S. Jackson, Jr.,

Scroll Sawing Machine,

No. 59,841, Patented Nov. 20, 1866.

Fig 2.

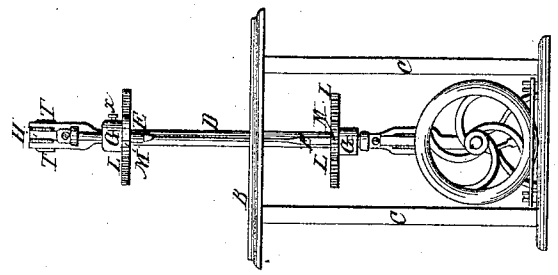


Fig 3.

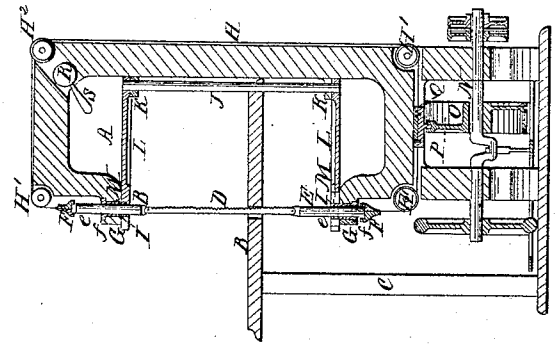
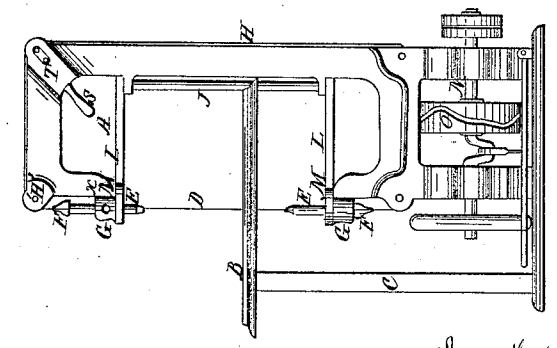


Fig 4.



Witnesses:

Jas Louge

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Inventor:

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United States Patent Office.

IMPROVEMENT IN SAW MILLS.

SAMUEL JACKSON, Jr, OF NEW YORK.

Letters Patent No. 59,841, *dated November* 20, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL JACKSON, Jr., of the city, county, and State of New York, have invented, made, and applied to use, certain new and useful improvements in the construction and operation of Scroll Saws; and I do declare the following to be a full, clear, and correct description of the same, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, in which—

Figure 1, a side elevation of my improved scroll saw.

Figure 2, a front elevation of the same.

Figure 3, a side sectional view of the same.

In the drawings, like parts of the invention are designated by the same letters of reference.

The nature of my invention consists in certain new and useful improvements in the construction and operation of scroll saws, as more fully hereinafter described.

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

A is a frame for supporting the operative parts of my improved saw. B is a table, suppported by the legs C, upon which the work to be sawed is placed. D shows the saw held and carried in the guides E, which guides, E, are provided with the caps F. These guides, E, pass through the projections G, upon the frame A, and are grooved upon their sides, as at *e*. The caps, F, are made in sections, and are placed and held, one over the top of the upper guide, and the other at the bottom of the lower guide. In these caps, F, the guides, E, turn freely, so that when the saw, D, is adjusted as hereinafter described, the belt, H, shall be unmoved. H shows a belt for driving the saw, which belt may be of steel, the ends of which belt are inserted and held in the caps F. This belt passes over the pulleys, H^1 and H^2, and the frame, A. I are movable boxes placed within the projections G, through which movable boxes the guides, E, pass. These movable boxes are provided with projections, *f*, *f*, fitting into the grooves, *e*, upon the guides, E. J is an upright shaft, supported by the lugs, K, upon the frame, A. L shows upper and lower segmental gears, keyed upon the upper and lower ends of the shaft, J. Two gears are used, in order that when the saw is turned the upper and lower portions of the same may be turned simultaneously, thus preventing twisting of the saw. These segmental gears gear into the pinions, M, keyed upon the movable boxes, I. N is the main or driving shaft of the machine, inserted in the lower portion of the frame, A. This shaft is provided with the grooved cam wheel O, into which plays the pin P, attached to the guide Q, which moves in a groove upon the inner side of the frame A, and to which guide the belt, H, is attached. R is a cam inserted in the frame A, which cam is operated by the handle S, and serves to move he sliding plates T, to which is attached the pulley, H^2.

My improved saw being thus constructed, the operation is as follows: Motion being imparted to the driving shaft by any convenient motor, is communicated through the cam wheel to the belt H, through the guide Q, provided with the pin P, and the saw being connected to the belt, as shown, is set in motion also. When desirable to turn the saw in any direction, either entirely or part way round, the set-screw *x*, inserted in the projection, G, upon the frame A, and bearing against the movable box, I, is loosened, and by turning the segmental gears, which gear into the pinions held upon the movable boxes provided with the projections, *f*, which fit into the grooves, *e*, upon the guides E, to which the saw, D, is attached, the saw may be turned in any direction; as these guides, E, turn freely within the caps F, the belt H remains unmoved while the saw is being turned.

When desired to tighten the belt and render the saw more rigid, the handle S is depressed, raising the cam R, bearing against the sliding plates T, to which is attached the pulley H^2, and thus throwing the pulley out and tightening the belt.

My improvement is intended particularly for light work and for work where small power is required.

The saw in my machine is so constructed and operated that it can be turned in any direction without danger of twisting, thus enabling the operator to accomplish very much more work than would otherwise result.

The use of the cam wheel, giving motion to the belt, is simple and durable, while by the use of a single belt the tension of the saw is more uniform than where two belts or a spring and a belt are employed.

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

1. The combination of the segmental gears, pinions, movable boxes, caps, and grooved guides, for turning the saw while retaining the belt in position, when the same shall be constructed and operated substantially as shown.

2. The combination of the belt, grooved cam wheel, and sliding guide, for the purpose specified.

SAMUEL JACKSON, Jr.

Witnesses:

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