H. L. BEACH.

SCROLL SAW.

No. 182,743. Patented Oct. 3, 1876.

Fig. 2.

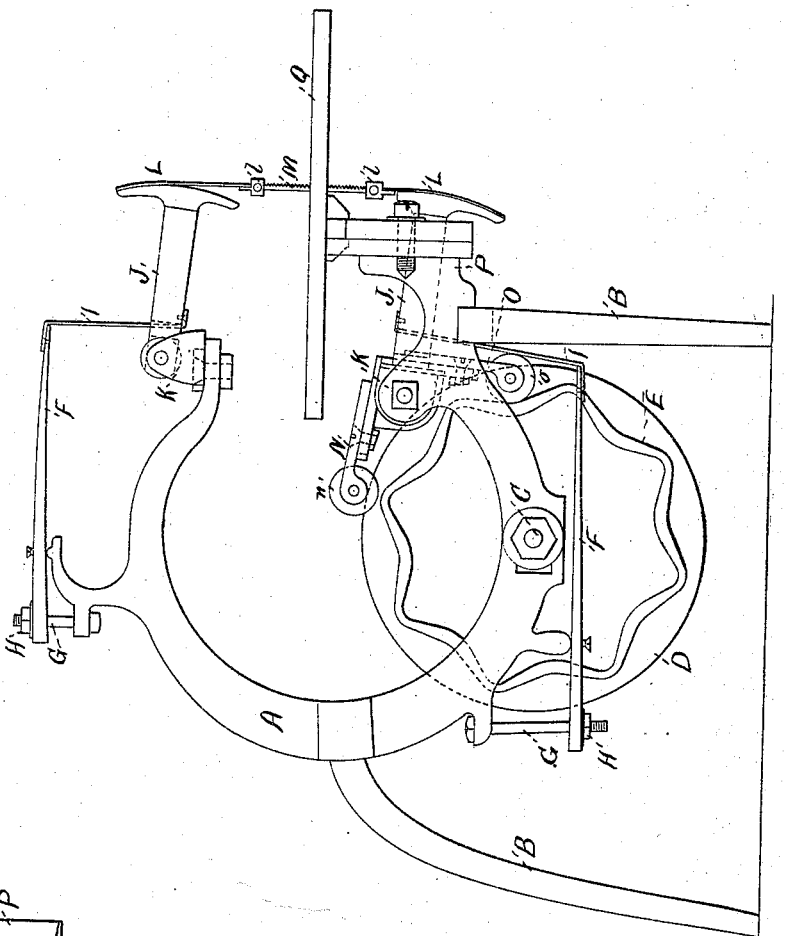


Fig. 3.

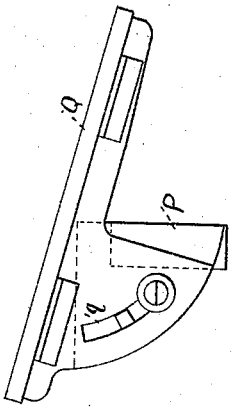
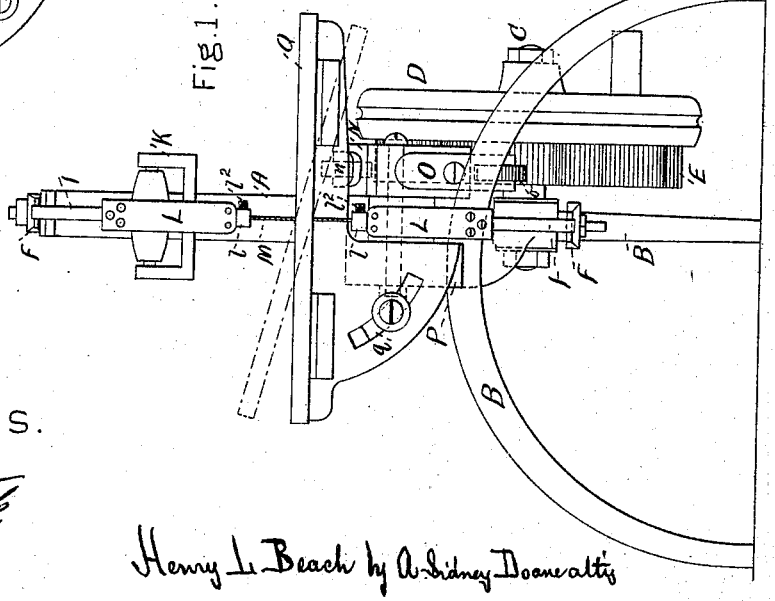


Fig. 1.



WITNESSES.

