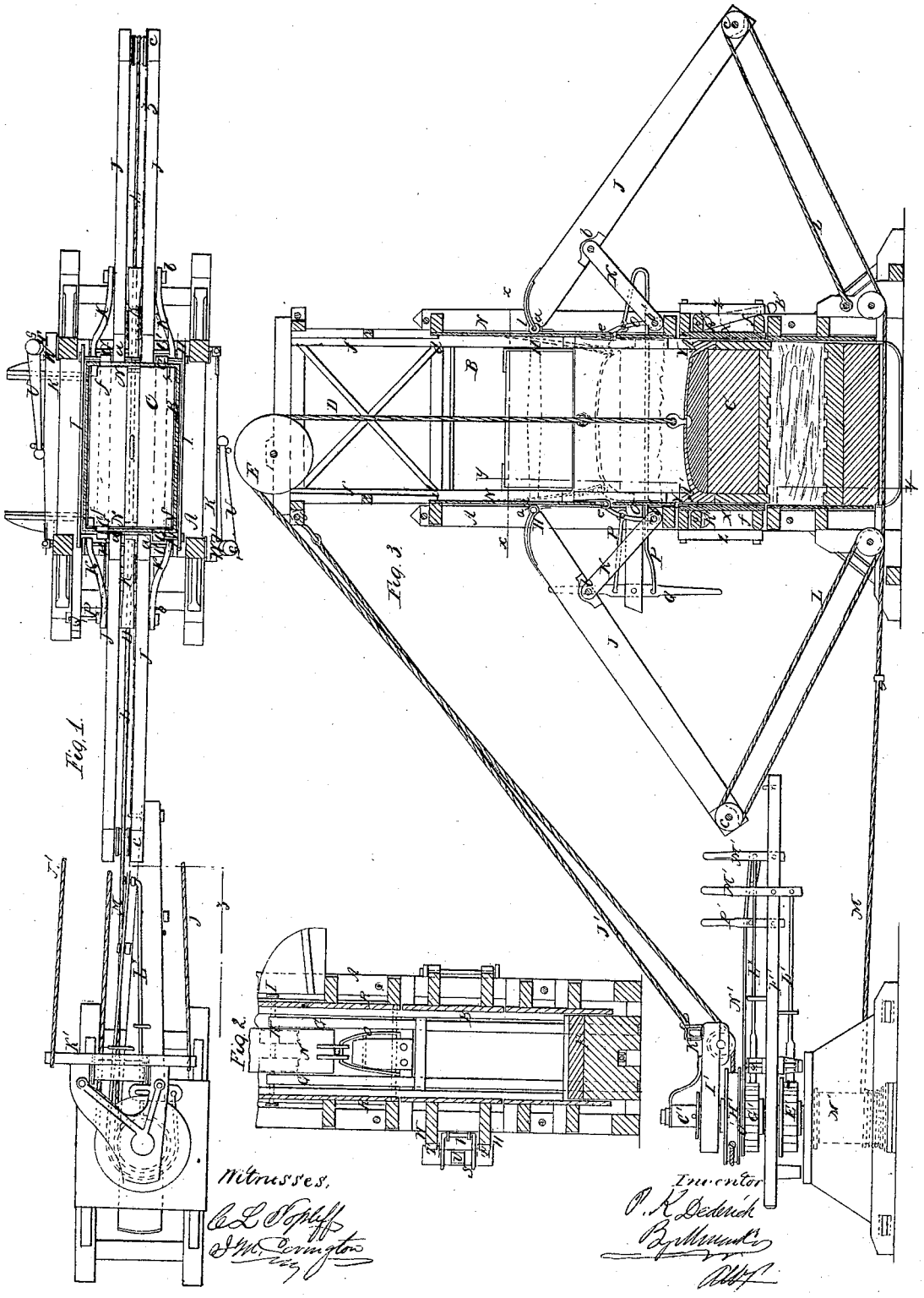
P. K. DEDERICK.

BEATER PRESS.

No. 48,619. Patented July 4, 1865.



UNITED STATES PATENT OFFICE.

