

(No Model.)

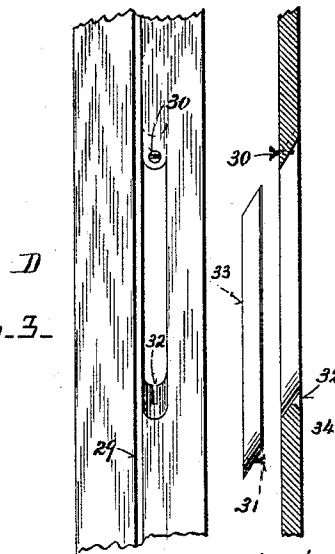
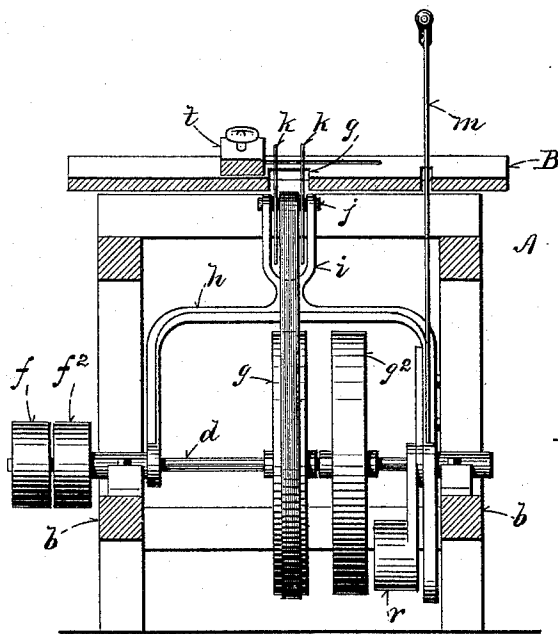
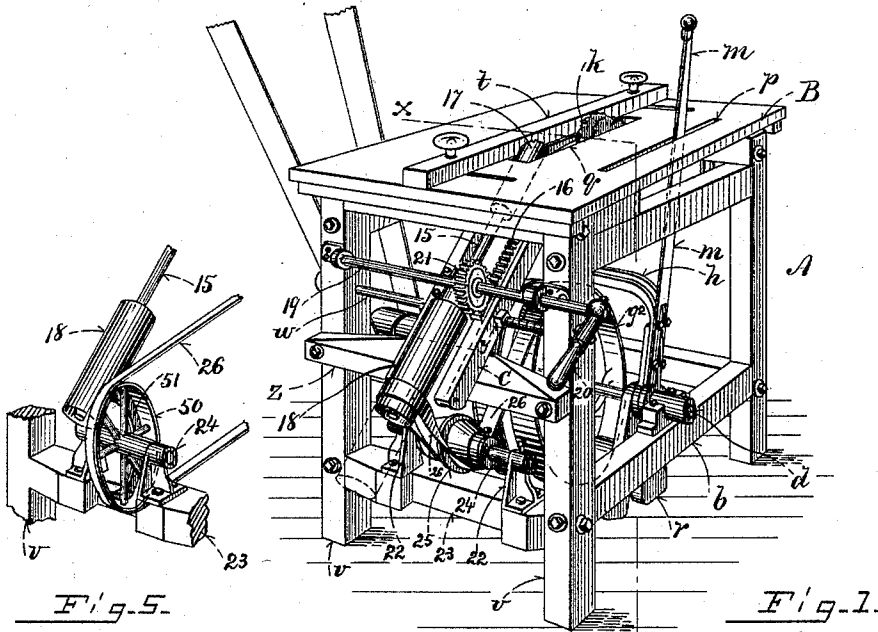
2 Sheets—Sheet 1.

F. E. FARWELL.

MACHINE FOR CUTTING POCKETS IN WINDOW JAMBS.

No. 497,070.

Patented May 9, 1893.



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(No Model.)

