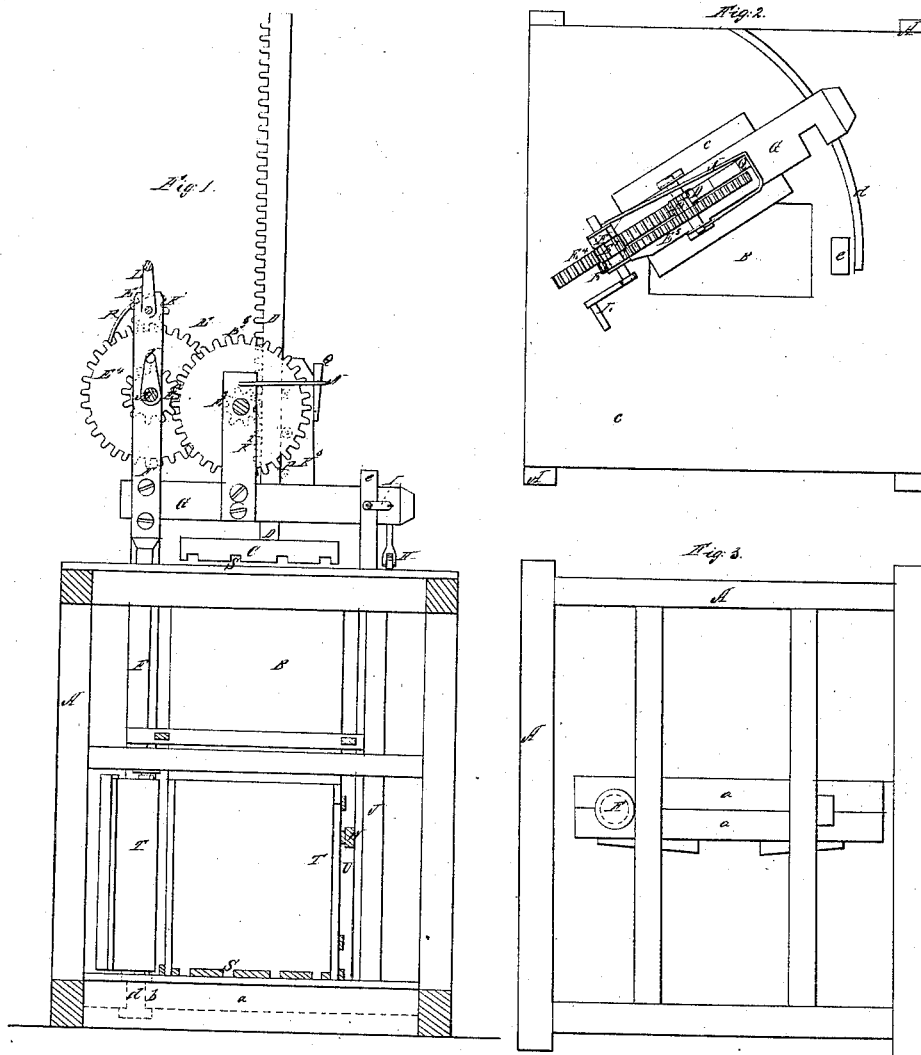


C. MARTINE.
HAY PRESS.

No. 2,657.

Patented May 30, 1842.



UNITED STATES PATENT OFFICE.

CALEB MARTINE, OF GREENSBURG, NEW YORK.

IMPROVEMENT IN PRESSES FOR HAY, &c.

Specification forming part of Letters Patent No. 2,657, dated May 30, 1842.

To all whom it may concern:

Be it known that I, CALEB MARTINE, of Greensburg, Westchester county, State of New York, have invented a new and useful Press for Pressing Hay, Cotton, and other Substances, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation of the machine; Fig. 2, top view; Fig. 3, bottom view.

Similar letters refer to corresponding parts.

The frame A, for containing and supporting the several parts, the box B, in which the piston moves and the pressing takes place, the piston C and cogged piston-rod D, the gearing E, for raising and lowering the piston, being made similar to others in use, need not therefore be particularly described.

