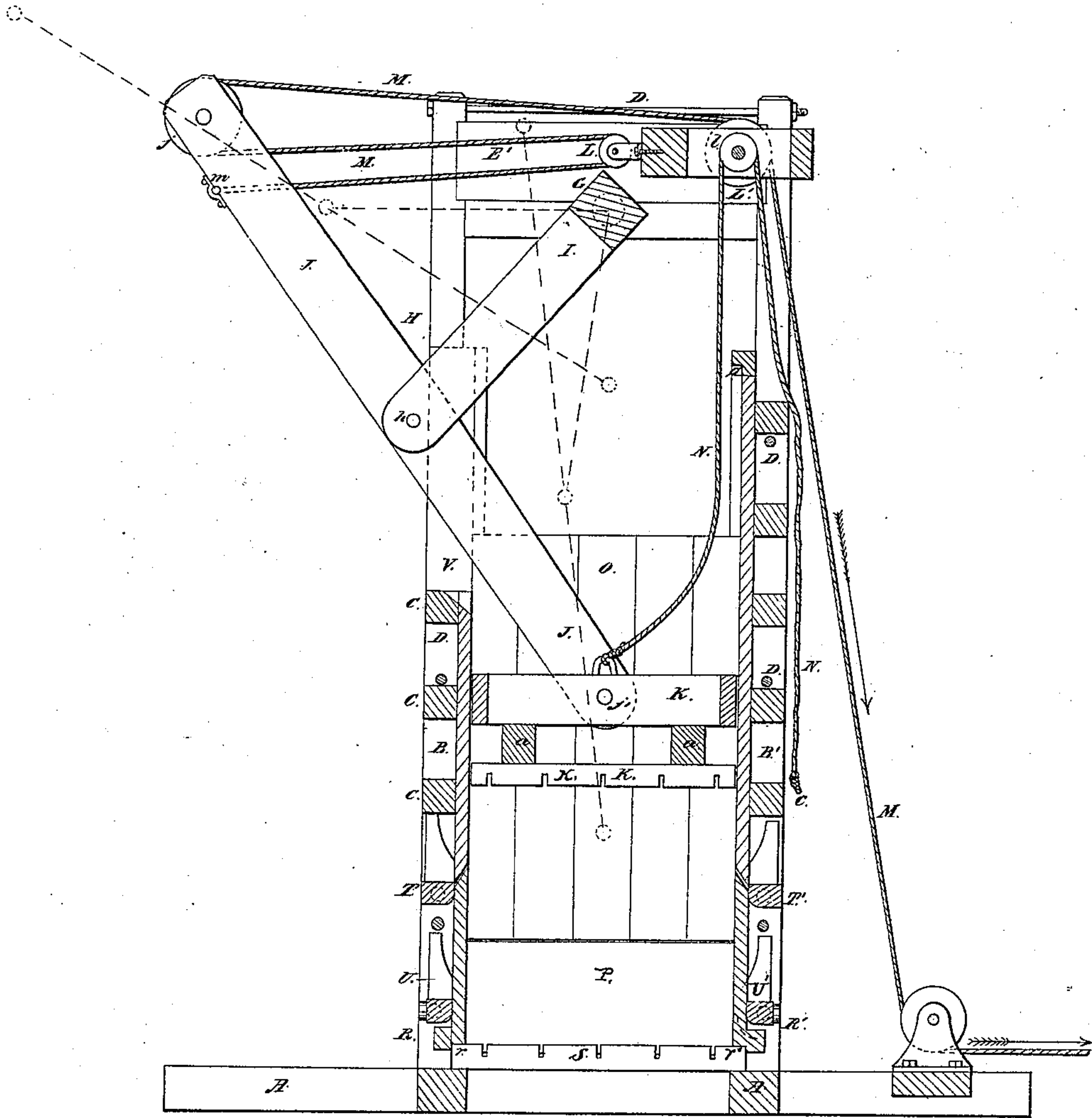


H. A. Ashley,

Hay Press.

N^o 59,309.

Patented Oct. 30, 1866.



Witnesses:
James H. Layman,
James S. Ewing

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UNITED STATES PATENT OFFICE

HEMAN A. ASHLEY, OF SPRINGFIELD, OHIO, ASSIGNOR TO HIMSELF AND
EDWD. M. DOTY, OF THE SAME PLACE.

IMPROVEMENT IN BALING-PRESSES.

Specification forming part of Letters Patent No. 59,309, dated October 30, 1866.

To all whom it may concern:

Be it known that I, HEMAN A. ASHLEY, of Springfield, Clarke county, Ohio, have invented certain new and useful Improvements in Baling-Presses; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification.

