W. PALEN.

SCROLL-SAWING MACHINES.

No. 195,302. Patented Sept. 18, 1877.

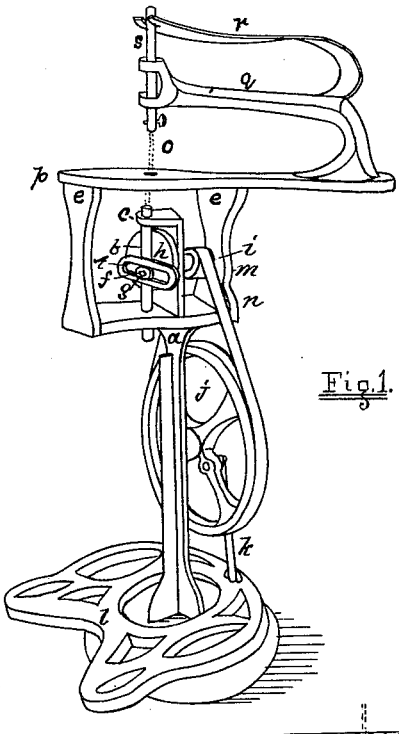

Fig. 1.

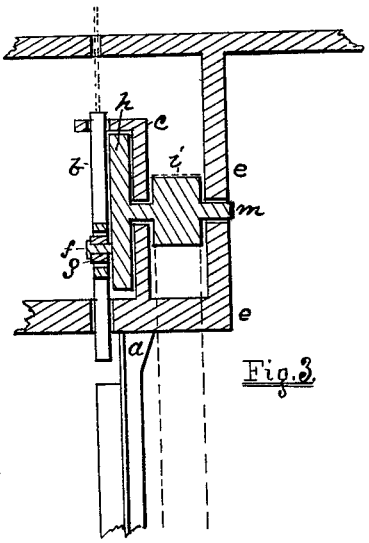

Fig. 3.

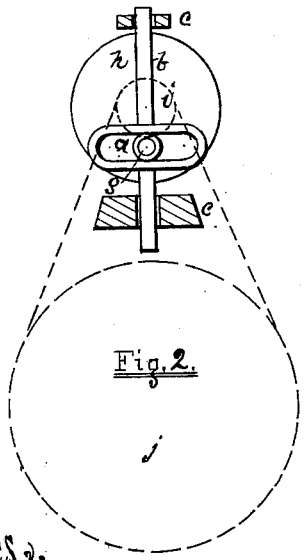

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIS PALEN, OF PATERSON, NEW JERSEY.

IMPROVEMENT IN SCROLL-SAWING MACHINES.

Specification forming part of Letters Patent No. **195,302**, dated September 18, 1877; application filed February 10, 1877.

To all whom it may concern:

Be it known that I, WILLIS PALEN, of the city of Paterson, county of Passaic and State of New Jersey, have invented a new and useful Improvement in Scroll-Sawing Machines, which improvement in fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to furnish a new and useful improvement in scroll-sawing machine, by which improvement I do away with the use of a pitman from below, on which we have hitherto depended as a means for driving the saw, and to furnish in its stead a slot-and-pivot motion, driven by means of a pulley and belt from the fly-wheel below, the whole being arranged in a neat and compact form directly underneath the table, where it is out of the way.

My invention also enables me to present, for the convenience of sawyers, a motion by which a great difficulty is obviated and overcome, as it will be readily seen that, in starting my machine, it makes no difference which way the fly-wheel turns, it working equally well with either a right or left motion, doing away with the necessity of stopping the machine when the wheel starts in the wrong direction, which is frequently the case with all other machines of the same class now in use; and, besides the advantages above set forth, my invention enables me to furnish a jig or scroll saw more compact in form than any now in use, it being arranged on a leg or standard which can be either screwed to the floor or on a box, so as to be moved about at pleasure, the foot-piece or treadle being so constructed as to encircle the standard, so that it takes up but little additional room.

Another advantage of my invention is, it is so constructed that it can be transferred from the standard to a turning-lathe or sewing-machine frame, and, when connected with the fly-wheel of either, will saw equally as well as when on the standard.

Figure 1 is a perspective or general view, showing the machine complete in all of its parts. Fig. 2 is a face view of my invention in connection with the fly-wheel by means of a belt, as shown by dotted lines. Fig. 3 is a sectional view, showing the construction of the parts in their connection with the frame.

A represents the slot; *b*, the jig-shaft, at the upper end of which the saw is attached by the ordinary means, as shown in Fig. 1. *c* represents the bracket, through which the shaft *m* passes, and which forms a journal for the same, as shown in Fig. 3, and which also acts as a guide for the jig-shaft at the top end, as shown in Fig. 1, the fly-wheel *j* being connected with the pulley *i* by means of the belt *n*, which, when set in motion, drives the shaft *m*, on the end of which is the face-plate *h*, in which is arranged the pivot *f*, which, running through the slot A, and revolving with the face-plate *h*, gives the motion to the jig-shaft *b* for driving the saw *o*.

On the pivot *f* is arranged the roller *g*, which, when in motion, travels with the pitman or jig-shaft *b* in the circuit of slot A on the pivot *f*, which forms an easy motion therein. These parts, traveling together in the circuit or slot A, cause no friction.

The shaft *b*, as well as the roller *g* and pivot *f*, may be made out of wrought-iron, steel, brass, or any other materials that are considered essential. It will also be seen that a longer as well as a shorter, and a quicker as well as a slower, motion can be given to the saw by placing the pivot *f* nearer to or farther from the center of the face-plate *h* by means of holes arranged therein for that purpose.

The saw *o*, passing through the top or table, connects with the connecting-rod *s*, which, passing through the arm *o* and connecting with the spring *r*, makes the connection complete, as shown in Fig. 1.

What I claim as my invention is—

In a scroll-sawing machine, the combination of bracket *c* with the shaft *m*, having pulley *i* and face-plate or disk *h*, provided with stud *f*, carrying roller *g*, the shaft *b*, having link *a*, the saw *o*, rods *s*, spring *r*, guide *q*, wheel *j*, belt *n*, and treadle *k l*, all constructed and operating as shown and described, and for the purpose set forth.

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