3 Sheets--Sheet 1.

# W. H. McBURNEY, dec'd.

MARIA McBURNEY, Adm'rx.

## Hay, Cotton and Wool Press.

No. 164,748. Patented June 22, 1875.

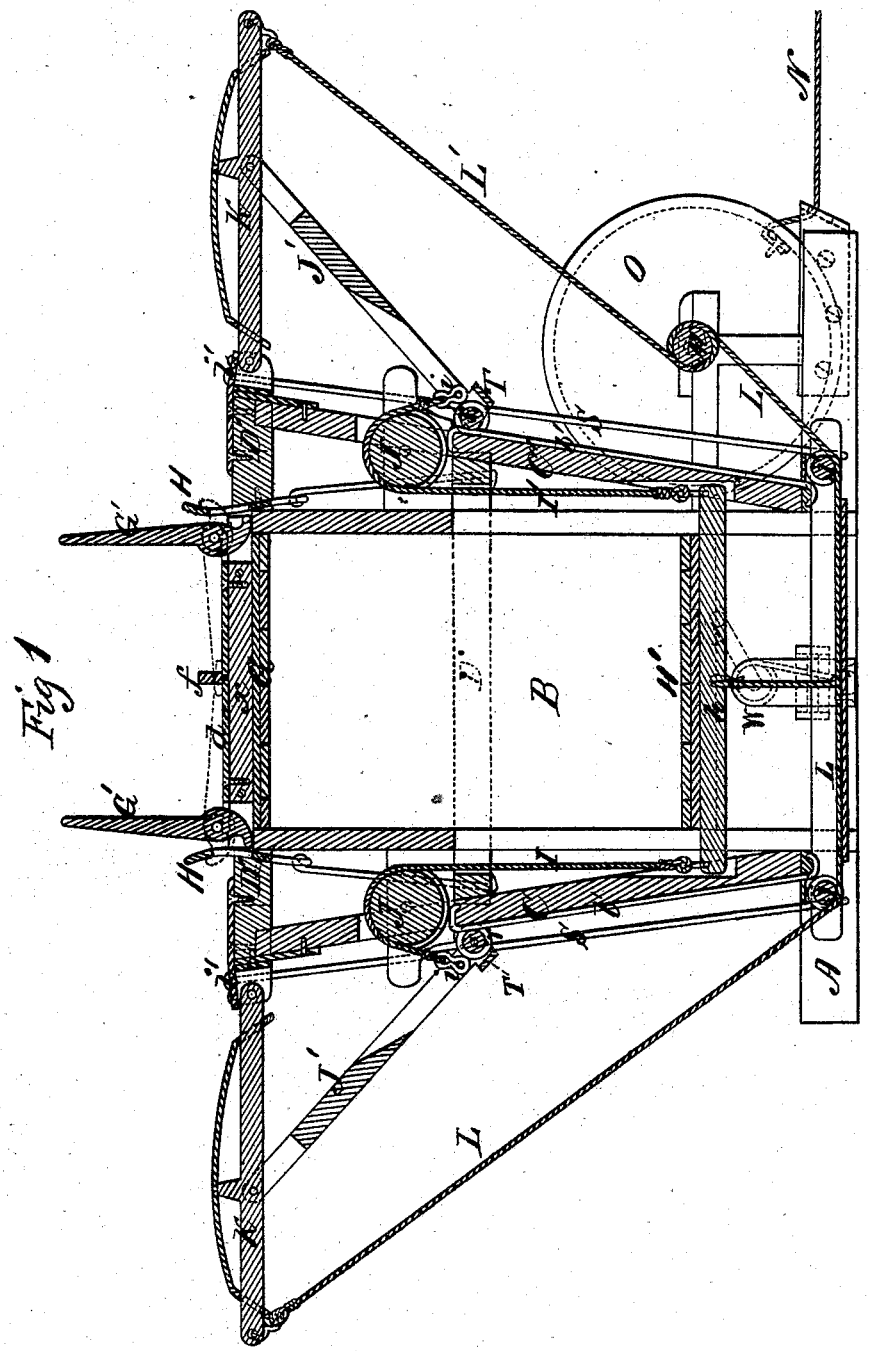


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Fig 3.

