

# Disbrow & Crank Cotton Press.

N<sup>o</sup> 19279.

Patented Feb 2, 1858

Fig. 1.

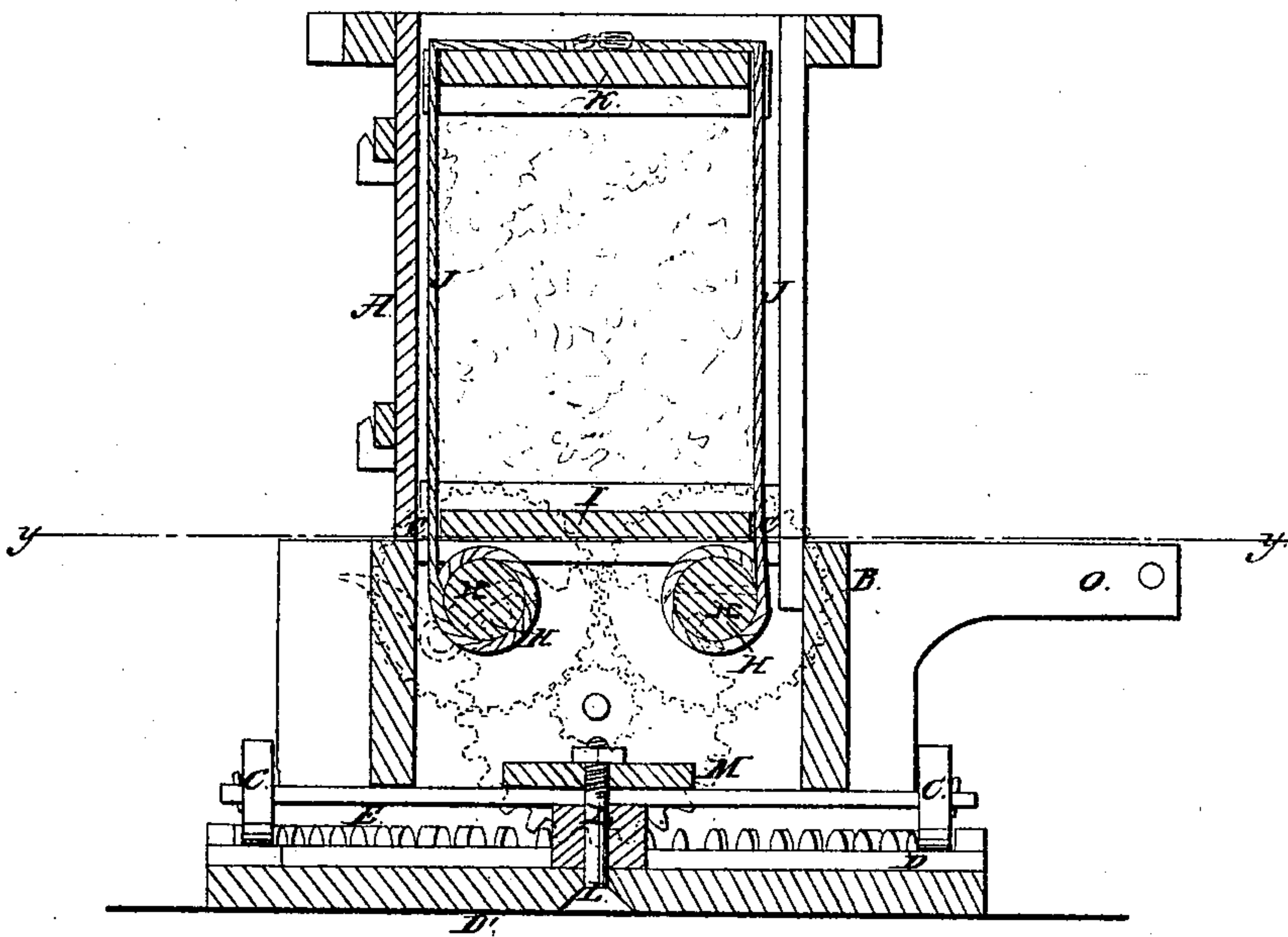
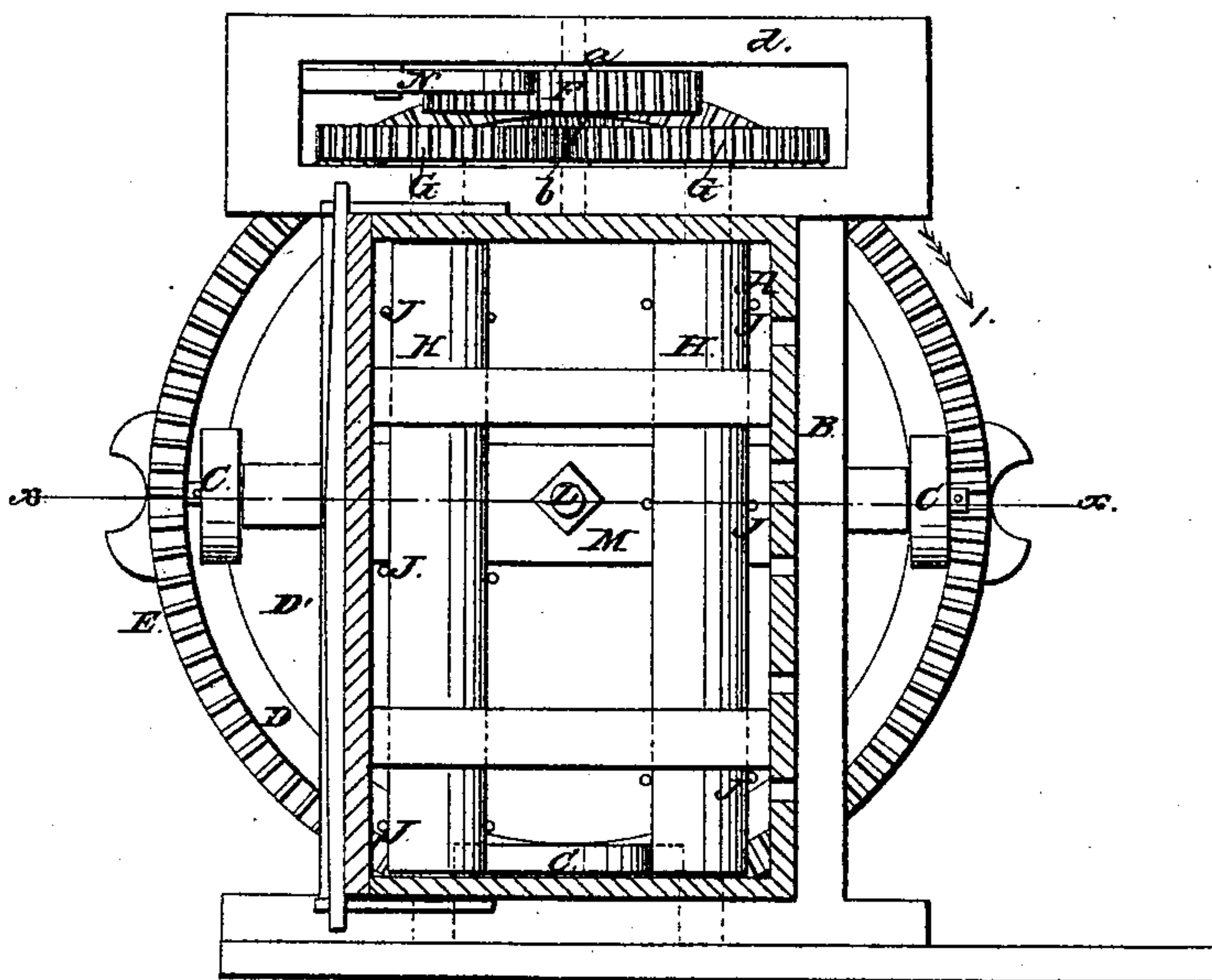


