

(No Model.)

2 Sheets—Sheet 1.

A. SHOWALTER.

SCROLL SAW AND EDGE MOLDER.

No. 272,785.

Patented Feb. 20, 1883.

Fig. 1

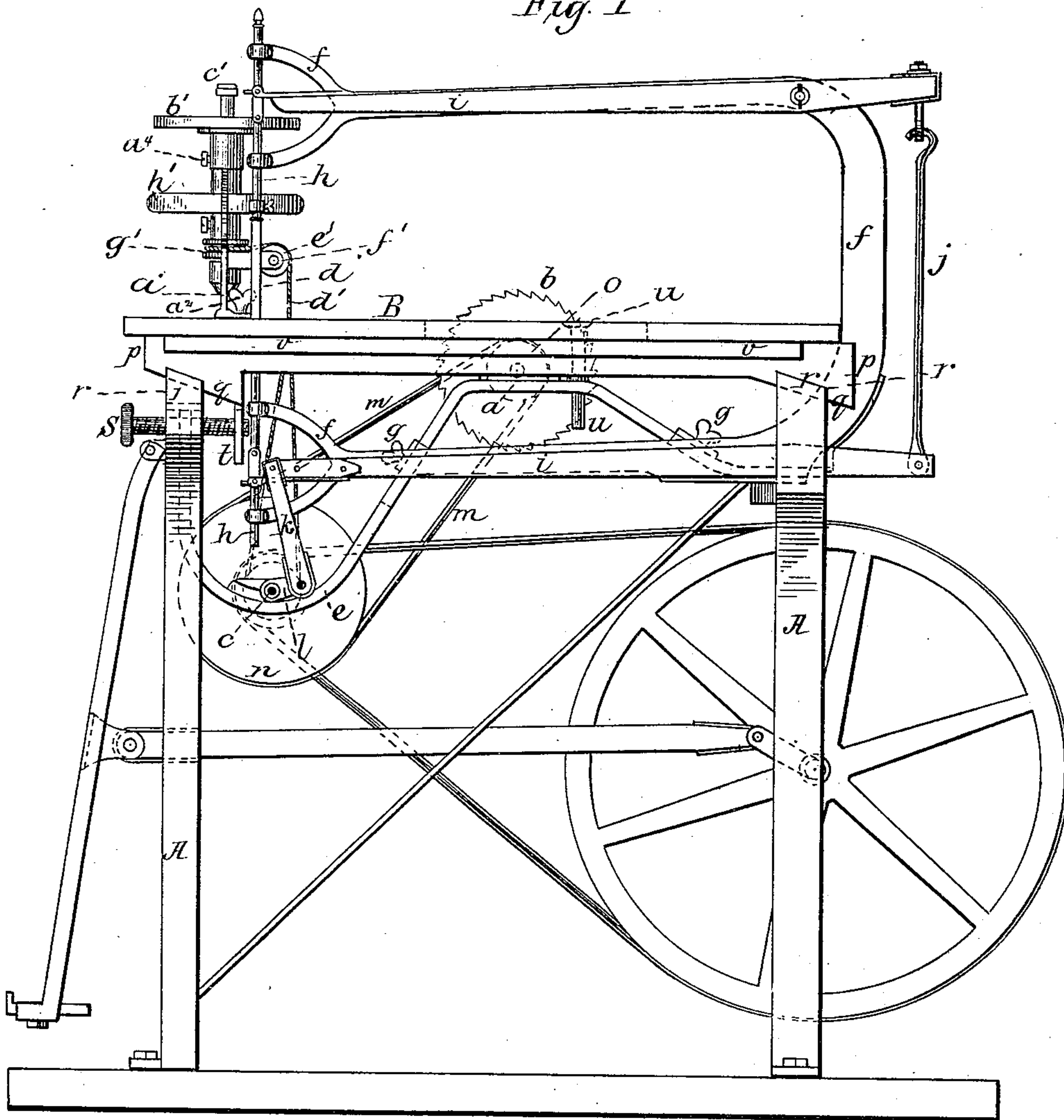
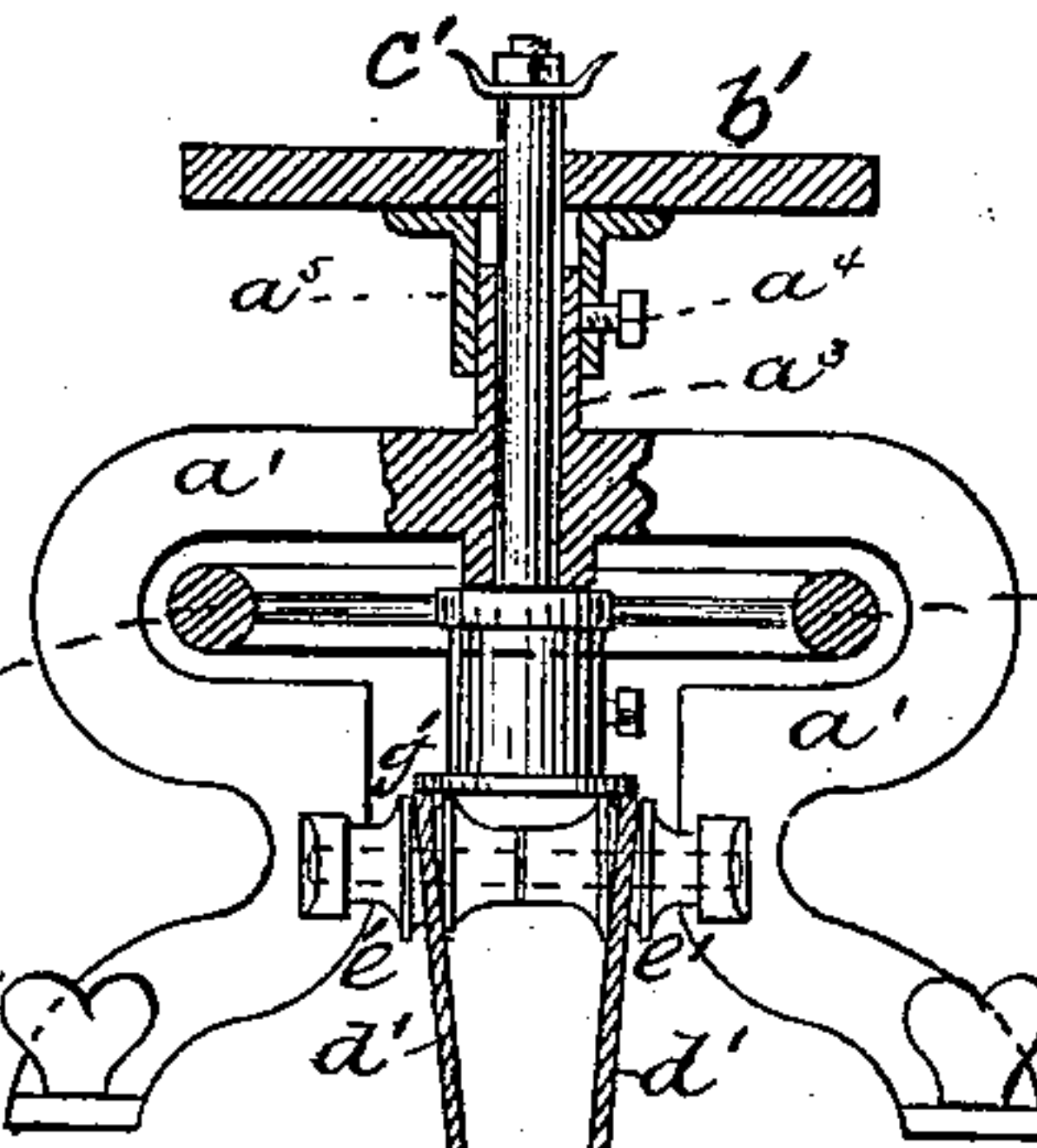


Fig. 5.