P. K. DEDERICK, OF ALBANY, NEW YORK, ASSIGNOR TO L. AND P. K. DEDERICK, OF SAME PLACE.

IMPROVEMENT IN BEATER-PRESSES.

Specification forming part of Letters Patent No. **48,619**, dated July 4, 1865.

To all whom it may concern:

Be it known that I, P. K. DEDERICK, of Albany, in the county of Albany and State of New York, have invented a new and Improved Beater-Press; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet No. 1, is a horizontal section of my invention, taken in the line *x x*, Fig. 3; Fig. 2, a vertical section of the same, taken in the line *y y*, Fig. 3; Fig. 3, Sheet No. 2, a vertical section of the same, taken in the line *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved beater-press; and it consists in a novel and improved construction and arrangement of the parts, as hereinafter fully shown and described, whereby it is believed that the operations of beating and compressing substances for baling may be performed with greater facility than usual.

The invention refers to a press of that class in which levers are employed for operating the follower.

A represents the framing of the press, which has an upright position, and the press-box B placed or formed within it. These parts may be constructed in much the usual way, and therefore do not require a specific description.

C represents the beater, which has a cord or rope, D, attached to it, which passes over a wheel or pulley, E, on the top of the framing A. This beater is allowed to work freely up and down within the press-box during the beating operation.

F represents the follower, which works in the lower part of the press-box B, and is suspended at each end by two upright bars, G G, which extend upward at each narrow side of the press-box and are attached to rods H H, the ends of which are connected by bars I I at the outer sides of the press-box, as shown in Fig. 1. By this arrangement a positive connection of the rods H H and bars I is obtained, which tends to insure a uniform action of the levers on the follower.

J represents the levers, two being employed at each narrow side of the press. These levers are connected to the rods H H by means of eyes *a*, through which the rods pass loosely, and the levers J have feet or bars K attached by pivot rods or bolts *b*, the lower ends of said feet or bars being fitted loosely on rods *b'*, which pass through the framing of the press. (See Fig. 3.) By this arrangement it will be seen that the inner ends of the levers J are located within the framing A, and that they are above the bale when pressed, and the feet or bars K are brought as near as possible to a perpendicular line in compacting or compressing the bale, and relieve the latter when the levers J are drawn fully down and the bale compressed to its greatest extent. The levers J are operated by ropes L, which pass around sheaves or pulleys *c*, at the lower ends of the levers, and are connected to a rope, M, which is connected to the drum M^x of a windlass, hereinafter described.

At each narrow side of the press-box, at its upper part, there is suspended, by a pivot, *d*, a plate, N. The lower ends of these plates are connected by eyes *e* to a frame, O, which are fitted loosely at their lower ends on the rods or bolts *b*, on which the feet or bars K of the levers J are fitted. The frames O O of the two plates N N are connected to rods P P with a lever, Q, and by operating this lever the lower ends of the two frames O O may be moved simultaneously either toward or from each other, and be made to catch over the top of the beater or be moved off free from it. The plates N N perform an important function, to wit: they prevent the beater C, while acting as such, from falling upon the frames, as the beater in descending forces out the plates, and thereby causes the frames O to be moved out from the line of the descent of the beater. The lower ends of the plates N N are by actuating the lever Q drawn inward so as to catch over the top of the beater and hold it firmly, so that it may serve as a head-block, as shown in red in Fig. 3.

It will be seen from the above description that the guides *f* for the beater, at the upper part of the press-box, serve also as guides for the inner parts of the levers J, as the rods H H and bars I I encompass the upper part of

the press-box. The levers J, therefore, cannot but work steadily, and without being attended with much friction.

R R represent the doors of the press box, which are placed one at each broad side of the same, and may be hung in the usual or in any proper manner. These doors, however, are provided with a peculiar fastening, the same being composed of a roller, S, having two eccentrics, T T, upon it, each roller being provided with a lever or handle, U. The rollers S are connected to the framing of the press by links V to admit of them being adjusted over bearings W on the doors, or moved off from the same. This fastening may be operated with the greatest facility and the doors kept firmly closed without the possibility of casually opening.

