J. W. PENNEY.

SCROLL-SAWING MACHINES.

No. 192,597. Patented July 3, 1877.

FIG. 1.

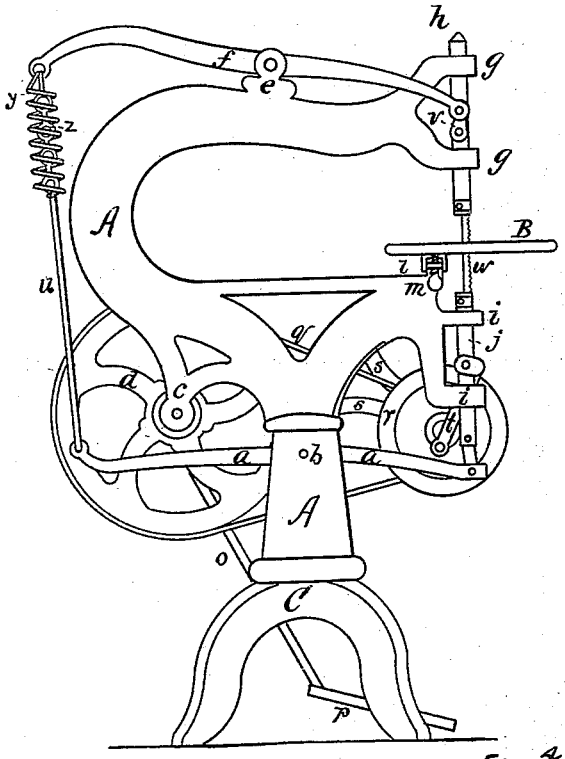


FIG 2.

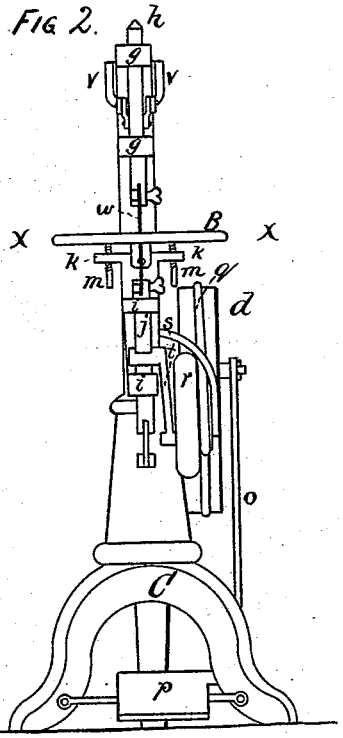


FIG 3.

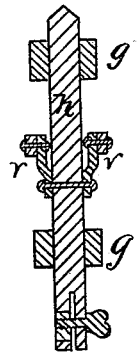


FIG 4.

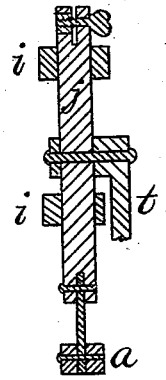
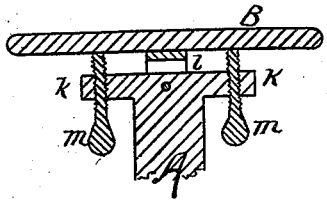


FIG 5.



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JOHN W. PENNEY, OF MECHANICS FALLS, MAINE.

IMPROVEMENT IN SCROLL-SAWING MACHINES.

Specification forming part of Letters Patent No. **192,597**, dated July 3, 1877; application filed May 2, 1877.

To all whom it may concern:

Be it known that I, JOHN W. PENNEY, of Mechanics Falls, in the county of Androscoggin and State of Maine, have invented a new and useful Improvement in Scroll-Sawing Machines, which invention is fully set forth in the following specification, reference being had to the accompanying drawing.

My invention consists in certain details of construction, arrangement, and combination of parts, as hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of my improved sawing-machine. Fig. 2 is a front elevation of the same. Fig. 3. is an enlarged vertical cross-section through the axis of the upper saw-slide. Fig. 4 is a similar section through the lower saw-slide. Fig. 5 is a vertical cross-section on line *x x*, Fig. 2, showing the table as hinged and supported on adjusting-screws.

