N. H. BOLTON.

Shingle-Machines.

No. 133,964. Patented Dec. 17, 1872.

Fig. 1.

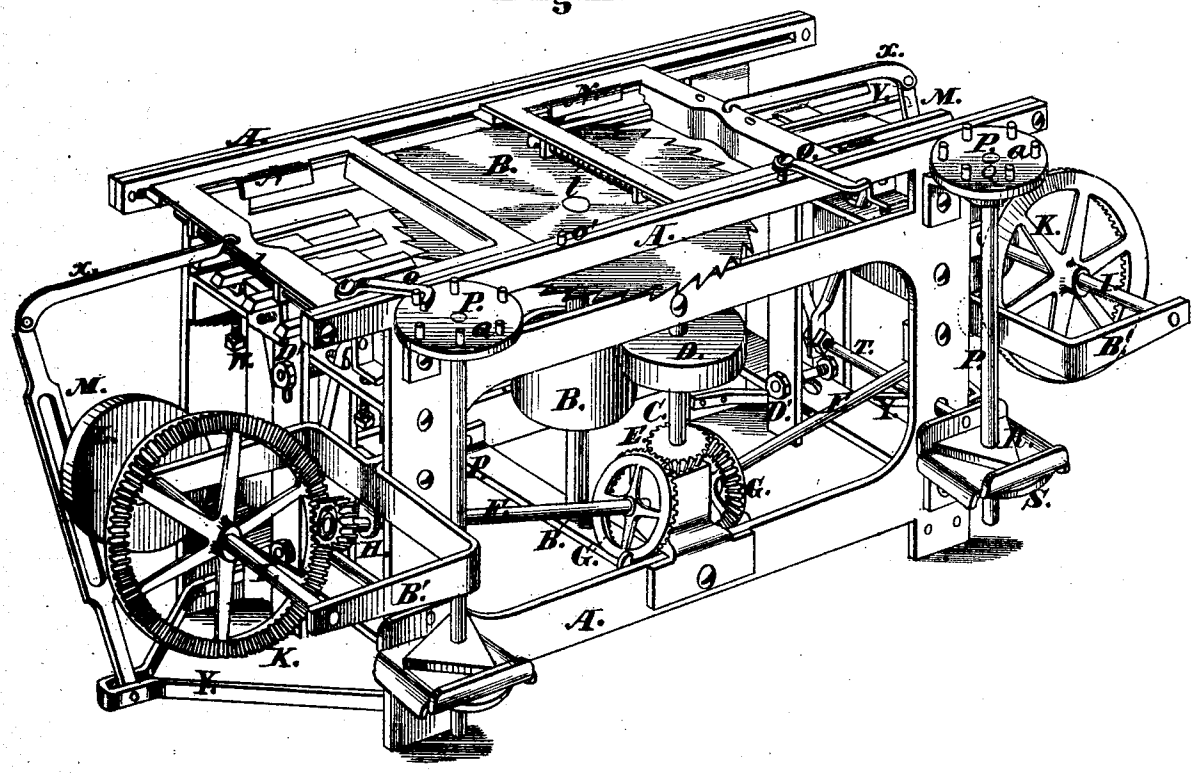
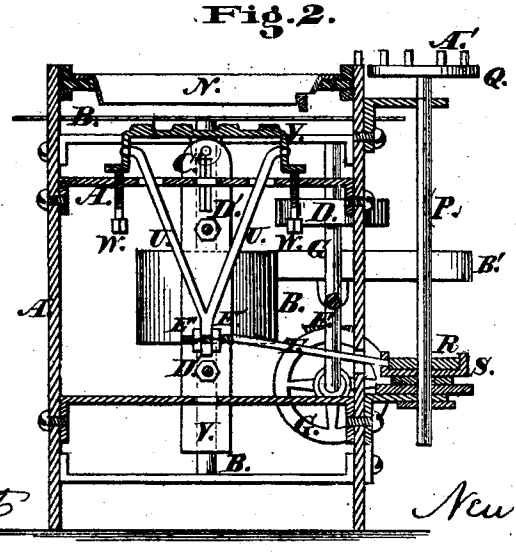


Fig. 2.



Witnesses.
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A.M. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

NEWTON H. BOLTON, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN SHINGLE-MACHINES.

Specification forming part of Letters Patent No. **133,964**, dated December 17, 1872.

To all whom it may concern:

Be it known that I, NEWTON H. BOLTON, of Minneapolis, in the county of Hennepin, in the State of Minnesota, have invented certain Improvements in Shingle-Machines, of which the following is a specification:

Nature and Object of the Invention.