X X represent the end-relieving plates, which are at the narrow sides of the press-box, and are designed for relieving the ends of the bale after being compressed, in order that the bale may be readily removed from the press-box. These relieving-plates X are fitted at their lower ends on shafts or bars *f*, the ends of which are provided with journals fitted in the framing A, and the upper ends of said plates are connected to the upright follower-bars G by means of metal strips Y, which extend over the inner sides of the bars G and retain the plates X in proper position, the strips Y not interfering in the least with the movement of the bars G.

At the outer side of each plate X there is secured an upright bar, Z, between which and the plates a shaft, Z′, is fitted, the journals of said shaft being in the framing. The shafts Z′ have eccentrics or projections A′ on them, which, by turning the shafts Z′, through the medium of a lever, B′, are made to bear against the bars Z and force outward the plates X, so as to relieve the ends of the bale from pressure, the elasticity of the follower-bars G admitting of this result and at the same time being drawn from the bale, so that they cannot bind or bear against it.

Both the beater and the follower are operated by one and the same windlass, which is constructed and arranged as follows:

C′ is an upright shaft, which has the drum M× permanently secured on its lower part, and also a ratchet, E′, the latter being above the drum M×. On this shaft C′, above the ratchet E′, a sweep, F′, is fitted loosely, and above the sweep a ratchet, G′, is fitted loosely on the shaft C′, the ratchet G′ having a pulley, H′, attached to its upper surface.

I′ represents a horizontal bed or plate, through which the upper end of the shaft C′ passes. This bed or plate may rest on a shoulder upon the shaft, and it is held in position or prevented from turning by means of cords or chains J′ J′ attached to each end of a bar, K′, on the bed or plate, and to the upper end of the framing of the press.

The sweep F′ has two sliding pawl-bars, L′ L×, fitted to it, one of which, L′, is in line with the ratchet E′, and the other, L×, in line with the ratchet G′. These pawl-bars are connected at their outer ends to levers M′. The lever M′ of the pawl-bar L× has a rod, N′, attached to it, and this rod is connected to a metal strap, O′, which encompasses a smooth surface on the ratchet G′. This rod N′ also has a lever, P′, attached to it. The strap O′ serves as a brake, which is designed to regulate or control the action of the beater.

The beater C, when acting as such, is elevated by the pulley H′, motion to which is given by shoving the pawl-bar L× in contact with the ratchet G′. The rope or cord D is made to work on the pulley H′ by means of a guide-pulley, P′, attached to the bed or plate I′. The beater is allowed to descend at any time at the will of the operator, who draws the pawl-bar L× out from the ratchet G′, the strap O′ serving as a brake to prevent the unnecessary unwinding of the rope D from the pulley H′, no more rope being allowed to pass from pulley H′ than is necessary to let down the beater. This strap or brake O′ may be operated by the lever of the pawl-bar L×, or be operated by the lever P′ of the rod N′.

In operating the levers J J the operator shoves the pawl-bar L in contact with the ratchet E′, the drum M× winding up the rope M, and thus causing the levers J J to be drawn down.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The employment and use, in a beater-press, of toggle-levers, with the lower ends of the fulcrum-levers permanently located on a plane even with or above the top of the bale, when said levers are connected by the rods H H and bars I I, the whole being so constructed as not to interfere with the relieving of the bale endwise when pressed.

2. The frames O, forming a direct and substantial connection between the fulcrum-bars *b′* and the beater as a head-block, and the suspended plates N attached to the frames O, in the manner and for the purpose described.

3. The fastenings for the doors, composed of the rollers S, connected to the frame of the press by means of links V, and provided with eccentrics T T and handles U, substantially as set forth.

4. The relieving-plates X X, arranged with the bars Z, shafts Z′, having eccentrics A′ on them, and connected with the follower-bars G to operate in the manner substantially as and for the purpose set forth.

5. The follower suspended by the bars G G to the upper ends of the toggle-levers J J, in combination with the beater C, used as a fixed head while the bale is being pressed.

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Witnesses:
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