Fig. 2.





# UNITED STATES PATENT OFFICE.

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ASSIGNORS TO J. A. DISBROW, OF SAME PLACE.

## IMPROVEMENT IN COTTON-PRESSES.

Specification forming part of Letters Patent No. 19,279, dated February 2, 1858.

*To all whom it may concern:*

Be it known that we, J. A. DISBROW and JAMES E. CRONK, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Machine for Compressing Cotton, Hay, and other Materials into Bales; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of our improvement, taken in the line *x x*, Fig. 2. Fig. 2 is a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in a peculiar arrangement of drums, ropes, and a follower, as hereinafter shown, whereby the sides of the press-box are protected from lateral pressure while the material within it is being compressed, thereby enabling us to dispense with the usual heavy and cumbersome press-box and substitute a comparatively light one that will advantageously admit of a novel means of applying power to the press.

The invention further consists in this means of applying power to the press, whereby the press and its concomitant parts may be made very compact and the machine as a whole rendered extremely simple.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents the press-box, which may be of the usual rectangular form, and attached to a square box, B, which serves as a base. The base or box B may be made of heavier material than the press-box A, and it is mounted on wheels or rollers C, which are placed on an annular cast-iron way, D, attached to a bed, D'. The way D has a cogged rim or annular rack, E, at its outer edge, the rim and way being cast in one piece, and a toothed wheel, F, gears into the rack E, said wheel being at one side of the box B, and serving as a support to the same. The axis *a* of the toothed wheel F has a pinion, *b*, placed on it, and this pinion gears into two wheels, G G, which are placed on the ends of parallel drums H H.

The drums H H are placed within the box or base B, just below the bottom I of the press-box A, and to each drum H a series of ropes, J, are attached. The drums H H are placed at opposite sides of the box B, and the ropes J pass up through openings *c* at each side of the bottom I of the press-box, the ropes extending upward and passing over the top of the follower K, the ropes of the two drums being connected together above the follower, as shown clearly in Fig. 1.

L is a center pin or bolt, which passes through the center of the bed D, and through the center of a cross-piece, M, attached to the bottom of the box or base B, as shown clearly in Fig. 1.

N is a pawl, which is pivoted to a bar, *d*, at one side of the base or box B, said pawl catching between the teeth of wheel F, and allowing it to turn in one direction only. O is a bar or "sweep" attached to the box or base B.

The operation is as follows: The horse or team is attached to the bar or sweep O, and the bed D' is permanently secured to the flooring or ground. The follower K is removed from the press-box A, the top of which is open, by disconnecting the upper ends of the ropes J. The press-box is then filled with the material to be compressed, the ropes J of each drum being at opposite sides of the material. The follower is then placed within the press-box on the cotton, and the ropes J connected at their upper ends over the follower K, as before. The box or base B and press-box A are then rotated, the horse or team passing around on a circular "walk" or "tread" properly leveled, the machine being rotated in the direction indicated by arrow 1. By the rotation of the machine the follower K is depressed or drawn down through the medium of the annular rack E, toothed wheel F, pinion *b*, toothed wheels G G, drums H H, and ropes J. As the follower K descends, the material within the box A will of course be depressed, and the ropes J will protect the sides of the box from all lateral pressure, a sufficient number of ropes being used at each side of the press-box to effect this purpose. The ends of the box being quite narrow compared with the sides, they are not subjected to much lateral pressure, and consequently ropes are not required at the ends. When the material is



fully or sufficiently compressed, the rotation of the machine is stopped, the pawl N retaining it. The material is then bound, as usual, and removed from the box A, one side of which is provided with a door, by opening which the bale may be readily removed. The door is then closed, the follower K removed from the press-box, the press-box again filled, the follower replaced, and the ropes J connected over it and the operation repeated.

By this improvement it will be seen that the machine may be made quite light and much less cumbersome than usual, for as the ropes J prevent the press-box from being subjected to the usual lateral pressure, considerable friction will be avoided, and it will not require to be made of heavy stuff, nor be so firmly braced as heretofore. The machine, therefore, is well adapted to be rotated, so that the power may be applied to the follower in the manner shown and described, and by this mode of applying the power the machine as a whole may be included and operated within a comparatively limited space.

We are aware that windlasses have been previously used and arranged in various ways to operate the followers of presses; but we are

not aware that the windlasses, ropes, and followers have been so arranged that the ropes could protect the press-box from lateral pressure while the substance within the box was being compressed. We do not claim, therefore, broadly, the employment or use of windlasses for operating the follower; but,

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the drums H H, ropes J, and follower K, substantially as shown and described, whereby the ropes are made to serve the double function of lateral supports and as a means for connecting the follower to the gearing or driving parts.

2. Applying the power to the follower K, substantially as herein shown and described—to wit, by means of the rotating press-box A, and base B, annular rack E, gearing F b G G, in connection with the drums H H and ropes J, or their equivalents.

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Witnesses:

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