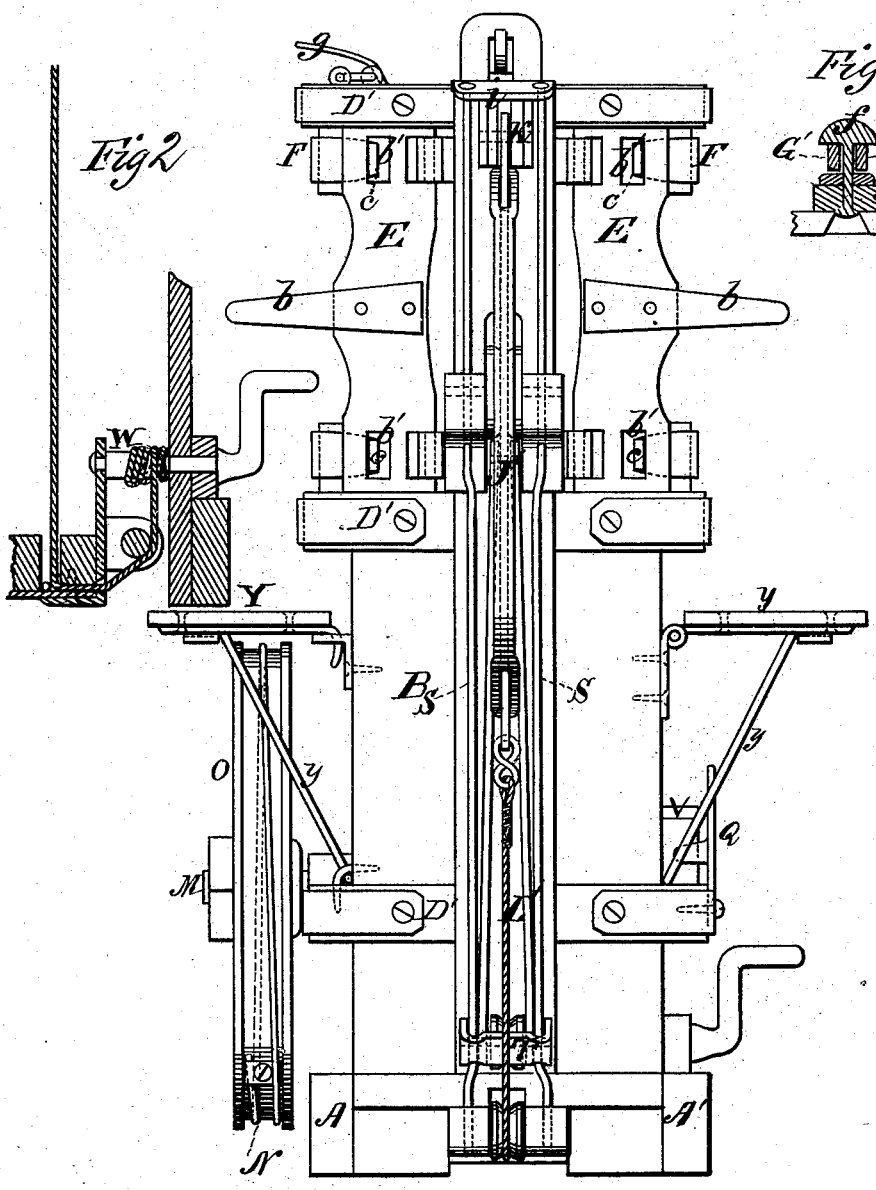


Fig 2

Fig 4




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Fig 5

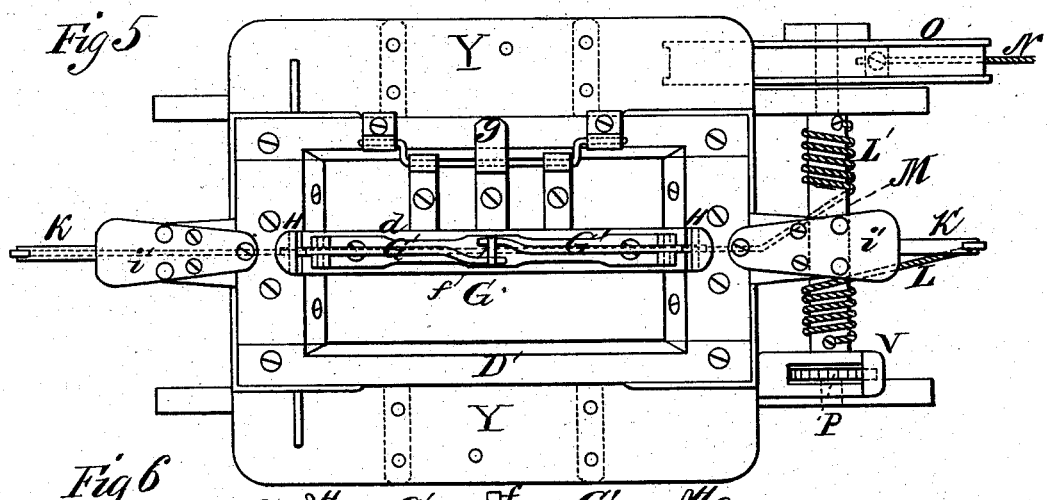
