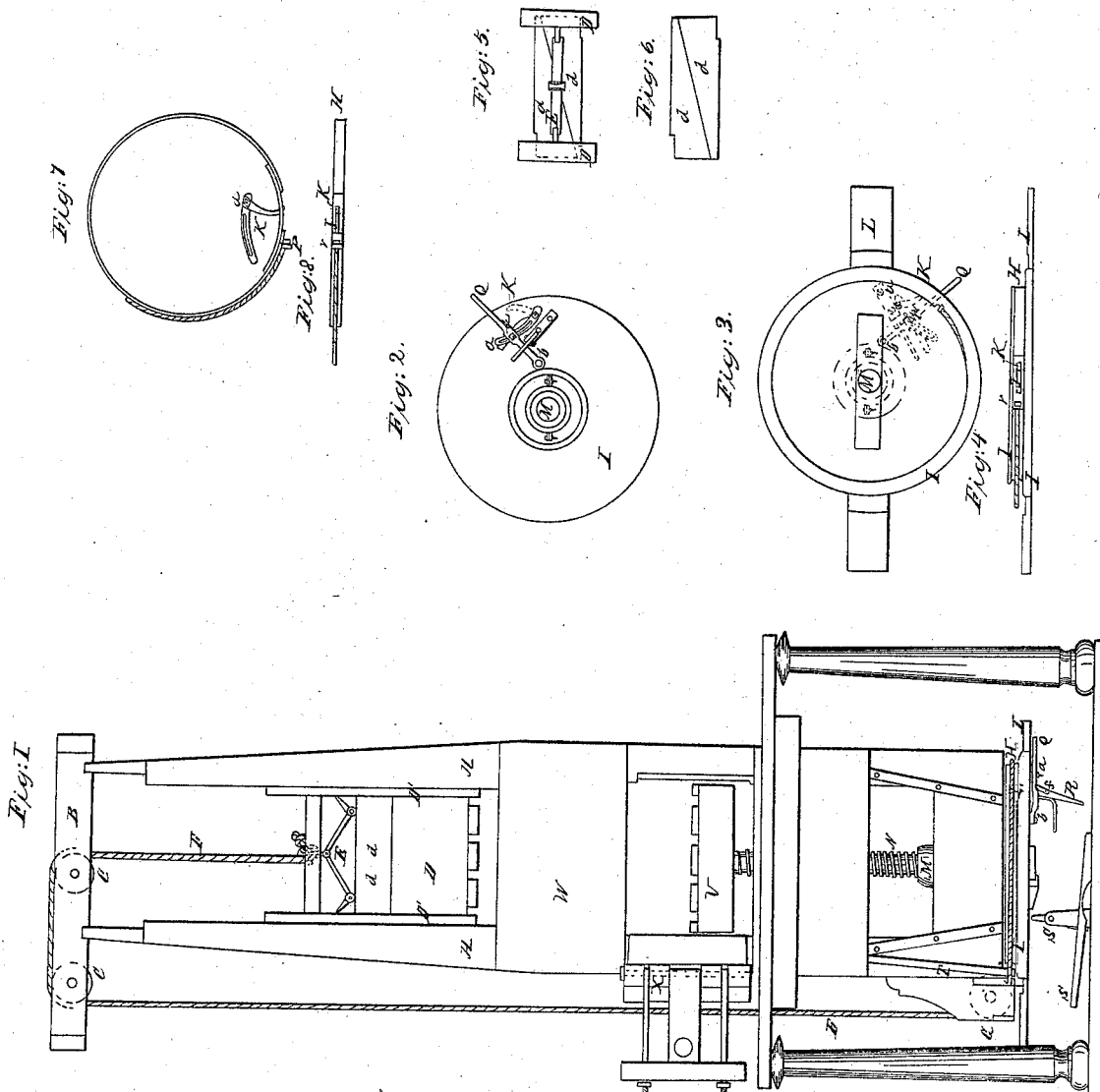


S. Hewitt
Hay Press.

N^o 3394.

Patented Dec. 30, 1843.



UNITED STATES PATENT OFFICE.

SAMUEL HEWITT, OF ALLENSVILLE, INDIANA.

IMPROVEMENT IN HAY-PRESSES.

Specification forming part of Letters Patent No. 3,394, dated December 30, 1843.

To all whom it may concern:

Be it known that I, SAMUEL HEWITT, of Allensville, Switzerland county, State of Indiana, have invented a new and useful Improvement in Presses for Pressing Light Substances into Bales—such as Cotton, Hay, &c.—called “Hewitt’s Improved Press,” which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a front elevation of the press; Fig. 2, under side of the wheel; Fig. 3, top of the wheel; Fig. 4, edge view of the wheel; Fig. 5, top view of the wedge-shaped timbers and toggle-joint; Fig. 6, top of the wedge-shaped timbers alone; Fig. 7, plan of hoop and rope; Fig. 8, edge view of the same.

