(No Model.)

3 Sheets—Sheet 1.

P. K. DEDERICK.

BALING PRESS.

No. 457,633. Patented Aug. 11, 1891.

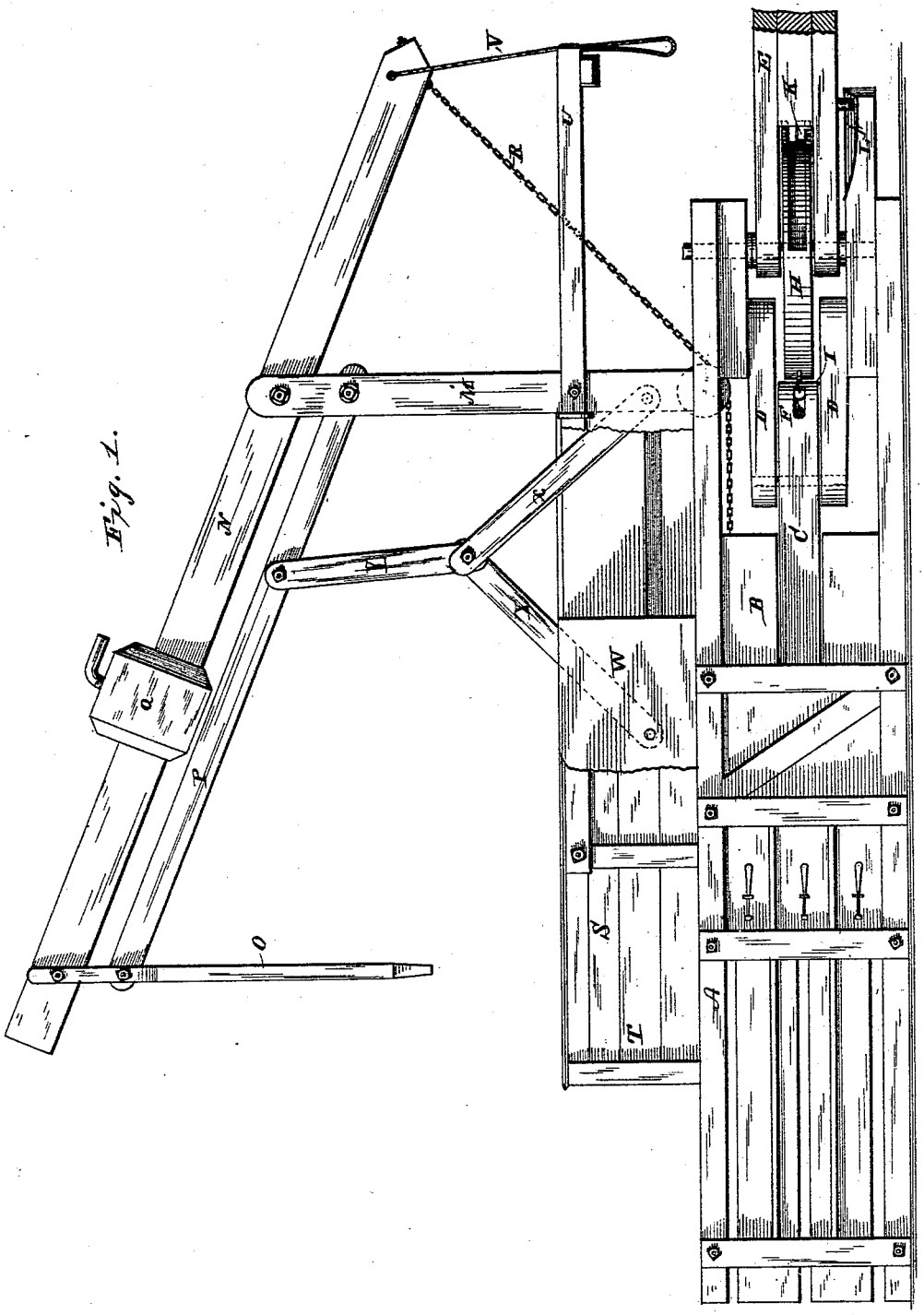

Fig. 1.

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(No Model.) 3 Sheets—Sheet 2.

