J. A. MUMFORD.

Machine for Sawing and Jointing Shingles.

No. 204,499. Patented June 4, 1878.

Fig. 1

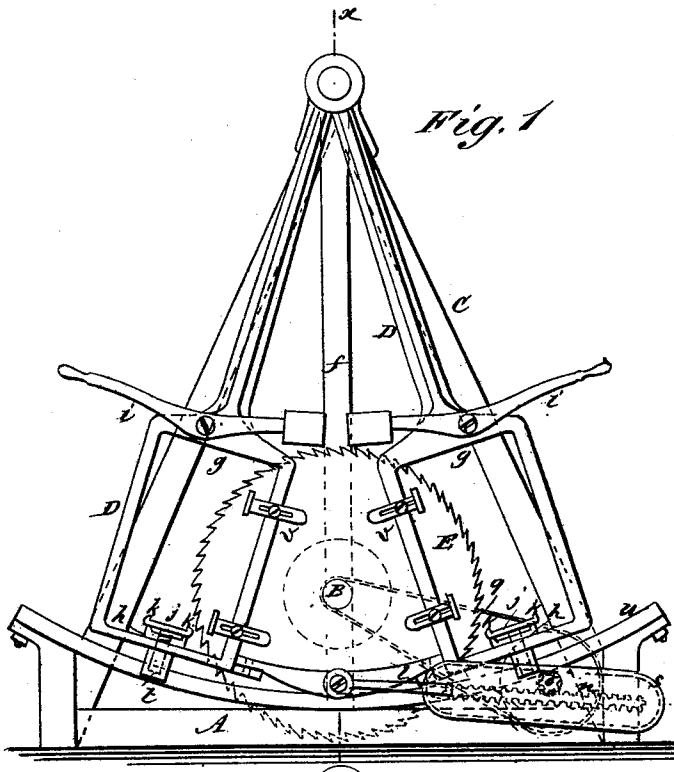


Fig. 2

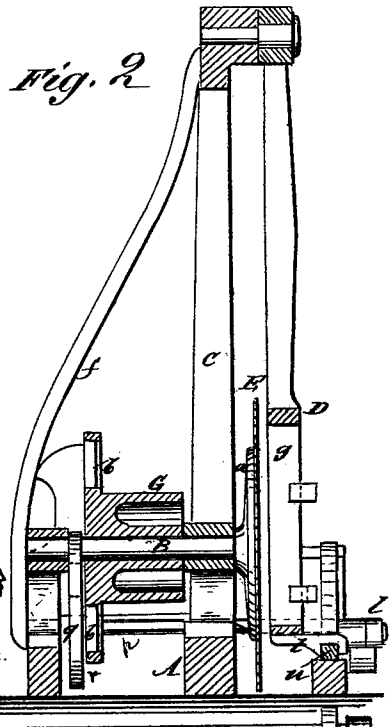


Fig. 3

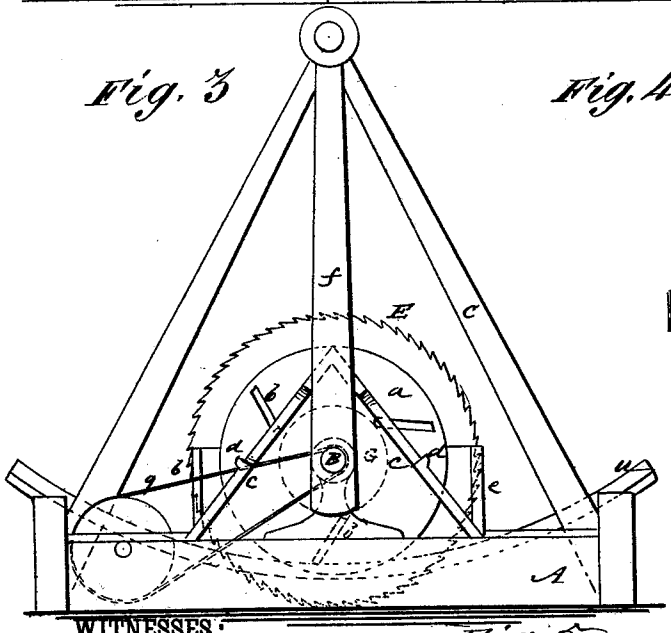


Fig. 4

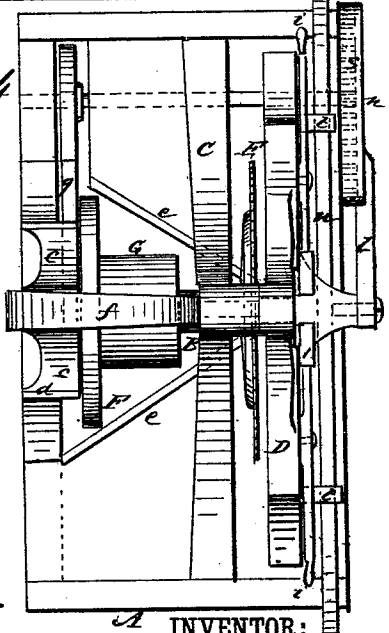
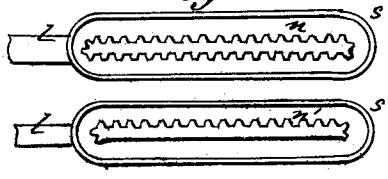


Fig. 5



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UNITED STATES PATENT OFFICE.

JOSEPH A. MUMFORD, OF AVONDALE, NOVA SCOTIA, CANADA.

IMPROVEMENT IN MACHINES FOR SAWING AND JOINTING SHINGLES.

Specification forming part of Letters Patent No. **204,499**, dated June 4, 1878; application filed April 15, 1878.

To all whom it may concern:

Be it known that I, JOSEPH A. MUMFORD, of Avondale, in the county of Hants and Province of Nova Scotia, Dominion of Canada, have invented a new and Improved Shingle-Machine, of which the following is a specification:

Figure 1 is a front elevation of my improved shingle-machine. Fig. 2 is a vertical section taken on line *x x* in Fig. 1. Fig. 3 is a rear elevation. Fig. 4 is a plan view. Fig. 5 is a detail view of racks employed in driving the oscillating block-holding frames.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

Referring to the drawing, A is the bed of the machine, which supports the bearings of the mandrel B, and also the triangular frame C, from which is suspended the double block-carrying frame D.

Upon one end of the mandrel B, outside of the journal-boxes, a saw, E, is secured to a collar, *a*, and upon the opposite end of the mandrel, within the journal-boxes, a fly-wheel, F, is secured, the outer side of which is plane. This fly-wheel has three diagonal slots, *b*, in which are secured the jointing-knives. Over the journal-boxes, and near the fly-wheel, are placed two inclined shingle-supports, *c*, having ribs *d*, for engaging the butts of the shingles as they are placed upon the supports to be jointed by the knives in the fly-wheel.

The mandrel B is provided with a pulley, G, for receiving a driving-belt, and upon each side of the mandrel there are boards *e*, or other covering, for confining the shavings as they are removed by the knives in the fly-wheel.

