

(No Model.)

2 Sheets—Sheet 1.

A. FREDRICKSON.
BOX AND PLATE FOR OIL PRESSES.

No. 578,229.

Patented Mar. 2, 1897.

Fig. 1.

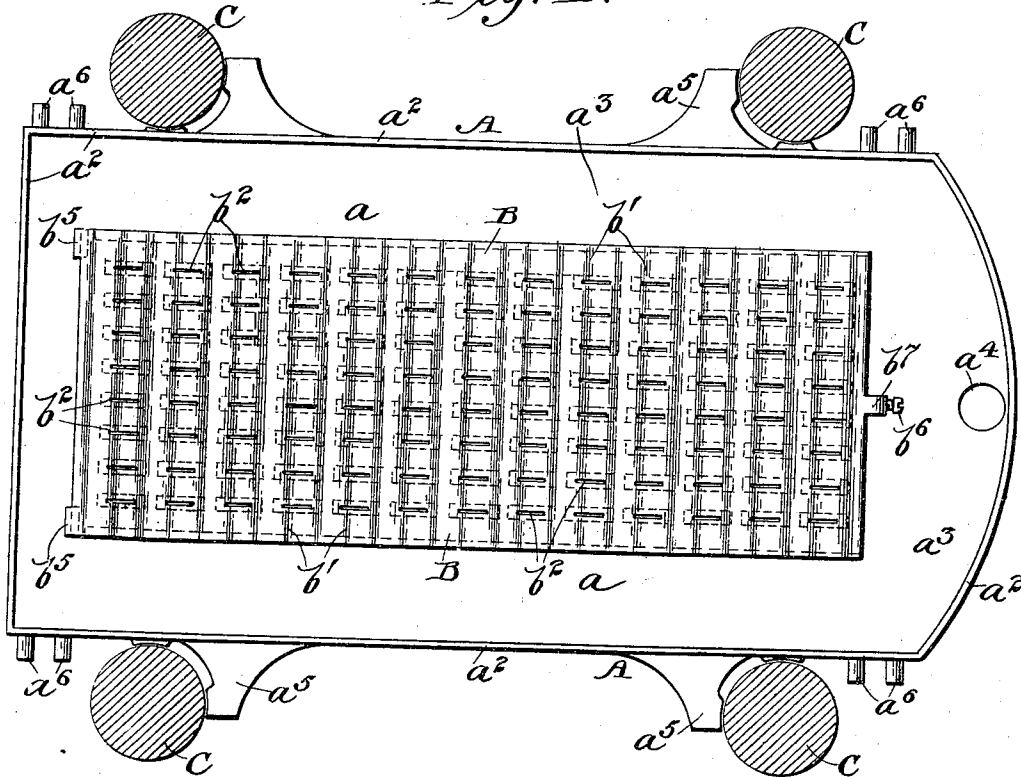
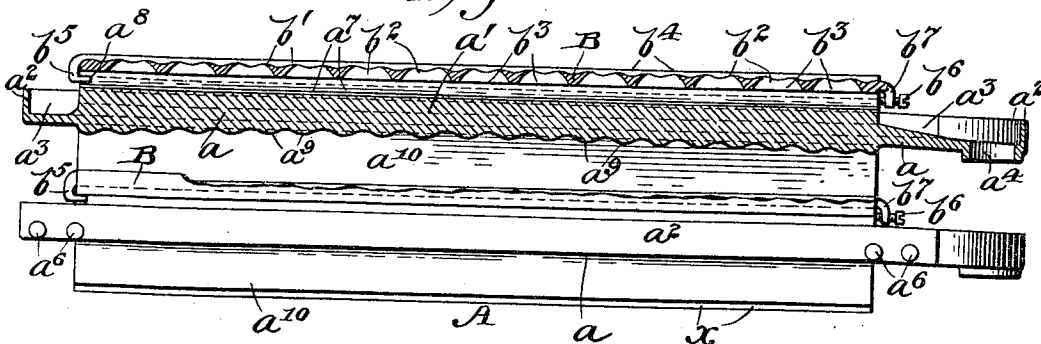


Fig. 2.



WITNESSES

Everance.
N. S. Hockman.