The stand or frame A A is constructed of cast-iron, and is provided with a slot through which the oscillating lever *a* passes, and is pivoted therein at *b*, and formed with a pendent hanger, *c*, which supports the shaft of the driving-wheel *d*, a raised bearing or support for the pivot *e* of the rocking-lever *f*, with guides or bearings *g g* for the upper saw-slide *h*, and bearings *i i* for the under saw-slide *j*, and is also formed with a raised bed-piece having lateral projections *k k*, Fig. 2, to the center of which the hinge *l* of the table B is pivoted, and in the projections *k k* the supporting and adjusting screws *m m* are threaded. Thus the frame is formed and adapted in the casting to receive and support said operative parts in convenient combination and relation to each other.

The tripod-support C, upon which frame A is mounted, is cast or constructed separately and bolted to said frame. The table B, with its hinge *l*, may be cast in one piece. The table is thus hinged to the frame and supported, in order that it may be adjusted obliquely to the line of the saw, so that the stock resting upon it to be sawed may be cut beveling. When two thicknesses are thus sawed with a proper bevel the pieces cut therefrom, if the stock is thin, may be interchanged in the boards so cut and fitted with nicety. And when the woods so cut are of different colors the pieces of fancy design sawed therefrom, if so interchanged, will form ornamental inlaid work of great beauty, which is thus cheaply constructed, and such as is now in quite common use. By the use of the screws *m m*, on opposite sides of the hinge *l*, said table is supported, and may be firmly held in a level or horizontal position, as shown, or may be adjusted to and supported in an inclined position oblique to the plane of the saw, as may be desired, for the purpose above stated.

To the pendent hanger *c* is secured the shaft or axis of the driving-wheel *d*, which is connected with the treadle *p* by the pitman *o*. This wheel is also connected, by a belt, *q*, to the small crank-wheel *r*, which latter wheel is journaled upon a bracket, *s*, secured to said frame A. A pitman, *t*, connects this wheel with the under saw-slide *j*, as shown, and thus, when the operator actuates the treadle *p*, the movement is imparted, through wheels *d* and *r* and crank-pitman *t*, to said slide *j*. Said slide is united by a link at its lower extremity to the pivoted lever *a*, which is attached to the lever *f* by the connector *u*, and lever *f*, branching to the right and left of head *g*, is secured, through pivoted links *v v*, to the upper saw-slide *h*, as shown. Therefore, when movement is imparted to slide *j*, as above described, a corresponding movement is transmitted, through the connections just named, to the slide *h*. When the saw *w* is securely clamped in its place in slide *j*, by means of the screw-clamp in said slide, as shown, said slides *h* and *j* are pressed toward each other with sufficient force to rigidly tighten connector *u*, and while so held the upper end of the saw is properly inserted in and firmly clamped to slide *h*, and thereby the proper tension is secured thereon.

A special feature of my invention consists in making connector *u* contractible by reason of its linked portion *z*, and in combining therewith an elastic spring, *y*. This spring is sufficiently elastic to not exert undue strain upon the saw, as its purpose is not to produce tension thereon, as that is obtained, as before stated, by straining the connector *u* to its full length, and then clamping the saw securely in its slides. But by the contractibility of connector *u* said spring is also permitted to act by contraction, and is thus employed for the

purpose of operating lever *f* to throw up slide *h* when the saw is released from said slide, in order to facilitate the removal of the work from the table when completed, or its adjustment thereon when preparing for or during the process of sawing the same according to fancy designs, and on disconnected lines. It may be preferable to construct said connector *u* wholly of chain, or contractible its entire length; and the spring *y*, in such case, may extend the whole length of the connector, or from lever to lever, the object being to have a connector limited in its longitudinal extension to the requirements of the machine, but at the same time contractible to the extent necessary for the purpose specified, and combined therewith an elastic connector sufficiently active and forcible to thus contract and raise said slide *h*, as and for the purpose described.

I am aware that many of the devices herein described, separately considered, are not new; but the construction, arrangement, and combination thereof, as herein shown and described, are believed to be new, and to possess advantages over the machines for like purposes heretofore made.

I therefore claim as my invention—

1. In combination with the pivoted reciprocating levers *a f*, the contractible connector *u*, composed wholly or in part of chain *z*, and a spring, *y*, whereby such connector is not extensible when at its full length, but is contractible by the action of spring *y* when the saw *w* is removed, substantially as described and shown.

2. The combination of projections *k k*, formed on frame A, screws *m m*, and the hinged table B, constructed and arranged to operate together, substantially as shown and described.

JOHN W. PENNEY.

Witnesses:

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JAMES G. GERRY.