2 Sheets--Sheet 1.

H. K. BURNETT.

Hay and Cotton Presses.

No. 161,201. Patented March 23, 1875.

Fig 1

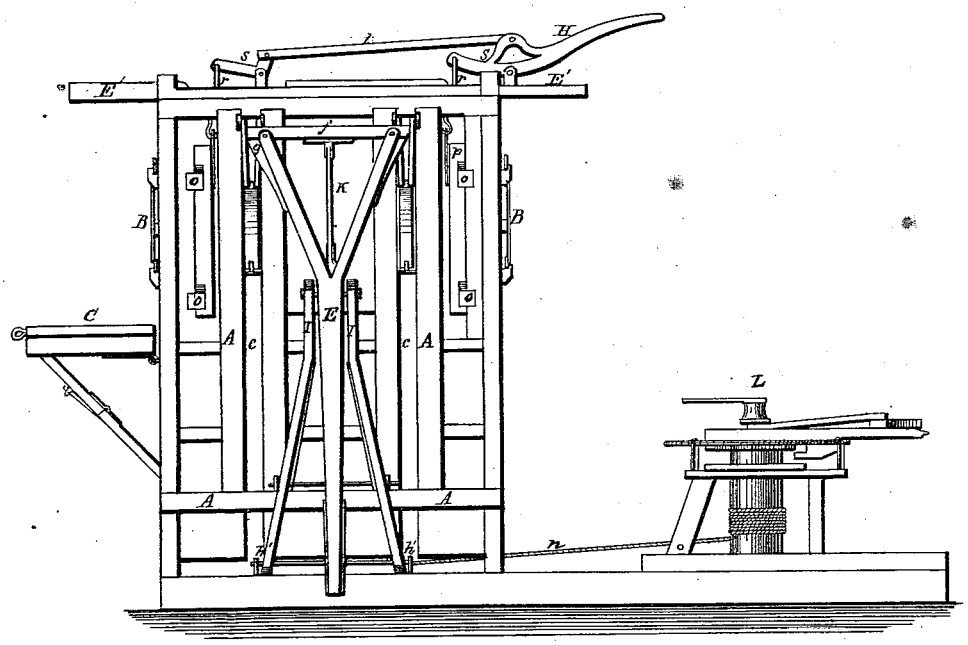


Fig 2

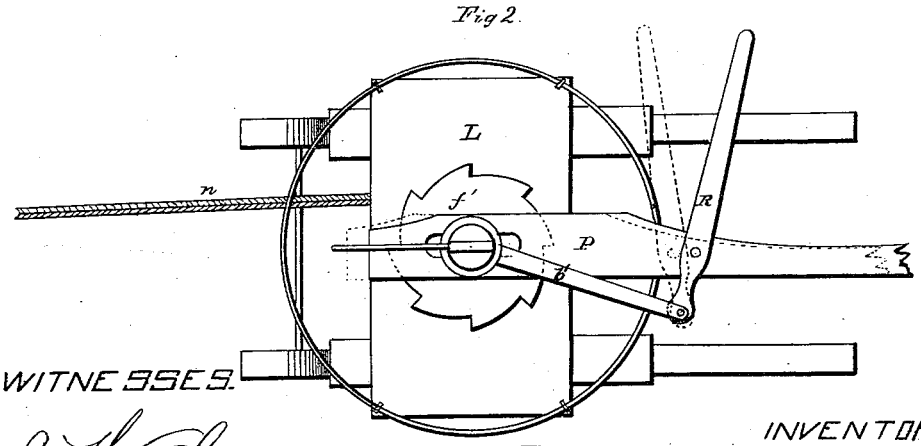
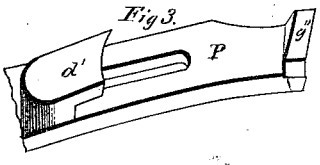


Fig 3



WITNESSES.

Wm. Garner

Chas. W. Lemm

INVENTOR.

Henry K. Burnett

per F. A. Lehmann Atty

2 Sheets--Sheet 2.

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Fig 4.