John. Cook

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INVENTOR.

UNITED STATES PATENT OFFICE.

HENRY L. BEACH, OF MONTROSE, PENNSYLVANIA.

IMPROVEMENT IN SCROLL-SAWS.

Specification forming part of Letters Patent No. **182,743**, dated October 3, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, HENRY L. BEACH, of Montrose, Susquehanna county, Pennsylvania, have invented, made, and applied to use Improvements in the Construction of Scroll-Saws, of which the following is a full, clear, and correct description, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a front view of my improved scroll-saw. Fig. 2 is a side view of the same. Fig. 3 is a view of the tilting table used by me.

In the drawing like parts of the invention are indicated by the same letters of reference.

The nature of the present invention consists in certain improvements in the construction of scroll-saws, as more fully hereinafter set forth; the object of the invention being the construction of a scroll-saw easily operated, and one that can be afforded at a low price, and applicable to the various classes of work performed by scroll-saws.

To enable those skilled in the arts to make and use my invention, I will describe the construction and operation of the same.

A is a frame, for supporting the operative parts of my scroll-saw, supported in position by the legs B. C is a spindle, inserted in the frame, upon which is placed a blank-wheel, D, having upon its inner side the surface-cam E. F shows flat springs, preferably made of wood, having their rear ends passed over bolts G, inserted in the frame A, over the threaded ends of which bolts G are screwed the nuts H, by means of which the tension of the springs F is regulated. To the forward ends of these springs F are attached the ends of the straps I, the opposite ends of these straps being attached to the rear ends of the levers J, the forward ends of which levers are elongated and curved, as clearly shown in the drawings. The rear ends of the levers J are extended, so as to form, as it were, axles, received and free to turn in the flanged pieces K, attached in line to the frame A.

Upon the forward ends of the levers J are riveted the ends of the plates of metal L, the forward or lower ends of which project a short distance below and away from the faces of the levers J, and have attached to them the plates *l*, provided with openings, in which are inserted the ends of the saw M, being held therein by set-screws l^2, entering the plate *l* and bearing upon the ends of the saw.

To the lower lever J are attached horizontally the slotted plates of metal N, one of which receives within its slotted portion a roller, *n*, free to revolve upon the bolt passed through it, and vertically-slotted plates of metal O, one of which supports, in like manner, a roller, *o*, free to revolve upon the bolt passed through it. These rollers *n* and *o* are so positioned as to have a bearing upon the cam E, and by them the saw M is operated.

Upon a support, P, secured upon the forward end of the frame A, is held the table Q of the machine, upon which the stuff to be sawed is laid. The table Q is provided with an opening, through which the saw M passes. The support proper of the table Q is continued in its manufacture, and is provided with a curved slot, *q*, through which and the support P is passed a headed screw; and the table Q can thus be tilted or placed at any angle to the saw M, and thus the stuff to be sawed can be so presented. This is an important feature, and will be found very desirable in certain classes of work to be done by the machine.

In Fig. 3 of the drawing a view of the tilting table is clearly shown.

Such being the construction, the operation may be briefly described.

The saw has its ends inserted and secured in the openings in the plates *l*, and the set-screws l^2 are tightened. The tension of the saw is then regulated by screwing or unscrewing the nuts H, bearing upon the rear ends of the springs F. The table Q is then adjusted to the proper position by loosening and then tightening the screw passed through the curved slot *q*, and the work is laid upon the table Q, ready for the saw. Motion is now communicated to the wheel D in any convenient way, and, as the roller *n* is brought into contact with a portion of the cam E, secured upon the wheel D, the saw M is drawn down through the stuff fed to it; and the springs F, connected to the curved levers J by the straps I, as set forth, have their forward ends depressed. The motion continuing, the roller *o* is brought to bear upon the cam E to cause

the return movement of the saw, which is facilitated by and through the expansion of the springs F.

A saw thus made is easily operated, and can be afforded at a low cost, and for the production of scroll-work of various kinds will be found efficient and reliable, particularly so as the table can be placed at almost any angle to the saw.

Having now set forth my invention, I distinctly disclaim the use of a cam movement as a means of depressing or drawing down a saw, as I am aware that the same has heretofore been availed of; but

I do claim as new and desire to secure by Letters Patent—

The combination of a tilting table, Q, saw M, having its ends held in the plates *l*, the rocking curved levers J, straps I, springs F, and wheel D, provided with a surface-cam, E, operating the rollers *n* and *o*, substantially as and for the purposes described.

H. L. BEACH.

Witnesses:
A. SIDNEY DOANE,
THOS. F. STODDARD.