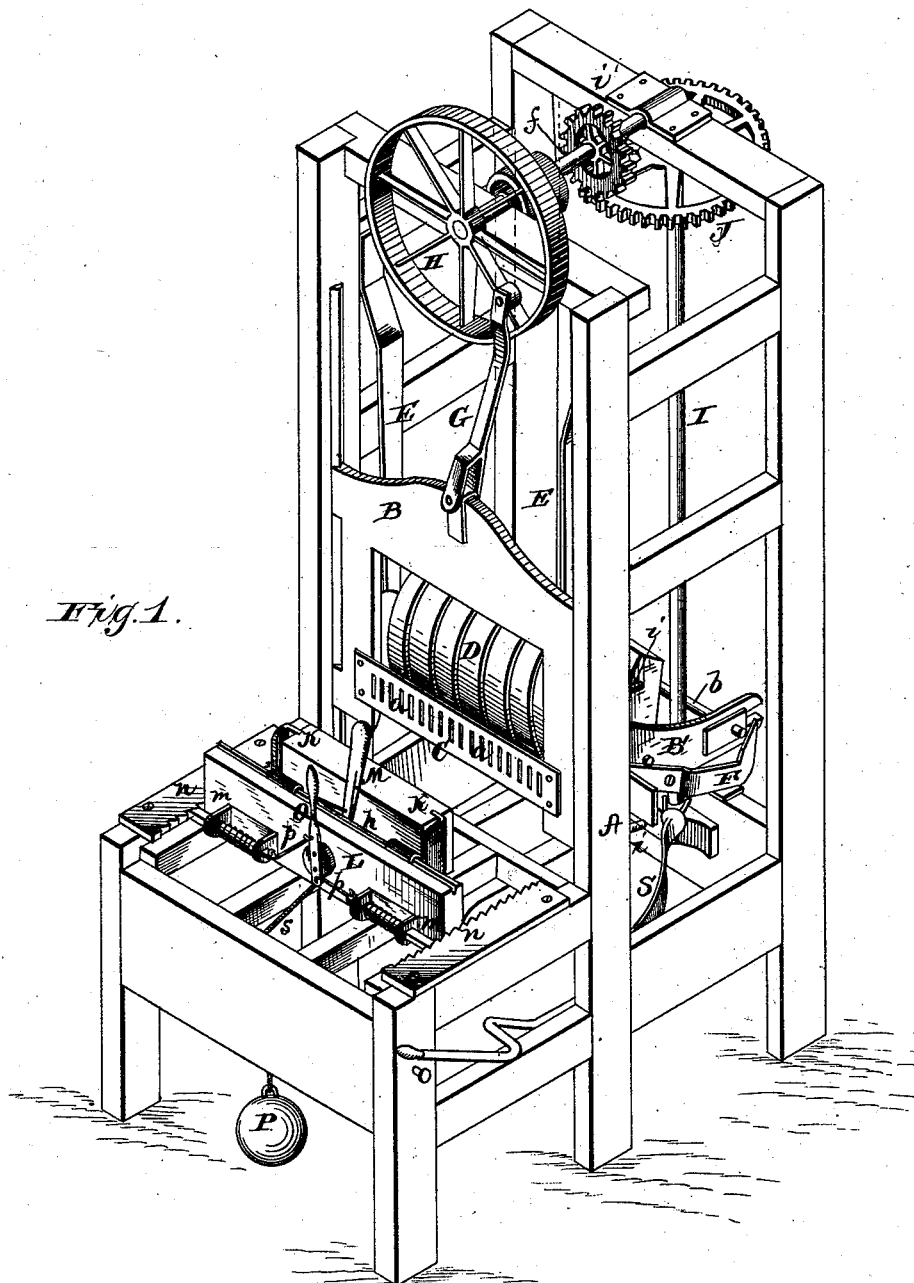


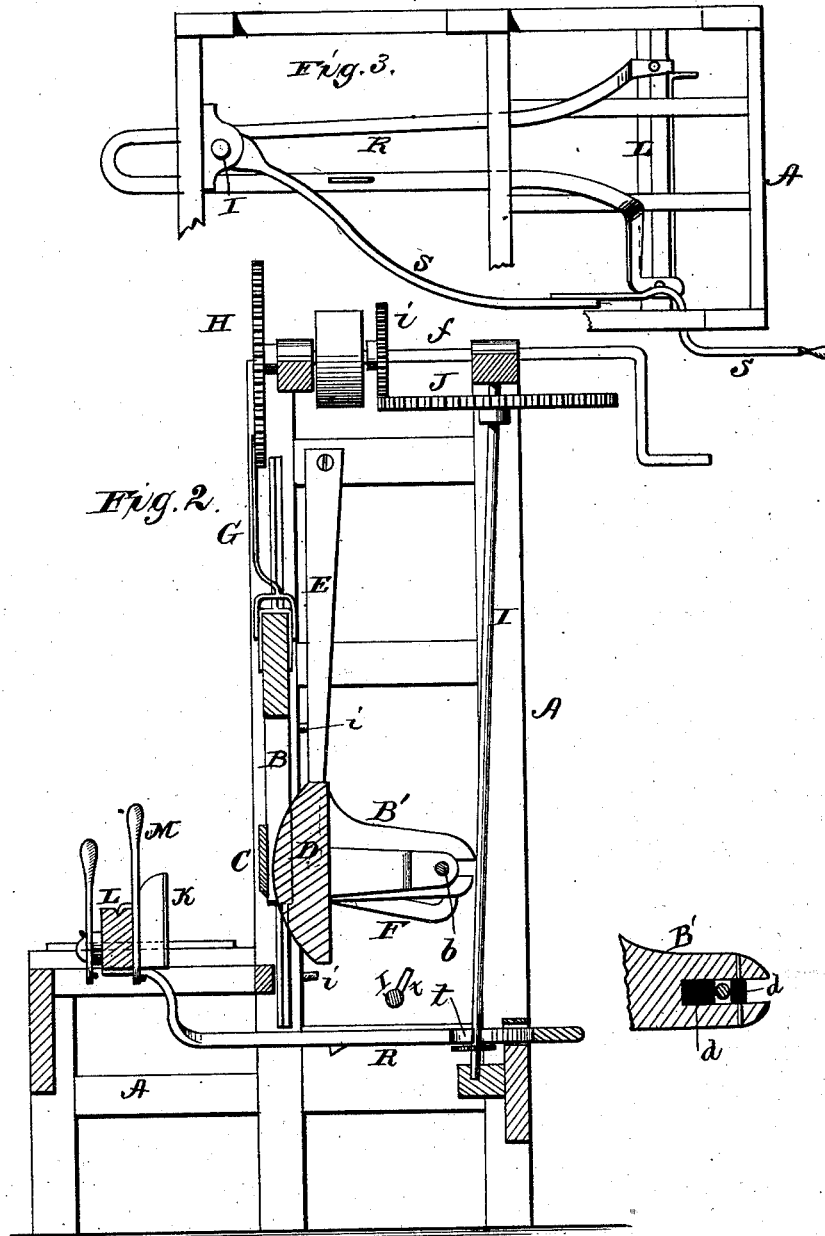
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Shingle-Cutting Machine.
No. 216,575. Patented June 17, 1879.



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Joseph H. Phipps
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UNITED STATES PATENT OFFICE.

JOSEPH H. PHIPPS, OF FENTON, MICHIGAN.

IMPROVEMENT IN SHINGLE-CUTTING MACHINES.

Specification forming part of Letters Patent No. **216,575**, dated June 17, 1879; application filed April 2, 1879.

To all whom it may concern:

Be it known that I, JOSEPH H. PHIPPS, of Fenton, in the county of Genesee, and in the State of Michigan, have invented certain new and useful Improvements in Shingle-Cutting Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for cutting shingles, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of my machine. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a bottom view of the machine.

A represents the frame-work of the machine, in which is a vertically-reciprocating gate, B, carrying the knife C. This knife is provided with a series of slots, *a*, to prevent suction when the machine is running at a rapid rate.

The gate B is, near its lower end, provided with rearwardly-extending arms B' B', in the rear ends of which is placed a shaft, *b*. On this shaft is placed a rocker, D, connected by straps E with the upper part of the stationary frame. A spring, *d*, is arranged in a slot in each arm B', in front of and against the shaft *b*, to throw the rocker away from the knife when a shingle is cut. To the outer side of each arm B' is pivoted a hook, F, as shown, and two stationary pins, *i* *i*, are arranged at each side of the frame.

Just as the gate completes its upward stroke the hooks F strike the upper pins, *i*, and are turned so as to take hold of the ends of the shaft *b* and move the rocker inward, and at the completion of the downward movement of the gate the hooks strike the lower pins, and

are thereby turned away from the shaft, allowing the springs *d* to move the rocker outward.