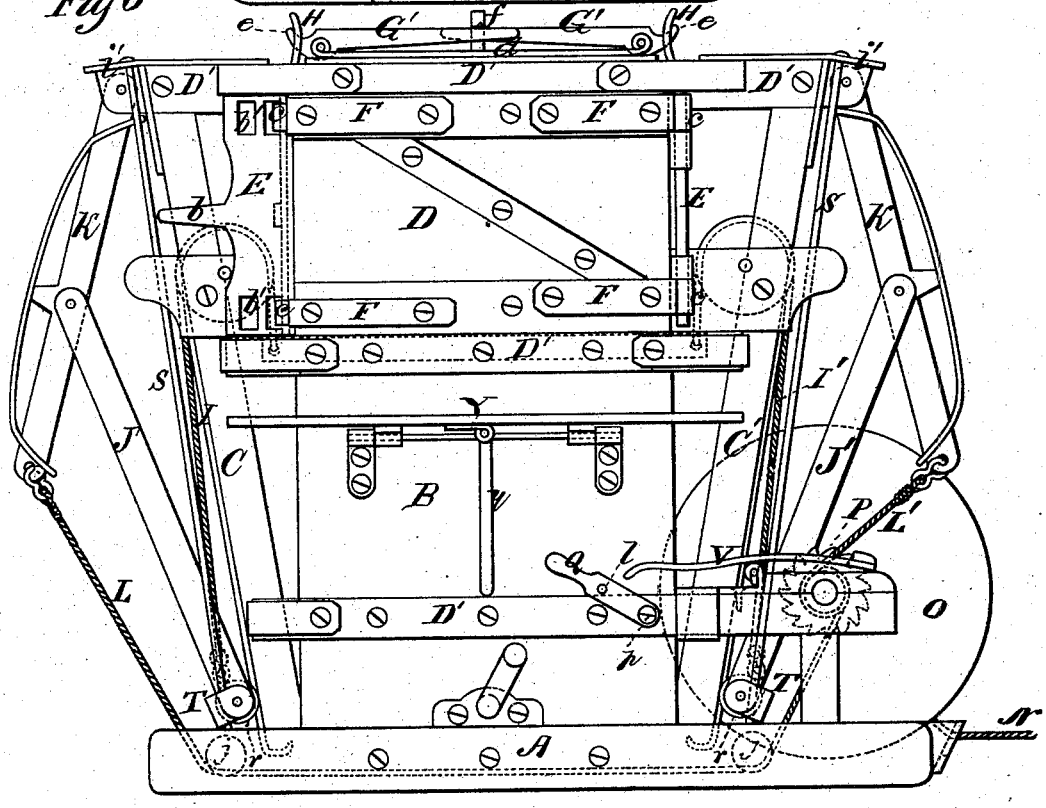



Fig 6

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# UNITED STATES PATENT OFFICE.