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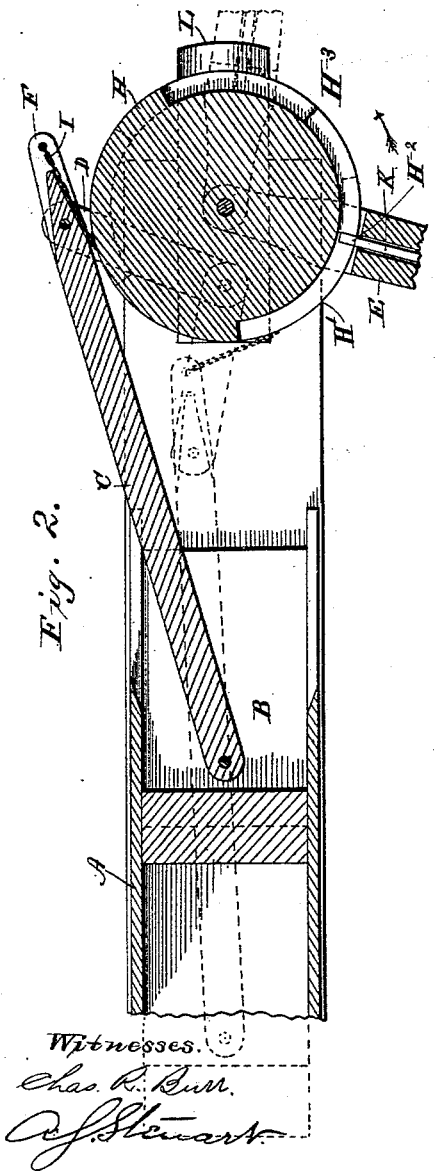

Fig. 2.

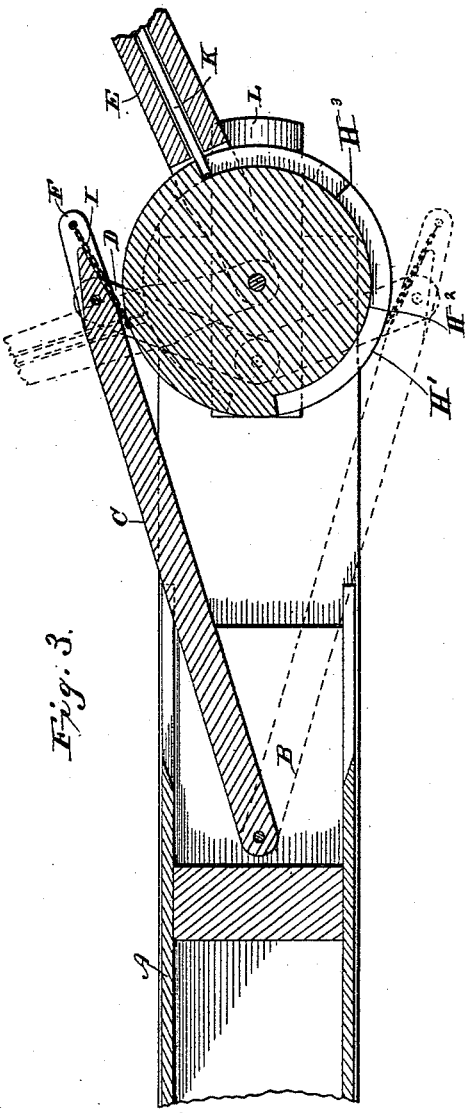

Fig. 3.

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(No Model.) 3 Sheets—Sheet 3.

P. K. DEDERICK.

BALING PRESS.

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Fig. 6.

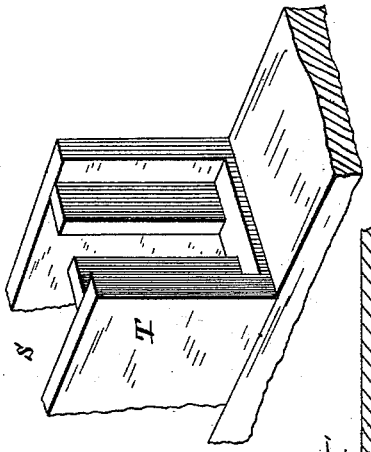


Fig. 4.