2 Sheets—Sheet 2.

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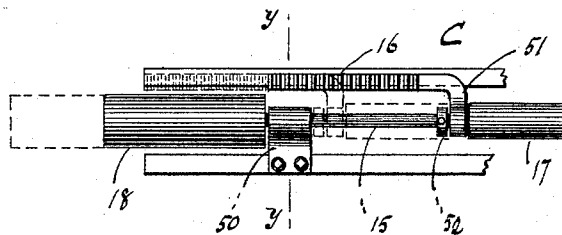


Fig-6-

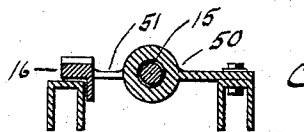


Fig-7-

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UNITED STATES PATENT OFFICE.

FREDERIC E. FARWELL, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO HENRY A. HAWLEY, OF SAME PLACE.

MACHINE FOR CUTTING POCKETS IN WINDOW-JAMBS.

SPECIFICATION forming part of Letters Patent No. 497,070, dated May 9, 1893.

Application filed February 29, 1892. Serial No. 423,180. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC E. FARWELL, of Fitchburg, in the county of Worcester, State of Massachusetts, have invented certain new and useful Improvements in Machines for Cutting Pockets in Window-Jambs, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of my improved pocket cutting machine; Fig. 2 a vertical transverse section of the same taken on line, *x, x*, in Fig. 1; Fig. 3 a face view of the jamb-board of a window showing the pocket; Fig. 4 a vertical longitudinal section of the same taken through the pocket; Fig. 5 a perspective view showing a modification from the drive mechanism; Fig. 6 a plan view showing the sliding-rack and barrel-saw shaft; and Fig. 7 a vertical transverse section of the same taken on line, *y, y*, in Fig. 6.

Like letters and numerals of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to a wood sawing-machine for cutting pockets in the jamb-boards of window-casings; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the frame of the machine which is practically of the form of the ordinary circular sawing-machine frame or table and is provided with a top, B. On the lower tie-rods, *b*, on the bench a horizontal drive-shaft, *d*, is mounted provided with fast and loose pulleys, *f, f'*, at one end belted to any suitable drive-shafts. Two large fast pulleys, *g, g'* are mounted on the shaft, *d*. Mounted loose on the shaft, *d*, there is a U-shaped frame, *h*, centrally from which a vertical arm, *i*, projects supporting an arbor, *j*,

on which two circular saws *k* of ordinary pattern are mounted in parallelism. The arbor is belted to the central pulley, *g*, on the shaft, *d*. A hand-lever, *m*, has its lower end secured at one side of a U-shaped frame, *h*, its upper end projecting through a slot, *p*, in the table top, B. By means of said lever the saws, *k*, may be raised or lowered at will to project through the saw slot, *q*, in the table top. The lever, *m*, is preferably counterbalanced by weights, *r*, pendent below the shaft, *d*.

The table is provided with the ordinary gage, *t*, on its top. The legs, *v*, of the table are connected by a metallic rod, *w*, on which a wooden frame, C, is fitted to swing, said frame being tensioned by a nut, *y*, turned onto said rod. The outer end of the frame rests on a brace-rod, *z*, connecting the legs, *v*.

A rack-bar, 16, constructed of an angle-iron is fitted to slide longitudinally on one of the side-bars of the frame as shown in Figs. 6 and 7. A rotary-shaft, 15, is arranged longitudinally of the frame and is journaled in a bearing, 50, shown in Fig. 6 through which it is fitted to slide. The upper end of the rack-bar is bent laterally at, 51, and the shaft, 15, is journaled in the arm thus formed. The upper end of the shaft, 15, is provided with a cylindrical or barrel saw, 17, which may be projected through the rear end of the saw slot, *q*, and adjacent to which the arm, 51, of the rack-bar is disposed. A collar, 52, fast on said shaft prevents longitudinal movement thereof through the arm. On the lower end of said shaft, 15, there is an elongated cylindrical pulley, 18. A shaft, 19, is journaled on the legs, *v*, and is provided outside the bench with a handle, 20, whereby it may be rotated; said shaft bears a pinion, 21, meshing with the rack, 16.