INVENTOR

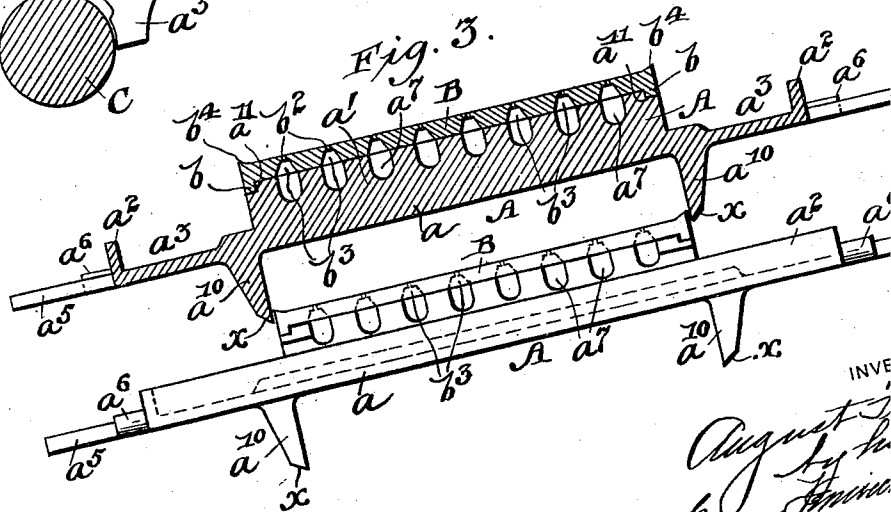
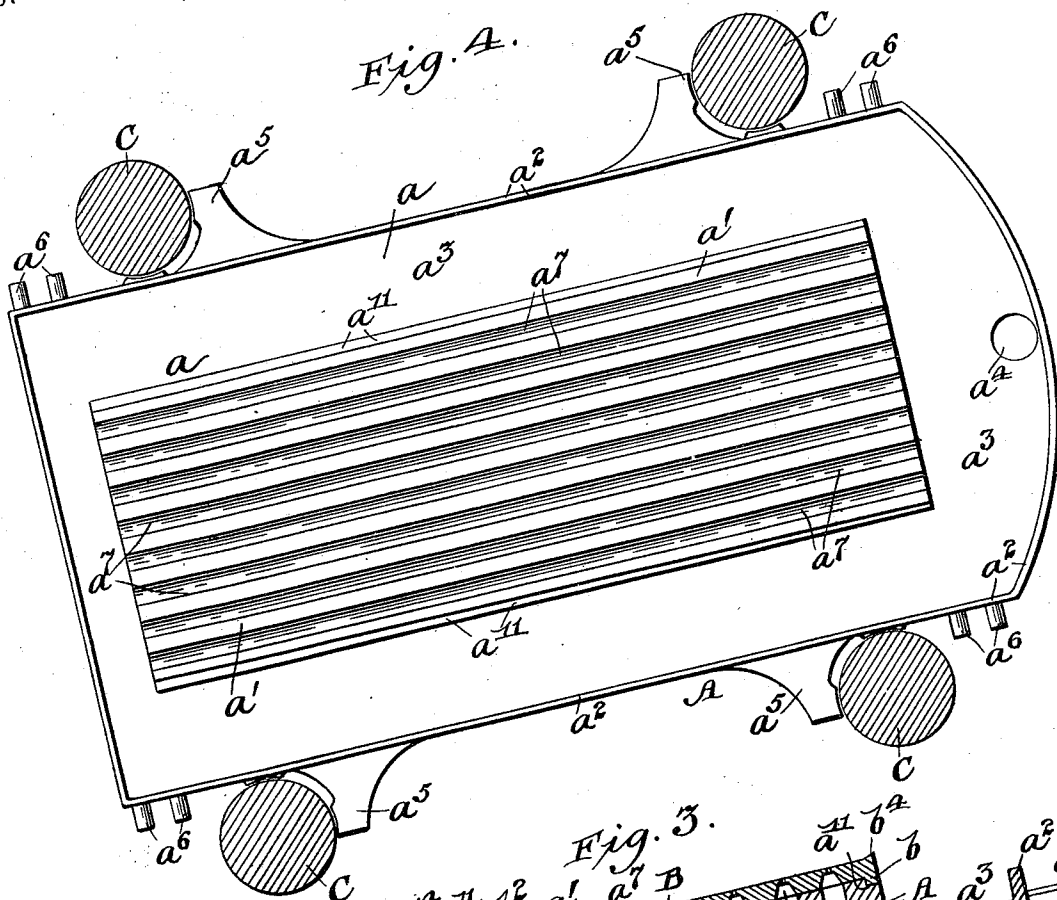
August Fredrickson
By this Attorney
Mason F. Smith

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Everance,
J. S. Hockman,

INVE
August 2
by the
Mason & Co.

UNITED STATES PATENT OFFICE.

AUGUST FREDRICKSON, OF MERIDIAN, MISSISSIPPI.

BOX AND PLATE FOR OIL-PRESSES.

SPECIFICATION forming part of Letters Patent No. 578,229, dated March 2, 1897.

Application filed May 13, 1896. Serial No. 591,421. (No model.)

To all whom it may concern:

Be it known that I, AUGUST FREDRICKSON, a citizen of the United States, residing at Meridian, in the county of Lauderdale and State of Mississippi, have invented certain new and useful Improvements in Boxes and Plates for Oil-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 appertains to make and use the same.

My invention relates to improvements in presses, and has more particular relation to the boxes and plates of presses employed for expressing oil from oleaginous seeds and other substances.

The invention consists in certain novel constructions, arrangements, and combinations of parts, as will be hereinafter described and specifically claimed.

It also consists of the combination, in a press, of an oil-meal-receiving box having longitudinal grooves and a surrounding trough and an apertured plate arranged above the same.

