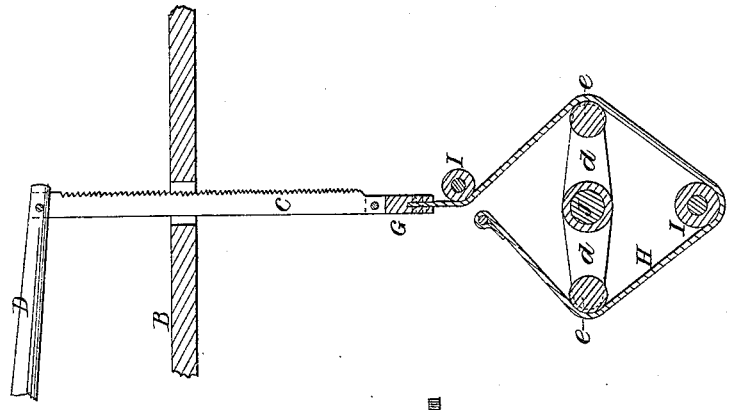


Fig 2

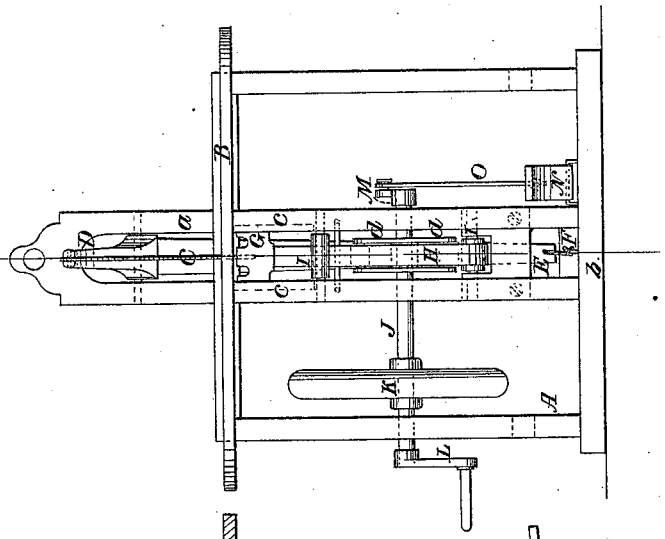
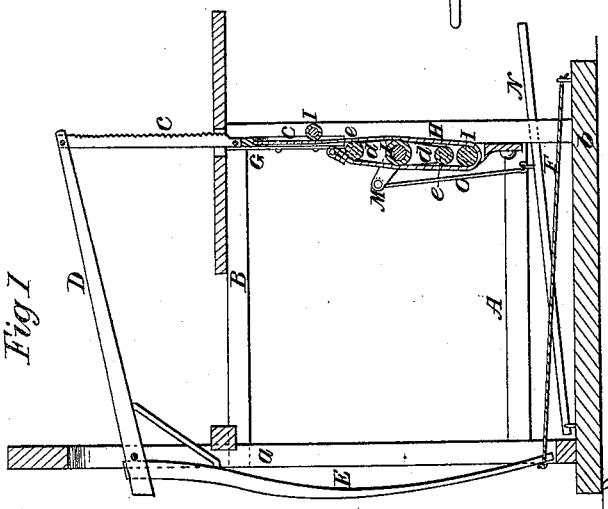


Fig 1



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH A. TALPEY, OF SOMERVILLE, MASSACHUSETTS.

IMPROVEMENT IN SCROLL-SAWING MACHINES.

Specification forming part of Letters Patent No. **51,761**, dated December 26, 1865.

To all whom it may concern:

Be it known that I, JOSEPH A. TALPEY, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Sawing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2. Fig. 2 is a front elevation of the same; Fig. 3, an enlarged side sectional view of the saw-driving mechanism.

Similar letters of reference indicate like parts.

This invention relates to a new and improved sawing-machine of that class in which the saw is strained and driven or operated without a sash or frame, and which are used principally for sawing scroll or curved work.

The invention consists in a novel and improved means for operating the saw, as hereinafter fully shown and described, whereby a very compact machine of the kind is obtained, and one which may be operated by hand or by the foot of the operator through the medium of a treadle with the greatest facility.

A represents a framing, which may be constructed in any proper manner to support a horizontal platform, B, and the working parts of the machine.

C represents the saw, the upper end of which is secured to one end of a bar, D, the opposite end of the latter working on a shaft or between centers in an upright, *a*, of the framing A. The rear end of the bar D has a pendent spring, E, attached to it, the lower end of which is connected by a cord or chain, F, to the base *b* of the machine, as shown clearly in Fig. 1.

The lower end of the saw C is attached to a slide, G, which is fitted and works between vertical guides *c c* in the framing A; and to the slide G there is attached a strap, H, of leather or other suitable flexible material, which passes around rollers I I′ working in fixed bearings in the framing, the end of said strap being secured in or to the framing A at such a point that the strap will form what may be termed a "loop," as shown clearly in Figs. 1 and 3.

Within the loop of the strap H a cam works, said cam being on a shaft, J, having a fly-wheel, K, upon it, a hand-crank, L, at one end, and a crank, M, at the opposite end, to which a treadle, N, is connected by a pitman, O. (See Fig. 2.)

The cam is composed of arms *d d*, projecting radially from the shaft J at equal distances, and having rollers *e* at their outer ends, which act against the strap H. Two of these arms are shown in the drawings projecting from opposite sides of the shaft; but more may be employed, if necessary.

From the above description it will be seen that as the shaft J is rotated the rollers *e* will at each half-revolution of the shaft spread apart the loop formed by the strap H, as shown in Fig. 3, and thereby draw down the saw C, the spring E throwing the saw upward as the rollers *e* approach a position vertically in line with the shaft J. Two strokes are consequently given the saw at each revolution of shaft J, the latter being rotated by either the hand or foot of the operator.

The advantage of this invention consists in the very rapid movement which may be given the saw by a simple and economical means, and one by which there is but a trifle of power lost by friction. The device is admirably adapted for foot or hand power for sawing small work.

I do not confine myself to two arms *d d* for the cam, for more may be employed; but two will probably be sufficient. More than two arms would give a greater number of vibrations to the saw at each revolution of shaft J, and for large or power machines such a cam might be adjustably used.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The flexible strap and cam, in connection with a spring or its equivalent, arranged and applied to a saw, to operate substantially in the manner as and for the purpose specified.

The above specification of my invention signed by me this 24th day of October, 1865.

JOSEPH A. TALPEY.

Witnesses:

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C. L. TOPLIFF.