Witnesses:

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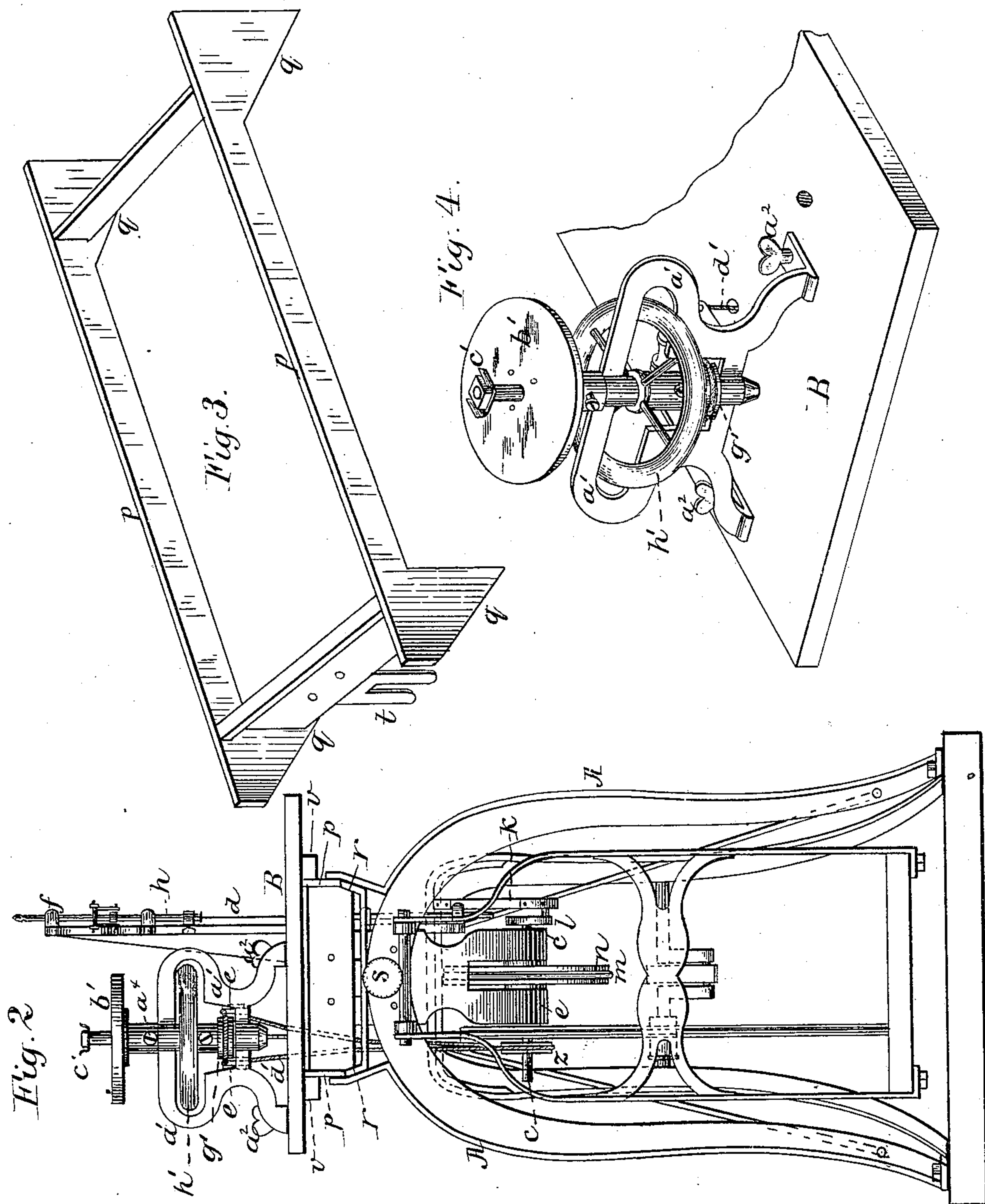
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UNITED STATES PATENT OFFICE.