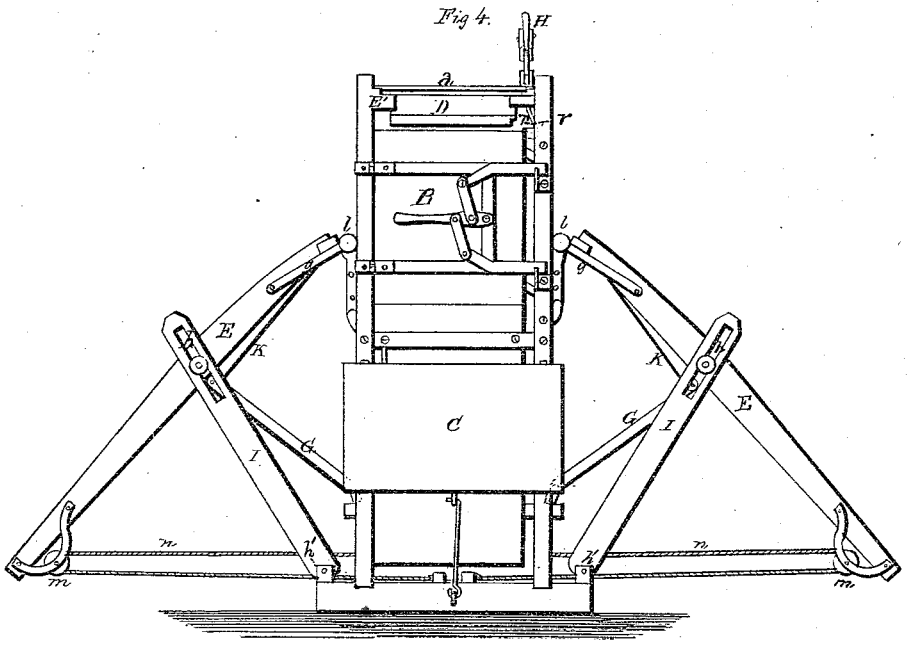
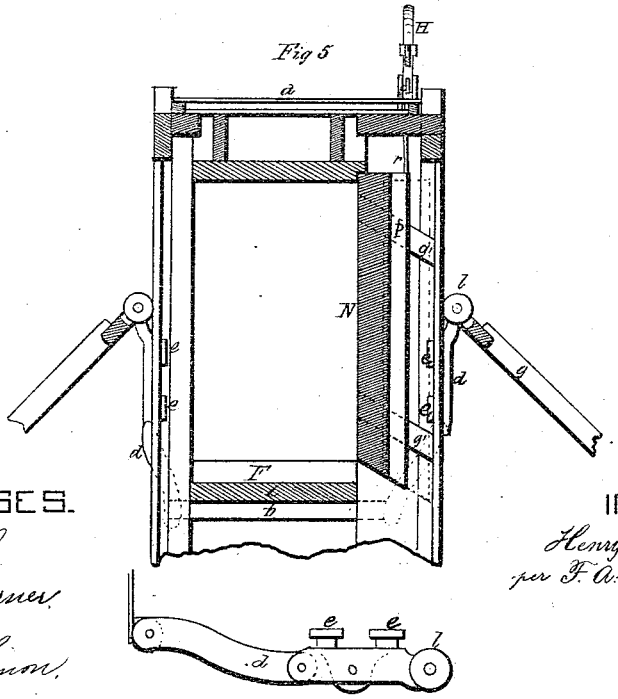


Fig 5



WITNESSES.

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UNITED STATES PATENT OFFICE.

HENRY K. BURNETT, OF POUGHKEEPSIE, NEW YORK.

IMPROVEMENT IN HAY AND COTTON PRESSES.

Specification forming part of Letters Patent No. **161,201**, dated March 23, 1875; application filed February 19, 1875.

To all whom it may concern:

Be it known that I, HENRY K. BURNETT, of Poughkeepsie, in the county of Dutchess and State of New York, have invented certain new and useful Improvements in Hay or Cotton Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in hay and cotton presses; and consists in an arrangement of parts by which vegetable fibrous substances, such as cotton, hemp, hay, straw, &c., can be compressed into bales, as will be more fully described hereafter.

The accompanying drawings represent my invention.