In standards, 22, on a brace, 23, between the legs, *v*, a shaft, 24, is journaled, said shaft bearing two-cone pulleys, 25. A belt, 26, from the pulley, *g'*, passes over the cone-pulleys, 25, and around the cylindrical pulley, 18.

The jamb-board is provided with the ordinary bead-groove, 29. It is customary to cut a pocket-piece, 30, through the board, D, at the edge of the bead-groove. This piece is cut so that it can be replaced in the opening with a miter-joint and secured at the upper end by

a screw, 30, passing through the outer face of the board, its lower end being secured by a screw, 31, passing from the inner face of the board; the lower joint section in the board
 5 being provided with a vertical slot, 32, so that by turning out the upper screw, 30, when the window frame is in position, the pocket-piece may be pushed upward until the screw, 31, is
 10 removed. This opening is formed to enable the weights in the weight-box to be relieved when they become jammed or displaced without removing the jamb-board.

In the use of my improved machine the
 15 frame is adjusted at a suitable angle to the plane of the table and the jamb-board disposed on the table with its grooved face upward.

By means of the handle, 20, the barrel
 20 saw, 17, can be forced upward into the saw slot, *g*, of the table practically one-half its cutting edge protruding therefrom; said saw cutting a grooved or semi-circular miter-joint in the board, *D*. The circular saws, *k*, are thrown
 25 upward by means of the hand-lever, *m*, said saws being adjusted a distance apart equal to the width of the pocket it is desired to cut. These saws begin cutting at the upper end of the pocket and the saws are fed upward by
 30 their frame until they meet the miter-kerf which has been formed by the barrel-saw. The circular-saws are then lowered and the board is fed forward in the position suitable for the barrel-saw to cut the upper miter-kerf
 35 detaching the piece, 3, from the jamb-board.

Suitable stops may be attached to the gage, *t*, to regulate the distance of the cutting in the ordinary manner of sawing machines.

The barrel-saw may be replaced by a circular saw and the ordinary miter-joint cut thereby if desired but I deem the use of the barrel saw preferable as the curved miter-groove serves to retain the pocket-piece more securely in position. As the barrel-saw shaft,
 45 15, is raised and lowered its drive pulley, 18,

will slip freely through the belt, 26. I do not confine myself to this method of driving the inclined shaft, 15, as the same may be driven by friction or in any other suitable manner.

In Fig. 5 a pulley, 50, is mounted on the shaft, 24, and driven by a straight belt, 26, from the pulley, *g*². The side of the pulley, 15, has a face, 51, which engages the cylindrical pulley, 18, driving the same by friction.

Having thus explained my invention, what I claim is—

1. In a machine for sawing-pockets in window-jambes the combination of a drive-shaft with two parallel circular saws actuated therefrom and adjustable vertically, an inclined
 60 rotary-shaft actuated from said drive shaft and bearing a cutting-tool for forming a kerf at an angle to that of said circular saws, substantially as described.

2. In a machine for sawing pockets in window-jambes, the bench, adjustable circular saws and drive mechanism in combination with the inclined adjustable barrel saw and mechanism for driving the same conjointly with said circular-saws, substantially as described.
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3. The herein described sawing machine comprising the bench, the adjustable circular-saws, adjustable inclined barrel-saw and mechanism for actuating said saws conjointly, substantially as described.
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4. The bench and drive-shaft in combination with a vertically swinging frame, *h*, two circular saws journaled in parallelism on said frame and actuated from said drive-shafts, the vertically swinging frame, *C*, the rotary shaft adjustable longitudinally on said frame and bearing a cutting tool at one end and mechanism for actuating said shaft from the drive shaft, all being arranged to operate
 85 substantially as described.

FREDERIC E. FARWELL.

Witnesses:

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