ABRAHAM SHOWALTER, OF PATASKALA, OHIO.

SCROLL-SAW AND EDGE-MOLDER.

SPECIFICATION forming part of Letters Patent No. 272,785, dated February 20, 1883.

Application filed October 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM SHOWALTER, a citizen of the United States, residing at Pataskala, in the county of Licking and State of Ohio, have invented new and useful Improvements in Combined Sawing and Wood-Working Machine, of which the following is a specification.

I have combined with the sawing-machine a wood-working attachment for edge-molding brackets or other regular or irregular work, such molding attachment being mounted upon the table and driven from the saw-operating shaft by a cord belt rendered operative by the vertical adjustment of the table. The table is supported solidly upon a frame of planed iron ways formed with inclines at each end, and adapted for adjustment horizontally upon the main frame for the purpose of effecting the vertical adjustment of the table, which is pinned to some fixed part of the main frame, so as to be free to rise and fall only. The edge-molding attachment consists of a frame clamped upon the table carrying the cutter-spindle, a fixed table below the shaping-cutter, and a suitable arrangement of pulleys for the operating belt-cord, by which to drive the wood-worker, when desired, by adjusting the table, as stated. The adaptation of the machine for ripping and for scroll-work by the scroll and circular saws and for edge-molding renders it very desirable for carpenters and for cabinet-makers for doing a variety of work hitherto done by separate machines.

Referring to the accompanying drawings, Figure 1 represents a side elevation of the machine; Fig. 2, a front view; Fig. 3, the supporting sliding frame of planed ways for the table; Fig. 4, the edge-molding attachment, and Fig. 5 a partial sectional view of the same.

The frame consists of castings A A, forming front and rear legs, united by diagonal braces, and a top plate bent upward and downward, and firmly bolted to the tops of the leg-castings.

The table B is supported upon a metallic frame of planed ways, having end inclines, upon which it is adapted for horizontal adjustment upon suitable supports of the leg-castings to raise and lower the table which is pinned to the frame, as will be hereinafter more particularly described.

The top plate has an elevated middle part, *a*, upon which the shaft of the circular saw *b* is mounted in suitable bearings, while the crank-shaft *c*, for operating the scroll-saw *d*, is mounted in a hanger bent front part, *e*, of said top plate, so as to have a proper relation to the lower guide-rod for said saw. A U-shaped frame, *f*, is removably secured by bolts *g g* to the top plate, with one arm extending horizontally beneath the table and the other arm horizontally above the table from the rear, the front ends of said arms being forked and forming the guides for the vertically-reciprocating guide-rods *h h* of the scroll-saw. The guide-rods are suitably secured to the front ends of bars *i i*, pivoted to the rear part of the U-frame, and connected at their rear ends by a stretcher-rod, *j*, and the scroll-saw thus connected is operated by the rod *k*, connecting the crank *l* of the operating-shaft with the front end of the lower pivoted bar. The two saw-operating shafts are connected by a band, *m*, passing over a large pulley, *n*, on the crank-shaft, and a small pulley, *o*, on the circular-saw shaft, by which said saw is driven at a high speed.

The several working parts of the machine are operated from the crank-shaft by foot-power, which may be as shown or of any suitable construction.

The scroll-saw and its attachments are made removable from the frame, and the circular saw is also made removable from its shaft, so that either saw may be used, as required, for the work. The carrying parts of the scroll-saw are made to adjust or turn horizontally around in any desired direction, which is very useful in sawing long stuff that would not pass the rear standard of the U-frame, as described in a patent granted to me February 14, 1882.

As stated, the table is carried by a horizontally-adjustable frame of planed ways, *p p*, of a length about equal to that of the table, and connected by cross-bars, making a rigid rectangular frame, the upper edges of the side plates forming the ways upon which the table rests. Each end of the planed ways terminates in bottom inclined planes, *q q*, standing in the same direction, and rests upon suitable vertical supports, *r r*, of the leg-castings, upon which said frame is free to be moved horizontally to set it higher or lower. This horizontal adjustment of the table-carrying frame is

effected by a thumb-screw, *s*, screwed through the front-leg casting at the top, and connected by a grooved end with an arm, *t*, depending from the front cross-bar of said frame.