My improvement is a shingle-machine constructed on a new plan, so far as the feed and set works are concerned. The feed-works are arranged so as to feed slow when feeding the bolt to the saw, and fast when carrying the bolt back, after the shingle is sawed off.

Description of the Drawing forming part of this Specification.

Figure 1 is a perspective view of my invention, and Fig. 2 a sectional view of the set-works.

General Description.

A is the frame of the machine; B, the saw, shaft, and pulley; C, upright shaft of the feed-works; D, pulley on shaft C. This pulley is revolved by means of a friction-pulley on the saw-shaft B. E, pinion on shaft C; F F, shafts, on which are cog-wheels G G meshing into pinion E; H H, pinions on the other ends of shaft F; I I, shafts; K K, cog-wheels on shafts I I, meshing into pinions H H; L L, crank-wheels on shafts I I, with crank-pins on one side of them working in a slot in levers M M; M M, levers, their feet secured to braces Y; N N, feed-carriages. These carriages work in slots in the frame A, when the crank-wheel L comes over the crank-pin in the slot, carries the lever M forward slowly, and with it the carriage, up to the saw, and as the pin passes round on the return stroke it falls into the bottom of the slot in the lever M, and, as that is the short arm of the lever, it moves back quick. O is a hook secured to the carriage N. O′ O′ are pins in the frame A which the hook O strikes against, and throws the point of the hook out so that it will hook onto the pins A′, when the carriage is gigged back to operate the set-works; P P, upright set-shafts; Q Q, disks on the upper ends of set-shafts P P, with upright pins A′ in them, which hooks O hook onto and turn the disks and shafts; R, three-cornered pieces on the lower ends of set-shafts P; S, shoe, in which the three-cornered pieces R work, and throw out and in again; T T, connecting-rods, one end attached to shoes S S, and the other end to forked tilting-rods U; U U, tilting-rods; V V, beds on which the bolt lies when being sawed. These beds are secured to forked rods U, and when the three-cornered pieces R turn and throw the shoes out and in they will be canted or raised on either side, and thus set a butt of the shingle, first at one side and then at the other, according as the pieces R shall throw the shoes out and in. W W, set-screws to regulate the thickness of the butt of the shingle to be sawed; and the thinness of the point of the shingle is regulated by nuts E′ E′ on the lower end of connecting-rod T; X X rods, from carriages N, connecting said carriages to levers M; Y, brace from frame A, to which the foot of lever M is pinned and held so as to oscillate back and forth. Springs hold a bar against the bolt to hold it in position. B′, supports attached to frame A to sustain shaft I; C′, a feather in one side of the bed V, which slides in a groove in a girt in frame A to steady the bed. To regulate the inclination of the bed V nuts on the heads of bolts D′ are loosened, and the outside piece which runs down from the bed is either raised or lowered, as the case may be, and the nuts set up again to hold it in position.

To operate this machine a belt is put on pulley B, running from any motor, and bolts are put in the carriage N, and the friction-pulley on saw-shaft B runs against pulley D, and puts the feed and set works in motion. As one carriage runs up to the saw the other is drawn back. As the pulley D revolves it revolves shaft C; and pin E, which meshes into wheels G, revolves them and shafts F, pin H, wheel K, shaft I, and pulley L, and crank-pin which carries lever M forward, and with it the carriage and bolt; and a shingle is sawed as the carriage N passes up toward the saw. Hooks O strike pins O′ and are thrown out, and, as the carriage is gigged back, this hook hooks into one of the pins A′ on the top of the disk Q, and it turns the disk and shaft P and with it the three-cornered pieces R, which, as it turns, throws shoe S out or in and

lifts either one side or the other of the bed V, and thus sets the bolt ready for another shingle.

Claim.

I claim as my invention—

1. Shaft C, pulley D, pinion E, shaft F, wheel G, pinion H, shaft I, wheel K, and crank-pin and slotted shaft M, carriage N, connecting-rod X, hook O, frame A, set-shaft P, disk Q, three-cornered pieces R, shoe S, connecting-rod T, tilting-rod U, and bed V, in combination with screw W and nuts E′ E′, substantially as described.

2. Carriage N, hook O, shaft P, disk Q, pins A′, three-cornered pieces R, shoe S, connecting-rod T, rod U, and bed V, in combination with screw W and nuts E′ E′ and frame A, substantially as set forth.

NEWTON H. BOLTON.

Witnesses:
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