A represents a rectangular oblong frame, of such construction and form as is best adapted to resist the great strains that are brought to bear upon it. The inside of this frame presents a smooth even surface, the boards which inclose its ends and sides being secured to the outside studs and braces from within, and closely fitted together, whereby the strength of the whole structure is largely increased. The frame is open at the bottom, and has doors B at each end, extending from the top to nearly half-way to the ground. These doors are for the removal of the bales, or may be used also to introduce loose material to the inside, which is made convenient by the platform or table C, hinged under each door, which table may be raised or lowered as required. The top of the frame consists of two strong square frames, D, which slide between guides E′, which guides extend beyond the ends of the press, so as to give room for the frame D to be pushed out of the way, and leave the entire top open, when loose material is to be placed inside. The strips *a*, extending across the frames D, serve to hold them in position between the guides. As the pressure is upward, the frames D, having their under sides covered with heavy boards, are made very strong, to resist any pressure that is likely to be brought against them. Inside of the frame A is the follower F, which fills the entire space from end to end, and consists of a platform, *i*, supported upon cross-bars *b*, the ends of which enter openings *c* at the sides of the frame A, and are there attached to jointed lugs *d*, which are provided with flanges *e* on the inside of their upper joints, to guide them up or down. The upper ends of the lugs *d* are pivoted to braces *g* on the arms of the lever E, and are provided with rollers *l*, which move upon the ways on each side of the openings *c*. The arms of the lever E are united by a cross-piece, *f*, extending from one opening to the other, and are strengthened by metallic braces *g*. At the junction of the arms a bolt passes through the lever E and the slots *h* in the upper ends of the braces I, which braces have their lower expanding ends pivoted at *h′*. On the outer end of the lever E is a pulley, *m*, over which the cord *n* passes to the moving power. To the cross-piece *f*, at the end of the arms of the lever E, is secured a rod, *k*, which extends under the bolt in the slots *h*, and is there pivoted to the upper end of the bifurcated brace G, the forked ends of which are pivoted on the side of the frame A, above the lower ends of the braces I. The object of this brace G is to relieve the brace I of the increasing pressure occurring when the bale is nearly compressed to the required size. The upper half of one of the sides N of the frame A is detached from the lower half, and its lower edge beveled inward, and the top edge of the lower half beveled outward, so that if the upper half were not otherwise supported, it would slide down into the recess formed on that side of the frame A by the boards and the outer frame.

To the sides of the back of the movable upper half N of this side of the frame are fastened pieces of wood, in which downward-slanting grooves *g′* are cut, and opposite to the grooves are blocks *o*, fitting into them. The grooves and blocks have the same grade with the beveled edges of the upper and lower halves on this side, and serve to allow the upper half to slide down outward until checked by the rods *r*, which are attached to the pieces *p*, to uphold the upper half on that side. The rods *r* are connected with bell-cranks S on the top of the frame A, which cranks are connected by the rod *t*, and operated by the lever H.

By depressing this lever the detached part of the side is held up to the place where it would have been if the side had been made in one piece.

When the bale has been pressed to its proper volume, the lever is raised up, and the upper half of the side, which is suspended by the rod *r*, is allowed to slide down outward, whereby one side of the bale is freed from all pressure, and room made for the removal of the bale through either of the doors B. This power is communicated to the press by cords, which pass over pulleys at the ends of the levers E, and under the frame A, from a capstan, L, which is operated by the slotted lever P. This lever may be moved back and forth by the united means of the lever R, pivoted upon the lever P, and the rod *b'*, which has one end secured to the pivot on the top of the capstan, and the other at the end of the lever R.

To turn the capstan in order to operate the press, the lever P is drawn back as far as the slot will allow, when a projection, *d'*, under the end of the lever, engages the ratchet *f'* around the upper end of the capstan. The lever P and the capstan may then be turned together, and the cord coiled around the drum.

When the cord is to be unwound to lower the follower in the press, the lever P is thrown out of gear by a reversed motion of the lever R, and another projection, *g''*, under the lever P brought to bear against the body of the capstan, and act as a brake, to prevent its revolving with too great velocity.

Having thus described my invention, I claim—

1. The combination of the lever E, braces I and G, rod *k*, and the follower F, substantially as described.

2. The construction of the frame A, with its movable side N, grooves *g'*, and blocks *o*, doors B, and hinged platform or tables C, and top frames D, moving in the guides E', substantially as set forth.

3. The bell-cranks S and connecting-rod *t*, in combination with the lever H, for the adjustment and support of the side N, substantially as specified.

4. The combination of the capstan L, ratchet *f'*, slotted lever P, with the projections *d'* and *g''*, the lever R, and the rod *b'*, substantially as shown.

5. The combination of the frame of a hay-press with a movable side or section, whereby the bale can be loosened, so as to be readily removable from the frame, substantially as described.

6. In combination with a capstan, L, a slotted lever, P, and a ratchet, *f'*, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 8th day of February, 1875.

HENRY K. BURNETT. [L. S.]

Witnesses:
GEO. WOOD,
HENRY ANGWINE.