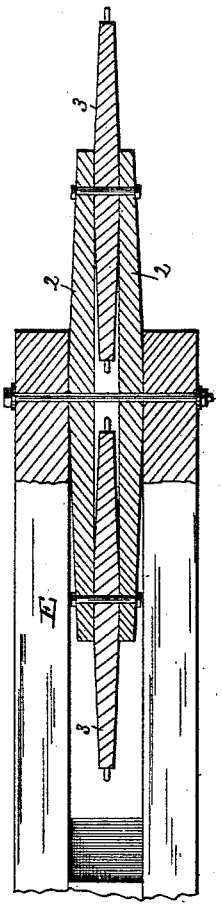
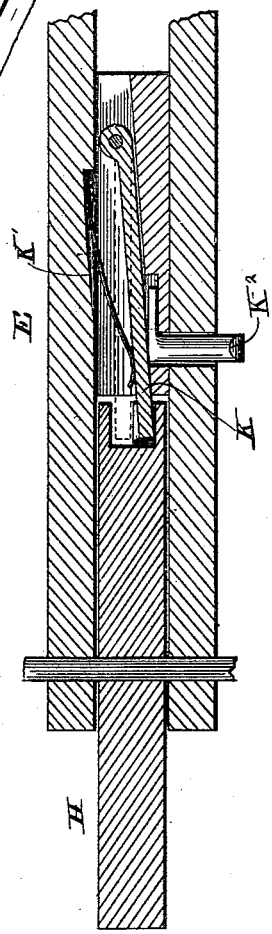


Fig. 5.



Witnesses:
Chas. R. Burr.
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UNITED STATES PATENT OFFICE.

PETER K. DEDERICK, OF LOUDONVILLE, NEW YORK.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 457,633, dated August 11, 1891.

Application filed September 14, 1886. Serial No. 213,525. (No model.)

To all whom it may concern:

Be it known that I, PETER K. DEDERICK, of Loudonville, county of Albany, State of New York, 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 of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

My invention relates particularly to that class of presses for which Letters Patent were granted me October 29, 1872, Nos. 132,566 and 132,639, and to the various modifications for which Letters Patent have since been granted me, particularly No. 334,004, of which the power herein shown is a modification, and No. 334,001 as embodying the class of hopper and feeding devices to which my improvements are applicable.

Figure 1 is a side view of a baling-press embodying my improvements. Figs. 2 and 3 are sectional plan views. Fig. 4 is a sectional view of the horse-lever with end attachments. Fig. 5 is an enlarged sectional view of the drum and trip attachments, and Fig. 6 is a perspective view of the end of the condensing-hopper.

Similar figures and letters represent similar parts.

A represents the frame or body of the machine, which may be constructed in the ordinary manner or as shown.

B represents the traverser; C, the pitman, which is pivoted to the traverser B, and D represents the crank arm or arms, which are pivoted to the pitman at one end and at the other end to the frame of the press, as shown. Any other guide to the pitman would answer as a substitute for the crank-arms—for instance, such as shown in Letters Patent granted me November 24, 1885, No. 330,877.

E is the horse-lever, which may be pivoted on the same center or shaft with the crank-arms or on a separate center outside or farther back, as shown. In the latter case it is desirable to extend the end of pitman C, as at F.

To the end of horse-lever E, I pivot a drum H and connect the pitman C from the end F to the said drum H by means of a chain I, one end of which is attached to the pitman and the other end to the drum, so that the rotation of the drum one way will draw the pitman or toggle over the center, and the rotation of it the reverse way will draw the pitman and toggle back. The drum H is provided with a peripheral slot H′, which extends about half-way round it, as shown in Figs. 2 and 3. This slot is not of the same width throughout its entire length, but between the points marked H^2 H^3 it is narrowed abruptly, so as to form vertical shoulders at said points H^2 H^3.

K is a latch pivoted within a slot in the horse-lever and having its forward end projecting within the slot H′ of the drum, a spring K′ above said latch operating to keep the latter normally pressed down.

Assuming the parts to be in the position indicated by the full lines in Fig. 2, when the horse-lever is moved in the direction indicated by the arrow in said figure the end of the latch K carried by it will strike the shoulder H^2 and rotate the drum H and cause the chain I to be wound thereon and the pitman C and arms D to be brought nearly into line, as shown in the dotted lines, Fig. 2, thus driving the traverser forward. By the time the pitman and arms are thus nearly brought into line a pin K^2, Fig. 5, carried by the horse-lever and arranged beneath the latch K, strikes a stationary trip or incline L, Figs. 1, 2, and 3, thereby raising the latch sufficiently high to free it from the shoulder H^2 in the drum-slot and permit the drum to be rotated backward by the back expansion of the pressed material until the end of the slot comes in contact with the latch, as shown in the full lines, Fig. 3. A continuation of the movement of the horse-lever in the same direction will now cause the drum to be rotated sufficiently to draw the pitman C and arms D not only up to but over the center, so that when the back expansion of the pressed material operates it will throw the joint of said pitman and arm out at the opposite side of the press, as shown in the dotted lines, Fig. 3. If the horse-lever is pulled around in the opposite direction, it will in like manner cause two strokes of the traverser to be made—to wit, one stroke while its latch K is engaged with the slot-shoulder H^3 and another stroke after

the latch is disengaged from said slot-shoulder H^3 and brought into engagement with the opposite extremity of the slot, as will be readily understood.

