

UNITED STATES PATENT OFFICE.

LEE ROY CAMP, OF SUMTER, SOUTH CAROLINA.

PRESS-BOX.

No. 800,901.

Specification of Letters Patent.

Patented Oct. 3, 1905.

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To all whom it may concern:

Be it known that I, LEE ROY CAMP, a citizen of the United States, residing at Sumter, in the county of Sumter and State of South Carolina, have invented new and useful Improvements in Press-Boxes, of which the following is a specification.

This invention relates to press-boxes used especially in hydraulic presses for expressing oil from material of various kinds. It is particularly adapted for use in hydraulic presses for expressing oil from cotton-seed and the like, but is not in any way limited thereto.

The present ordinary kind of press-boxes are made with both ends open for the admission and discharge of the cotton-seed or other material before and after pressing. This necessitates some means for retaining the material in the boxes when the pressure is applied. Usually a very strong cloth is used for this purpose, which is placed around the material before it is put in the press and removed therefrom after pressing. With the use of a cloth it is impossible to make a cake of uniform density, as the ends are left soft and contain a much higher per cent. of oil than the rest of the cake, which oil is consequently lost.

The objects of the present invention are to secure a better and more uniform quality of presswork, to save time and labor required to cover the material with a cloth and to remove the latter after pressing, and to dispense with the use of a cloth. Press-cloths are expensive and constitute a large item of expense in the operation of oil-mills.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a box provided with the improvement. Fig. 2 is a cross-section thereof. Fig. 3 is a side elevation showing the end gates closed, and Fig. 4 is a side elevation showing them open.

The construction and operation of the box are similar to known devices, except that instead of having open ends gates are provided, as hereinafter set forth.

Referring specifically to the drawings, 6 indicates a gate comprising a bar of sufficient strength to stand the pressure, having a flat face which fits against the ends of the box, (indicated at 7.) There is one of these gates at each end of the box. The gate has squared lugs 8, which slide in slots 9, formed in the

outer ends of a pair of connecting-rods 10, of which there is one at each side of the box. The rods of both ends are pivoted at the middle of the box at 11, and the gates swing up and down therewith to close and open the ends of the box. At the outer end each rod carries a hand-cam 12. The cams bear behind the gates and act to jam them hard against the ends of the box when the cams are thrown in, and when so closed the gates hold the material in the box while it is being pressed. The V-stops 13, which enter a groove in the gate, act to center and guide the gate to exact position. Springs 14 between the ends of the rods and the ends of the gate act to force the gates open when the cams are released.

In use the boxes are filled with material and the end gates are then closed. After pressing, the cam-levers are released and the springs force the gates out or open. When they have receded far enough to clear the stops 13, the gates and connecting-rods drop to the position shown in Fig. 4, leaving the end clear and open for the removal of the cake and the refilling of the box for the next operation.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a press-box having an open end, of a gate movable up and down in front of said end, to close and open the same, and means to clamp the gate closed against said end.

2. The combination with a press-box having an open end, of a gate movable vertically and horizontally with respect to said end, and means to clamp the gate closed against said end.

3. The combination with a press-box having an open end, of a gate slidable to and from said end and means to clamp the gate closed against the same.

4. The combination with a press-box having an open end, of swinging rods at each side of the box, a gate carried by the rods, and means to clamp the gate against said end.

5. The combination with a press-box having an open end, of swinging rods at each side of the box, a gate extending across said open end and slidably supported on the rods, and means to slide and clamp the gate against said ends.

6. The combination with a press-box hav-

ing an open end, of swinging rods pivoted to
each side of the box and having slotted outer
ends, a gate extending across the end of the
box and having lugs at the ends slidable in
5 said slots, and cam-levers pivoted upon the
ends of the rods and bearing against the gate
to clamp the same against the end of the box. :

In testimony whereof I have signed my name
to this specification in the presence of two sub-
scribing witnesses.

LEE ROY CAMP.

Witnesses:

MARK REYNOLDS,
MARIE BARWICK.