The gate B is, by a pitman, G, connected with a crank-wheel, H, on the driving-shaft *f*. This driving-shaft is also provided with a pinion, *i'*, which meshes with a cog-wheel, J, on a vertical shaft, J, as shown.

The bolt from which the shingles are to be cut is fastened between two sliding clamps, K K, on a movable bar, L, the said clamps being, by rods *h*, connected with a lever, M, for moving said clamps simultaneously out and in. On the opposite side of the bar L are two spring-dogs, *m* *m*, taking into ratchet-bars *n* *n*, secured to the frame, the bar L sliding in suitable guides.

The dogs *m* *m* are, by rods *p*, connected with a lever, O, for simultaneously withdrawing the same.

P is a weight, connected by rope or chain *s* to the bar L, for drawing the same away from the knife. The bar L is attached to a slotted arm, R, which extends through suitable guides, and has the shaft I passing through it. On this shaft is feathered a wing, *t*, which is moved upward by means of a lever, S, so as to be in position for operating the arm R when the shaft is rotating. When the lever S is out of the way the wing *t* drops down and the feed stops.

During the revolution of the shaft I the wing *t* strikes first one side of the arm R, which moves one end of the bar L forward, and then it strikes the other side of the arm, moving the other end of the bar forward, leaving it always in a sufficiently-inclined position for the descending knife to cut the shingle of proper shape.

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

1. The combination, with the vertically-reciprocating gate B and knife C, of the arms B', shaft *b*, rocker D, and straps E, substantially as herein set forth.

2. The combination, with the gate B and knife C, of the slotted arms B', shaft *b*, springs

d, rocker D, with straps E, the hooks F, and stationary pins *i*, substantially as and for the purposes herein set forth.

3. The combination of the sliding bar L, carrying the clamps K, the dogs *m m*, ratchets *n n*, arm R, and shaft I, with wing *t*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of February, 1879.

JOSEPH H. PHIPPS.

Witnesses:

CHAS. D. PHIPPS,
HENRY HOFFMAN.