M is a post firmly secured to the press-frame and to which a rock-lever N is pivoted, with a feed-blade O attached to its upper end and a bar P pivoted to the feed-blade O, and post M to guide and keep the feed-blade in proper position.

Q is a weight encircling the bar N, so that it may be moved toward or away from the post M, so as to increase or diminish its force on the feed-blade O. This weight may be secured by a thumb-screw or otherwise to keep it in position.

To the outer end of the rock-lever N is attached a chain R, the other end of which is attached to the traverser B, so that at each forward stroke of the traverser the feed-blade is raised and at each reverse movement of the traverser the feed-blade falls, propelled by its own gravity and that of the weight attached, carrying with it the charge previously placed in the hopper S, which is forced down in the press-box in front of the traverser B, by which it is condensed into the bale in the ordinary manner in this class of presses.

At the end of the hopper at T, I construct an opening, as shown, so that if from overcharge or other cause the feeder fails to carry down the charge far enough the man charging the press can put his foot on the charge and force it down and again remove it, all without raising his foot over the top of the hopper, as customary, and in feeding some material it may be conveniently done with the foot through the opening in this manner without the feeder. This opening may be at the side of the hopper instead of the end, if preferred.

Extending back from the hopper and secured to it as well as to the post M or to the frame of the press are spring-bars U, and I connect their outer ends with the outer end of rock-lever N by means of ropes V or otherwise, so that when the feeder is allowed to fall without charge in the hopper or with insufficient charge the shock or blow will fall on these spring-bars instead of on the traverser and chain, as heretofore.

In the hopper S, I place a traverser W, to which I secure one arm X of a toggle-joint, the other arm x being secured to the post M.

At the joint of or to the arms X, I attach a pitman V or link Y, which is pivoted to the bar P, as shown. Other connections may be substituted, so that as the rock-lever is elevated the traverser W moves toward the post M, and as said lever is depressed it moves away from said post and condenses the charge over the box. 2 2 are eveners, of which one or two may be used. 3 3 are whiffletrees pivoted at their ends to the eveners, and the said eveners are pivoted at their centers between the two lever-planks of the press, constructed thus so as to make a central draft on said plank instead of winding, as when pivoted at the side; or, if pivoted forward of the horse-lever to make it central, then in reversing the horse he must travel that much farther, whereas between the lever-plank the point of draft either way is on the same pivotal point, and there is no dangling or knocking of whiffletrees or traces about the horse's heels.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the horse-lever, of the latch, the drum having the shoulders with which the latch co-operates, the trip for the latch whereby it is automatically released, the double-acting pitman, and connections between the pitman and drum, substantially as described.

2. The combination, with the horse-lever and drum, of the latch connecting the lever and drum, the fixed trip for releasing the latch, the pitman, and a loose connection between the drum and pitman, substantially as described.

3. The combination, with the horse-lever and the latch carried thereby, of the drum, the shoulders on the drum with which the latch co-operates, the stationary trip on the frame of the machine, the pitman, and connections between the pitman and drum, substantially as described.

4. The combination, with the horse-lever and latch, of the drum having the slot therein, the relatively widely-spaced shoulders in said slot, with which the latch engages the trip for releasing the latch, the pitman, and connections between the pitman and drum, substantially as described.

5. In a baling-press, the combination, with the baling-chamber, feeder-blade, and weighted rock-bar carrying the feeder-blade, of the spring-bars and the flexible connection between said spring-bars and the rock-bar, substantially as described.

6. In a baling-press, the combination, with the baling-chamber, feeder-blade, and weighted rock-bar carrying the feeder-blade, of the traverser and the flexible connection between it and the rock-bar, the spring-bars, and the flexible connection between said spring-bars and the outer end of the rock-bar, substantially as described.

7. The combination, with the rock-bar carrying the feeder-blade, of the feed-hopper and the condensing-traverser therein connected to and driven from the rock-bar, substantially as described.

8. The combination, with the rock-bar carrying the feeder-blade, of the feed-hopper, the condensing-traverser therein, and the toggle device by which the said condensing-traverser is operated from the rock-bar, substantially as described.

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Witnesses:
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