W. W. Hubbard,

Scroll Sawing Machine.

No. 80,958. Patented Aug. 11, 1868.

Fig 1.

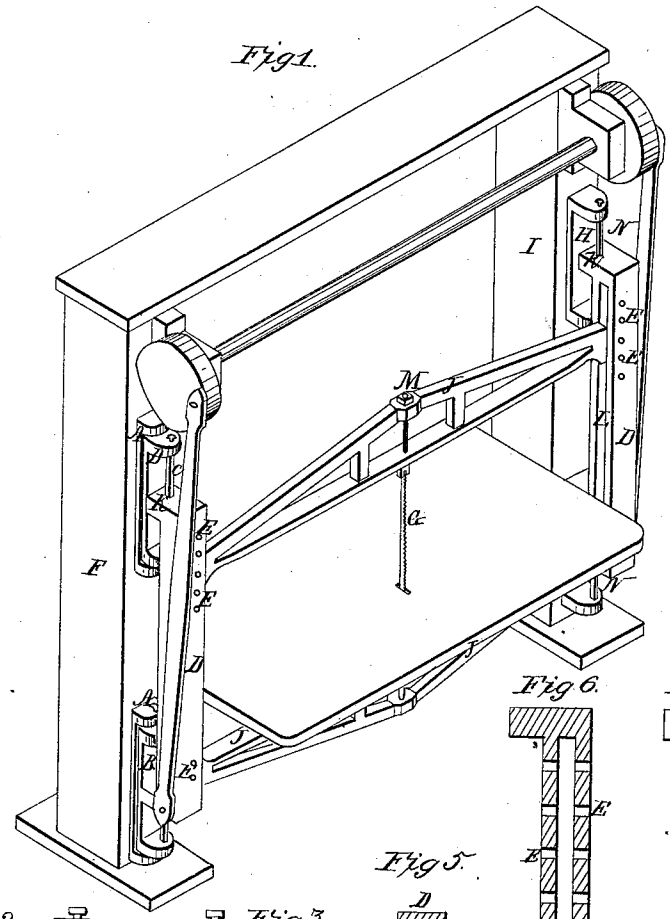


Fig 2.

Fig 3.

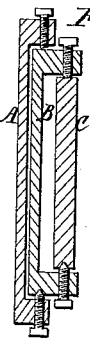


Fig 4.

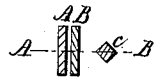


Fig 5.

Fig 6.

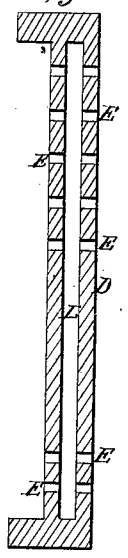
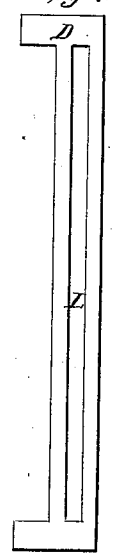


Fig 7.



Witnesses:

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WILLIAM W. HUBBARD, OF MANCHESTER, NEW HAMPSHIRE.

Letters Patent No. 80,958, *dated August* 11, 1868.

IMPROVEMENT IN SCROLL-SAWING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM W. HUBBARD, of Manchester, in the county of Hillsboro, and State of New Hampshire, have invented a new and useful Improvement in Scroll-Sawing Machines; 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 a part of this specification, in which—

Figure 1 represents a partial front and side elevation of the machine, with all its parts adjusted.

Figure 2 represents a side elevation of the double yoke.

Figure 3 is a vertical section of the double yoke through the plane A B, Figure 4.

Figure 5 is a transverse section of the hollow beam D.

Figure 6 is a vertical section of the hollow beam D through the plane of the bolt-holes E E.

Figure 7 is a side elevation of the hollow beam D.

Similar letters of reference indicate like parts.

This invention relates to a scroll-sawing machine, having its trusses adjusted to a hollow beam, by means of bolts easily removable, to suit the varying lengths of saws; also, to a double yoke, securely fastened to the front of the upright posts, said yoke supporting the steel slide, operating in combination with the sliding boxes of the hollow beam to which the trusses are adjusted.

The prominent features desirable to be obtained in the construction of scroll-sawing machines are lightness, strength, ease in adjustment of the saws, and a firm and steady movement of the boxes on their slides.

This invention consists, first, in the double yoke, constructed in three parts, viz, the casting A, the casting B, and the steel slide C. The casting B is hung on adjustable centres within the casting A. The slide C is also hung on adjustable centres within the casting B, as shown in figs. 2 and 3.

The casting A is securely fastened, by bolting or otherwise, to the front of the posts F and I.

The use and operation of the double yoke A and B are as follows, viz:

When the machine is in rapid motion, the casting B has a slight lateral motion, corresponding with the strokes of the saw G, thus preventing the slide C from heating, also preventing the rigid slide N, hung within the casting H, on the post I, from heating. The lateral motion above referred to is produced in part by the vibration of the trusses J J, by its momentum, and the pressure of the work against the teeth of the saw G, during the operation of sawing.

I would here remark that I have practically tested the utility of the yielding yoke B in the full-size machine, which I now have in daily operation, and I find that a more close-fitting sliding box, K, can be run upon the slide C at a high speed, without heating the same, by means of this device, in combination with the hollow beam, than by any other method heretofore employed.

The hollow beams D D combine lightness and strength, a valuable consideration in the kind of saw-frame generally termed "sash-gate." The hollow beams D D have also elongated recesses, L L, admitting the ends of the trusses J J, thereby permitting them to be readily adjusted for saws of variable lengths, by means of the removable bolts E E. The resting-points or bearings of the trusses J J are the bolts E E, upon which the trusses turn slightly whenever the saw G is tightened by means of the nut M.

The trusses have also another slight turning upon the bolts E E, at every stroke of the saw, produced both by momentum and inertia, and, being thus allowed to turn slightly, the hollow beams D D are relieved from any tendency to throw out of line the sliding boxes K K.

My invention is equally applicable to "mill-sawing" of heavy logs, timber, &c.

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

1. The double yoke A B, supporting the slide C, operating in combination with the boxes K K.

2. The mode of adjusting the trusses J J, by means of the bearings E E, or their equivalent, in combination with the hollow beams D D, substantially as and for the purpose set forth.

The above specification of my invention signed by me, this nineteenth day of May, one thousand eight hundred and sixty-eight.

WM. W. HUBBARD.

Witnesses:

JOSEPH CARR,

ISAAC W. SMITH.