MARIA McBURNEY, OF SACRAMENTO, CALIFORNIA, ADMINISTRATRIX OF WILLIAM H. McBURNEY, DECEASED.

## IMPROVEMENT IN HAY, COTTON, AND WOOL PRESSES.

Specification forming part of Letters Patent No. **164,748**, dated June 22, 1875; application filed April 3, 1874.

*To all whom it may concern:*

Be it known that WM. H. McBURNEY, deceased, did invent a new and valuable Improvement in Hay, Cotton, and Wool Presses, of which I, MARIA McBURNEY, of Sacramento, in the county of Sacramento and State of California, administratrix, do hereby declare the following to be a full, clear, and exact description of the construction and operation, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a vertical sectional view of the press, and Fig. 2 is a sectional detail view of the same. Fig. 3 is a front view, and Fig. 4 is a sectional detail view; Fig. 5, a plan, and Fig. 6 a front elevation, of the same.

This invention has relation to improvements in presses for reducing to a compact form a mass of cotton, hay, moss, or other analogous substances; and the nature of the invention consists in the combination of the parts hereinafter more fully set forth. It also consists in the novel means, substantially as hereinafter explained, whereby the hinged doors in the upper end of the press-box are kept closed when they are subjected to strain, as will be fully understood from the following description.

In the annexed drawings, A A′ designate the sills, B the press-box, and C C′ the uprights of the press-frame, rigidly secured to the transverse beams, bracing the sills, and diverging outwardly from the said press-box, as shown in Fig. 1. Uprights C C′ are rigidly and strongly secured in any suitable manner to the press-box, and to rectangular frames D′, embracing the same, which frames are strengthened by means of angle-irons or straps rigidly secured at their corners, and are arranged at a suitable distance apart, from bottom to top of the said press-box. These frames serve to prevent the sides and ends of the press-box from bulging during their subjection to strain in the formation of a bale. D represents doors in the sides of the press-box, between an upper and an intermediate frame, D′, which doors are hinged to open outward, and when closed are held against outward vibration by means of metallic plates E, having an actuating handle, *b*, and slots, *b′*, cut in their vertical edges, which plates are suitably hinged to the ends of the press-box, and are adapted to swing inwardly, for the purpose of allowing the hooked ends *c* of latch-irons F on the door to be received in the slots *b* of the said plates, as shown in Fig. 6. G represents a door suitably hinged to the upper frame D′, and adapted to snugly close the upper end of the press-box, which door, when it is closed, is held against upward vibration, when subjected to strain, in the following manner, to wit: Upon a strong wooden brace, *x*, rigidly secured to the top of door G, is suitably fastened a longitudinal metallic plate, *d*, having a vibrating hooked latching-lever, G′, pivoted at each end, the hooked ends *e* of which are adapted to be vibrated downward into a recess in the said brace, when the power ends of the said levers are thrown up vertical to the lid. When the said latches are thrown down, their hooked ends will be engaged under staples H, rigidly secured in any suitable manner to frame D′ of the press, the casual detachment of the said latches from the said staples being prevented by the engagement of the free ends of the former under a double-barbed arm, *f*, projecting upwardly from the plate *d*, as shown in Fig. 1. To open door G, throw up levers G′, when their hooked ends will be vibrated out of staples H into the recesses in the ends of the lid-brace. The door may then be raised out of the press-box upon its hinges, and when thus raised will be held against undue downward vibration by means of a metallic arm, *g*, rigidly secured to the hinged edge of the said door. H represents a follower of the usual construction, and arranged in the usual well-known manner in press-box B, having a longitudinal brace, *h*, projecting through slots in the end walls of the said box, to the ends of which are secured strong ropes I I′, passing thence over grooved pulley-wheels J, recessed into and having their bearings in uprights C, thence downward to an engagement by means of a hook, *i*, with a brace-rod in the lower bifurcated end of a strong metallic rod, J′. The upper end of

this rod is pivoted to a vertically-vibrating lever, K, having its fulcrum in a strong metallic plate, *i'*, rigidly secured to the upper ends of uprights C, and to frame D' at the upper part of the press-box, as shown in Fig. 1.