The improvement is principally in combining the gearing and piston with a turning-post, F, so that the piston C can be raised from the box B and turned aside from it for the purpose of filling the box, and also several other parts, which will be described hereinafter. The turning-post F is placed at one end of the box in the frame, and turns between two sills, *a a*, Fig. 3, at the bottom of the frame, with a notch, *b*, at the bottom of the post at the sills (represented by dotted lines) forming a shoulder which turns on the sills and a collar below them. Said post F extends above the top of the frame, and has framed into it by one of its ends a horizontal beam, G, while the other end is supported by an arm and wheel, H, the wheel turning on the top of the frame. On a horizontal cover, *c*, thereto, is a segment-curve, *d*, fixed on said cover, while swinging the piston round from the box B. The beam G is secured to a post, *e*, by a staple, I, or other convenient means. To this horizontal beam are fastened the standards and posts K' K² K³, and braces for sustaining the gearing and racked piston-rod and piston, the axles of the several cog-wheels and pinions turning in the aforesaid standards. The axle *f* of the upper pinion, E', has a crank, L, by which it is turned for operating the gearing in pressing. The axle M of the lower pinion, E², and first cog-wheel, E³, is also provided with a crank, V, Fig. 1, for raising the piston *c* with greater speed. The rack-piston D is kept in gear with the third pinion, E³, by a strap, N, fastened by its ends to the standards, and embracing a verti-

cal timber, K³, pressing against the back of the rack or sustaining anti-friction rollers P against it, which timber is pressed nearer to the rack by a wedge, Q, inserted between it and the staple. A pawl, R, is attached to the axle of the first crank-shaft, which drops against the teeth of the first cog-wheel to hold it from turning back by the resistance of the body to be pressed. The under side of the piston and the bottom of the box are grooved at S to admit the hoops for securing the bale or bundle. The lower part of the box is provided with hinged doors T, which are secured by bars during the pressing, and opened when the bale is to be hooped and removed. One end, U, of the part of the box where the bale is pressed is made removable, to render the discharge of the bale from the box more easy. The box should generally be made about four by two feet wide and ten feet high.

Operation: The machine may be worked by hand with great facility, and can press a bundle of hay in fifteen minutes with ease. The cog-wheels E' E² and pinions E' E² E³ raise the shaft some seven or eight feet above the top floor. The doors T at the bottom of the machine are then closed and made secure with up-rights wedged at the bottom. One of the posts, J, which is stationary, secures the fall back of the box in which the hay is pressed, by wedge W. The machinery, which is attached to the beam G, which turns, is then moved off to the side and leaves the mouth of the box open for the introduction of the hay. The box must be filled with hay and pressed down with the feet. The box being filled, the machinery and piston are brought over the mouth of the box and made secure by the staple I, which has an eye in it through which a pin is passed upon the outside of the beam. The two cranks are used to press the hay; but one hand is sufficient to work it until it comes within ten or twelve inches of the regular size bale. The hay being pressed into a bale, the bars at the sides, which are placed there to secure the doors, as aforesaid, are removed by displacing the wedges, and the doors T are thrown open. The hay, being pressed down in a space of two feet four inches, is prepared to receive the hoops, which are four in number. The hoops are then run through from the bottom through apertures in the bottom left for that purpose, and passed over the top of the bale through similar apertures, and

then nailed to the top of the strips of wood, which are placed at the top of the bale coming out at the side thereof, there being one in the center of the top and bottom, making six strips in all, their size from four feet long to one inch square. The strips in the bottom are placed before the hay is put in, and at the top after the hay is prepared for the press. When the press is to be raised from the hay, the crank V, which is placed upon the axle M of the second pinion and first cog-wheel, raises the piston with greater speed, the hay being hooped ready for removing. The wedge W is displaced from the end U, which moves, and the end is thrown back three inches. The bundle is then easily removed. The cog-wheels and axles are all made of cast-iron. The cogs upon the piston-rod are also cast-iron, and fixed to

a shaft made of some hard wood. The two largest cog-wheels are two feet four inches in diameter each. The next size is six inches in diameter, and the two remaining cog-wheels or pinions are each four inches in diameter.

What I claim as my invention, and which I desire to secure by Letters Patent, is—

The mode of turning aside the piston from the box to fill the same, and returning the piston and gearing to the box in order to press the hay by means of the combination of the turning-post E, and beam G, with the gearing E and cogged piston-rod D.

CALEB MARTINE.

Witnesses:

STIN VIN SWARTWOUT,
ARCHER MARTINE.