My invention relates to that class of machines known as "vertical baling-presses;" and my improvement consists in a cheap, simple, and powerful press, adapted to be operated on the ground, and not in a two-story building, as is customary, thus enabling the press to be moved from place as may be desired.

In the accompanying drawing, which is a vertical section of a press embodying my improvements, the machine is supposed to be in operation, the follower having completed about one-half its travel.

A represents the foundation or mudsills of the press, from which rise vertically the stanchions B B', which constitute the main frame of the press, and said stanchions are bound together by suitable braces C and tie-rods D. E and E' are two strong horizontal beams, firmly connected to the upper portions of the stanchions B B', and said beams afford journal-bearings for the shaft G of the toggle H. The toggle H is composed of two distinct members—the arm I and lever J—the two being connected at the knuckle-joint h.

The upper and free end of the lever J is provided with a sheave, j, while the lower or fixed end is connected to the follower K by means of the pivot-bolt j'.

The follower consists of two plates, K K, connected together by cross-pieces a a, as clearly shown in the drawing.

Placed above the shaft G, and secured in a suitable frame, are three sheaves, L, L', and l, and around the sheaves L L', and also around the toggle-sheave j, is passed the rope or chain M, by which the press is operated. One end of the rope M is attached to a pin, m, which is secured to the toggle-lever J, near its upper end, while the other end of the said rope is wound around a drum, which may be operated by horse, steam, or any other convenient power.

N is a rope, which, being attached to the follower K, and passing around the sheave l and thence down on the outside of the press, enables the operator to raise said follower to its most elevated position, in order that the press may be charged with a proper quantity of hay, cotton, &c.

O is the trunk or body of the press, in which the follower K has a vertical movement, said trunk being composed of thick planks, which are prevented from springing by the braces C, and the trunk is provided at its lower end with doors P R R'.

P is one of two similar doors on the opposite sides of, and at the extreme foot of, the press, which doors being thrown open when the follower has reached its lowest position enable the operator to tie or hoop the bale, and afterward to remove the same, without leaving the ground or floor upon which the machine stands. The said doors are hinged to the press and held in their closed position by any suitable device.

The doors R R' are not hinged to the press, but have shoulders r r', which bear upon the plate or bed-plate S; and these doors are held in line with the inside of the press during the process of making the bale by means of the eccentric beams T T' and U U'; and for a more elaborate description of these doors and their accessories see the patent granted to Wm. Ridenour, dated March 10, 1863.

The upper part of the trunk O has an opening, V, which not only permits the play of the toggle-lever J, but also enables the press to be charged with hay, cotton, &c.

The operation of this press is as follows: The follower K is elevated by means of the rope N until it reaches its most elevated position, when said follower strikes against the shoulder o of the trunk O, and is thus prevented from ascending any farther. (See dotted red lines.) The door P and the one opposite, which is similar to it, are thrown open, and the ties are inserted in the grooves of the bed-plate S, after which the doors are closed and fastened. The press is now charged through the mouth V, and after a sufficient quantity of hay has been placed in the trunk O the operation of pressing is commenced. The power is applied continuously until the

follower K is depressed to the top of the door P, (see strong red lines,) at which time said door is opened and the ties are forced through the grooves in the follower, and also bound together, thus retaining the bale securely in shape. The eccentric beams T T' and U U' are then turned one-fourth of a revolution, which act serves to relieve the doors R R' from the pressure of the hay, and the finished bale is shoved out through the door P directly onto the ground. The doors R R' are now closed by their respective eccentrics, the follower K again elevated, and the baling process is resumed.

Among the many advantages which a press of this kind possesses over those now in use the following may be enumerated:

First, its simplicity. It will be seen, by referring to the drawing, that there are no screws or complicated gearing employed in the construction of my press; and therefore it can be built by any country carpenter or millwright, and at a mere nominal cost, as the press is complete in itself, and does not require to have an expensive building erected especially to contain it.

Second, its convenience. The act of baling being done at the very bottom of the trunk,

and the bale shoved directly out from the press onto the ground, the press is thus operated in the most convenient and rapid manner, and without any extra handling of the bale.

Third, its economy of power. The power being applied direct, there is no loss from the friction of complicated parts, and, owing to the different positions which the toggle assumes, the pressure is lightest at the commencement of the operation, but gradually increased as the follower is depressed until it reaches its lowest position, when the pressure is the most intense.

I claim—

The arrangement herein described of the base-bars A A, press-box P S, at or near the level of the ground, double follower K K, cross-beams *a*, vertical toggle-levers I J J, cord M, and pulleys L j, all constructed and operating as set forth, to provide for the delivery of the bale at or near the ground.

In testimony of which invention I hereunto set my hand.

HEMAN A. ASHLEY.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.