When levers K are vibrated downwardly rods J' pivoted thereto will, by their descent, through the medium of ropes I' I and pulley-wheels J, raise the follower in the press-box, and any cotton which may have been placed therein will necessarily be compressed. Levers K are actuated with great force by means of strong cables or chains L L', secured in any suitable manner to their ends, the former passing downward over a pulley-wheel, *j*, having suitable bearings in the sills of the press-box at one end of the press-frame, thence across the latter, over a pulley-wheel, *j'*, at its other end, upward to a transverse shaft, M, in the nature of a winding-drum, to which it is rigidly secured, and the latter directly downward to the said shaft, to which it is also permanently attached. Shaft M has its bearings in a suitable frame at one end of the press-box, and, when it is caused to rotate by the forcible unwinding of a rope, N, previously wound around a grooved pulley-wheel, O, keyed upon one of its ends, ropes L L' will be simultaneously wound up thereon, depressing the power ends of levers K, raising the follower evenly, and compressing the materials in the press-box with great force. During the actuation of the winding-shaft in the formation of a bale it is prevented from backward rotation by means of a vertically-vibrating pawl-plate, V, pivoted to the frame of the press, and adapted to engage with the teeth of a rack-wheel, P, keyed upon the said shaft, which pawl may be disengaged from the rack and held free therefrom by means of a vibrating lever, Q, pivoted at *p* to the frame, and having an inwardly-projecting arm, *l*, when the said lever is thrust toward the pawl, bringing its arm *l* forcibly in contact with the said pawl. When the bale is completed and removed from the press, pawl V is disengaged from its rack-wheel, and the follower is lowered into the press-box by means of a suitable rope or cable rigidly secured to the under side of the said follower, which is then wound up by a windlass, W, mounted upon the sills of the press-frame, and operated by a suitable crank-arm. With a view to guiding rods J' accurately in their descent, and at the same time to prevent undue friction, the lower ends of the said rods are provided with a grooved pulley-wheel, *r*, traversing on a track-rod, *b'*, rigidly secured in any suitable manner to uprights C, the said ends being held against lateral displacement by means of metallic braces S, connecting the upper frame and the sills of the press-frame, and by means of U-shaped restraining-plates T, pivoted upon the journals of pulley-wheel *r*, and embracing the said brace-rods, as shown in Fig. 1. By this means all undue displacement of rods J is effectually prevented, and the full power exercised by levers K is transferred to the follower. Y represents platforms, secured to the press-box at each side thereof, for the use of the pressmen, standing upon which they will be enabled to apply the ties and bagging to a compressed mass conveniently and with dispatch. These platforms may be either hinged to the press-box, in which case they will be held in position by a prop, *y*, or they may be detachable therefrom. In either case prop *y* will be hinged to the under side of platforms Y, so that it may be vibrated close to the same, and thus economize room. When the platforms are detachable their under sides will be provided with hooks, the shanks of which will be rigidly secured across them, which hooks will be engaged in staples secured in any suitable manner to the sides of the said press-box; hence, when these stands or platforms are not required, as during transportation, they may be detached or caused to vibrate on their hinges close to the sides of the press-box, allowing the press to be packed or stored in a small space, and the risk of tearing them away is greatly lessened.

What I claim as new is—

1. The vibrating hooked levers G', in combination with a hinged door, having a barbed catch, *f*, and a press-frame, having stationary staples H, substantially as specified.

2. The vertically-movable follower H', having a brace, *h*, cords I I', pulleys J, connecting-rods J', and actuating-levers K, in combination with the windlasses M W, whereby the winding of the rope around one windlass will unwind the rope coiled upon the other, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MARIA McBURNEY.

Witnesses:

MANVILLE BARBER,
LEROY S. TAYLOR,
LUCINDA M. BRAINARD.