It also consists of the combination, in a press, of boxes and plates arranged in pairs, one above the other, each pair comprising an oil-meal-receiving box having pendent flanges for confining the pressed material on the pair below and a perforated plate upon said box for supporting the pressed material above.

It also consists of certain other novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a top plan view of one pair of the devices embodying my invention. Fig. 2 represents a central vertical longitudinal section through two pairs of said devices. Fig. 3 represents a central vertical transverse section through said devices, and Fig. 4 represents a detail top plan view of one of the oil-meal-receiving boxes.

A A in the drawings represent the oil-meal-receiving boxes, B B the slotted plates above the same, and C C the guiding-standards of the press.

The press proper employed in connection with my invention may be of any desirable

and well-known construction and forms no part of the present invention.

My improved expressing devices are arranged in pairs, one above the other to any extent desired, and each pair comprising an oil-meal-receiving box A and a slotted plate B. applied thereon. Each box A consists of a base-plate *a*, having a central raised portion *a'* and an upwardly-extending flange *a*² about its outer edge for forming an oil-receiving trough *a*³, an aperture *a*⁴ being formed in the bottom of the forward portion of the trough for the discharge of the oil from said trough to the next underlying trough or the final outlet, as the case may be. The said plate *a* is also provided upon each side with lugs or projections *a*⁵, which are adapted to fit partially about the guiding-standards C C of the press, and thus keep the boxes in perfect alinement and guide them in their movements. Studs *a*⁶ are arranged upon opposite sides of the plate *a* and are adapted to be engaged by the links of the press. The upper surface of the raised portion *a'* is provided with longitudinal open-ended grooves *a*⁷, that catch the oil which is pressed through the slotted plate above. One end of the raised portion *a'* is provided with sockets *a*⁸ *a*⁸, that are adapted to receive lugs formed on the slotted plates, as will be hereinafter more fully described.

The under surface of the box *a* is concaved longitudinally and provided with laterally-extending corrugations or ridges *a*⁹, whereby the material from which the oil is being pressed is formed into a wedge-shaped cake and prevented from slipping longitudinally. Flanges *a*¹⁰ *a*¹⁰ are pendent from the under side of the box *a* and extend longitudinally thereof to form guides that are adapted to fit over the plate and oil-meal-receiving box below. The lower edge and outer side of each of said flanges *a*¹⁰ is beveled, so that there will be no clogging of the meal under the same as one box descends over the other. The raised portion *a'* is provided along its side edges with longitudinal grooves *a*¹¹, that taper slightly from front to rear and are adapted to receive similarly-tapered flanges *b*, provided along the under side edges of the plate B. The office of these flanges and grooves is to prevent any of the substance from working

in through the crack between the plate and box. The plate B is formed with lateral ridges or corrugations b' upon its upper surface to prevent any slipping of the cake of material being pressed. These corrugations and those of the bottom of the box do not match, but the ridges lie in the same vertical planes and the grooves in the same vertical planes. The plate is also provided with narrow slots b^2 , through which the oil passes during the pressing operation, a beveled recess b^3 being formed in the under side of the plate beneath each slot to prevent any clogging of material in the slots. Low raised edges b^4 b^4 are formed along each side of the upper surface of the plate to assist in keeping the material in place upon the said plate. Angular lugs b^5 b^5 are provided at one end of the plate and are adapted to be fitted into the recesses a^8 when the plate is applied to the box. The opposite end of the plate is secured to the box by a screw b^6 , that passes through a lug b^7 , formed on this end of the plate, and engages the raised portion a' of the box.

As before stated, the plates and boxes are built up, one upon the other, with the material between them and the power then applied to depress them by a suitable press.

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

1. The combination in an expressing-press, of a suitable oil-meal-receiving box provided at its sides with tapering grooves and a perforated plate adapted to be applied upon said box and provided with tapering side flanges

that enter the tapering grooves in the box and thus jam the box and plate together upon the longitudinal movement of the latter substantially as described.

2. The combination in an expressing-press, of boxes and plates arranged in pairs one above the other, each pair comprising an oil-receiving box, the entire under surface of which is concaved so that every point of contact will be a working surface to force the material toward the center, and a perforated plate applied above the box and provided at one end with lugs to enter lug-apertures in the box, and at the other end with a securing-bolt adapted to engage the side of the box and thus hold the perforated plate in position, substantially as described.

3. The combination in an expressing-press, of guiding-standards, and boxes and plates arranged in pairs one above the other, each pair comprising an oil-receiving box having longitudinal grooves upon its upper surface, pendent flanges upon its bottom and lug-receiving apertures at one end, a perforated plate arranged above said box and provided at one end with lugs to enter the said lug-apertures in the box and at the other end with a securing-bolt adapted to engage the side of the box and thus hold the perforated plate in position substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

AUGUST FREDRICKSON.

Witnesses:

JNO. A. LEWIS,
V. L. CRAWFORD.