My invention and improvement consists in driving into the box the substances to be pressed by machinery operated by manual, horse, or other power simultaneously with the operation of reversing the motion of the screw which presses the substance into a bale, instead of trampling by the attendants, as heretofore.

One of the arrangements of machinery that I have used to effect the before-mentioned object is described as follows. Various arrangements, however, may be used; but this has proved effective. It consists of an extension of the two end timbers, A, or posts of the box, united at their upper ends by a cap, B, forming a gallows, in which cap two pulleys, c, are inserted, and between said posts a driver, D, for driving the substance into the box, rises and falls in the manner of a monkey of a pile-driving machine, to which is affixed a toggle-joint, E, to which a cord, F, or chain is attached, leading over said pulleys and down to another pulley, G, let into a block fastened to the lower end of one of the posts, and leading thence to an eye or ring, r, fastened to a sliding hoop, H, which moves around in a groove in the periphery of a grooved wheel, I, and to which eye the cord F is made fast, which hoop is perforated with an oblong mortise, J, in which works a hook, K, attached to the wheel, for locking and unlocking said hoop with the wheel. The wheel is placed in a horizontal position upon the lever L, attached to the nut M of the screw N below the bottom beam of the frame. The hook K, for connecting and disconnecting the hoop and wheel, is

inserted into a mortise in the wheel, having a vertical axle, a, attached to it, passing through the wheel into the end of a grooved segment arm or lever, O, perforated with a segment-groove, into which is inserted a bolt, P, attached to a horizontal trip-lever, Q, whose fulcrum b is inserted into the under side of the wheel I. This trip-lever enters a notch in the upper end of a vertical forked trip-lever, R, whose fulcrum f is in a casting or box screwed or bolted to the under side of the wheel I. These trip-levers are to be made to strike against permanent stops S s, inserted into the base or foundation of the frame of the press, in the manner and for the purpose hereinafter described. A spring pole or rod, T, is fastened to one of the posts to prevent the hoop H from turning beyond the point at which it is required to be arrested. The follower U on the head of the pressing-screw N, the pressing-screw N, the nut M, the box W, and doors X are made in the usual manner.

The operation is as follows: The follower U being up or raised in the box, the doors X are closed, made fast, and the driver D is raised. The attendant fills the box W with loose hay or cotton. The horse moves round with the lever L, which raises the driver D to the head of the frame, when the trip-lever Q strikes against the stop S, trips the hook K, and un-hooks it from the hoop H. The driver then falls upon the hay or cotton, and drives it down upon the follower U, which is gradually descending at the same time by the reverse movements of the nut. The forked trip-lever R then strikes the other stop S, and again engages the hook K with the hoop H, which causes the cord F attached to it to be wound upon it, and at the same time filling in hay or cotton to the box, which he constantly keeps filled. As the driver rises and the follower descends, the trip-lever again comes in contact with the stop S, trips the hook, and disengages the hoop to which the cord is attached, which then slips around upon the wheel, allowing the driver to again fall upon the loose hay or cotton as before; and in this manner the operation is continued until the follower is down and a sufficient quantity of hay or cotton is driven into the box to form the bale. The driver D is then made fast in the posts A of the frame in the manner hereinafter described, and becomes the head-block against which the bale is to be

pressed. The motion of the nut M is then reversed by changing the direction of the horse, which causes the screw N to rise with the follower and hay or cotton thereon, which it presses against the driver D in its permanent position until sufficiently pressed. The doors are then opened and the bale tied. The motions of the nut is again reversed by again changing the direction of the horse, and after having performed about two revolutions the hook is again thrown out of its mortise, and engages with the hoop, which unfastens the driver from the posts and raises it to the tops thereof.

The fastening and unfastening the driver from the posts is effected in the following manner: The driver D is composed of two parallel vertical timbers, D', which slide between the posts in the manner of saw-gate of a saw-mill. These timbers are united by horizontal parallel cross-timbers. The middle timber, *d d*, is divided diagonally into two wedged-shaped timbers, which slide horizontally in mortises in the before-mentioned vertical timbers D', and enter corresponding mortises in the posts A, the large ends entering the mortises. These sliding wedged-shaped timbers *d d* are united by a toggle-joint, E, one end of the joints being attached to the large end of each piece.

The rope F is attached to the middle of the toggle E. When the driver is let down to its position to act as head-block, the joint is straightened or brought nearly in a right line, which drives the two parts of the divided timber *d d* in contrary direction, the large end of one piece entering one of the mortises in the posts, and the other entering the mortise in its corresponding opposite posts, which thus secures or locks the driver to the posts and forms the head-block. When the joint is again bent by drawing the cord, the two aforesaid wedged-shaped timbers *d d* are drawn from the mortises in the posts and the driver becomes disengaged therefrom.

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

Filling the box with the substance to be pressed into bale by means of a driver raised by machinery and made to descend upon the substance in the box successively by gravity as the follower descends, whether effected in the manner above described or in any other mode analogous thereto.

SAMUEL HEWITT.

Witnesses:

WM. P. ELLIOT,
ALBERT EUGENE JOHNSON.