The triangular frame C is supported by a brace, *f*, which also stiffens the shingle-supports *c*.

In the frame C there are two rectangular oblong openings, *g*, for receiving the shingle-blocks, and at the lower end of each opening there are spikes or teeth *h*, which engage the lower end of the shingle-blocks when they are pressed down by the counterbalanced levers *i*, which are pivoted to the frame D at the upper end of the oblong openings *g*. At the side of the spikes or teeth *h* there are spring-supported guides *j*, having chisel-shaped edges *k*, for engaging the end of the shingle-block.

The springs of the guides *j* are sufficiently strong to raise the shingle-block from the teeth *h*, so that when the block is released from the pressure of the lever *i* it may be moved forward for a new cut.

To the frame D is pivoted an arm, *l*, that projects from a double rack, *n*, that is engaged by a pinion, *o*, on the shaft *p*. The shaft *p* is provided with a pulley, *r*, and is journaled in the main frame of the machine, and is driven by a belt, *q*, from the mandrel B.

The rack *n* is kept in engagement with the pinion *o* by a rim or flange, *s*, that surrounds it. By means of this rack and pinion the frame D is oscillated on its pivot at the required rate of speed.

The frame D is provided with guides *t*, which engage the curved track *u*, and prevent the frame from swinging laterally. The frame D is provided with gages *v* at the side of the opening *g*, against which the sides of the shingle-blocks rest.

When the swinging frame D is arranged to contain only a single block, a single rack, *n'*, is employed to move it, and it is returned by gravity.

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

1. The fly-wheel E, having three jointing-knives secured in diagonal slots thereof, in combination with the two inclined shingle-supports *c*, having ribs *d*, as shown and described.

2. The mandrel having fly-wheel with knives and boards *e*, arranged substantially as and for the purpose specified.

JOSEPH ALEXANDER MUMFORD.

Witnesses:

ARTEMAS W. WILDER,

CHARLES R. ELY.