5 The table is pinned to the elevated part of the top plate by a headed pin, *u*, so that it cannot slide, but must rise and fall under the horizontal sliding adjustment of its supporting-frame. The table is held from twisting or
10 lateral displacement by cleats *v*, secured to its under side so as to join the outer sides of the planed ways, so that the pinning of the table to the fixed top plate and the bottom cleats serve to hold the table firmly in position and
15 allow it to be raised and lowered with its pin, which passes through a tubular projection of the top plate. The table can also be removed when desired to remove or replace the circular saw. This vertical adjustment of the table is
20 provided for setting it above the circular saw and for controlling the operation of the edge-molding attachment, which I will now describe. It consists of a cast-iron frame, *a'*, bolted by fret and thumb screws *a²* to the top
25 of the table at the front, and carrying a small work-table, *b'*, detachably clamped to a tubular top of said frame, and a cutter-carrying spindle mounted in bearings in said frame, with its cutter-head *c'* above the table. A cord, *d'*,
30 passes from a pulley, *z*, on the crank-shaft *c*, over small pulleys *e' e'*, mounted in arms *f' f'* of frame *a'*, and around a pulley, *g'*, on said spindle, and operates the latter when the table is raised to tighten the cord *d'*, as explained.

35 The cutter-carrying spindle has a balance-wheel, *h'*, and the cutter is adapted for being revolved in either direction.

The edge-molding attachment can be applied and removed in a few moments, and is
40 particularly adapted for edge-molding light work, in which the cutter-spindle forms the guide for the work in the usual manner. Its table *b'* is adapted for vertical adjustment for thin or thick stuff.

45 The main frame is bolted to the floor, and the machine can be used for scroll-work, for ripping, and for edge-molding, as may be desired.

In molding light stuff it is not necessary to
50 remove the scroll-saw and its frame. In adjusting the table *b'* to suit the stuff, it is

clamped to a fixed sleeve part, *a³*, of the frame *a'* by the screw *a⁴* in a sleeve, *a⁵*, projecting downward from the molding-table.

The table of a sawing-machine has been 55 made vertically adjustable by side plates attached thereto, and adapted to receive the action of a longitudinally-adjustable frame, provided with corresponding inclines, and moved backward and forward by means of a screw con- 60 necting the said longitudinally-adjustable frame with the frame of the machine; and I do not therefore claim, broadly, such method of raising and lowering the work-table of a saw-
65 ing-machine.

I claim—

1. In a combined wood-working and sawing machine, the combination of a vertically-adjustable table, *B*, pinned to the main frame, with a horizontally-adjustable frame of planed 70 ways *p*, having inclined planes *q*, the frame *A*, the adjusting-screws *S*, the operating crank-shaft *c*, provided with the pulley *z*, and an edge-molding attachment carried upon said table and adjusted thereby for operation, substantially as described. 75

2. The edge-molding attachment herein described, consisting of the frame *a'*, having the adjustable table *b'*, the pulleys *e' e'*, the attaching-screws *a² a²*, and the cutter-carrying spindle 80 provided with the pulley *g'*, substantially as described.

3. The sawing and wood-working machine herein described, comprising the vertically-adjustable table *B*, the operating crank-shaft *c*, 85 the scroll-saw, and the edge-molding attachment clamped to said table *B*, having a cutter-carrying spindle, and a table vertically adjustable upon the frame of said attachment, the pulleys *z*, *g'*, and *e' e'*, and the cord *d'*, the 90 said crank-shaft being connected with and operating the molding attachment by the adjustment of the said table *B*, all substantially as described, for the purpose specified.

In testimony whereof I have hereunto set 95 my hand in the presence of two subscribing witnesses.

ABRAHAM SHOWALTER.

Witnesses:

F. S. HIGBEE,
J. M. GOSS.