(No Model.) 2 Sheets—Sheet 1.

G. W. HATFIELD.

OIL PRESS BOX.

No. 376,438. Patented Jan. 17, 1888.

FIG. 1.

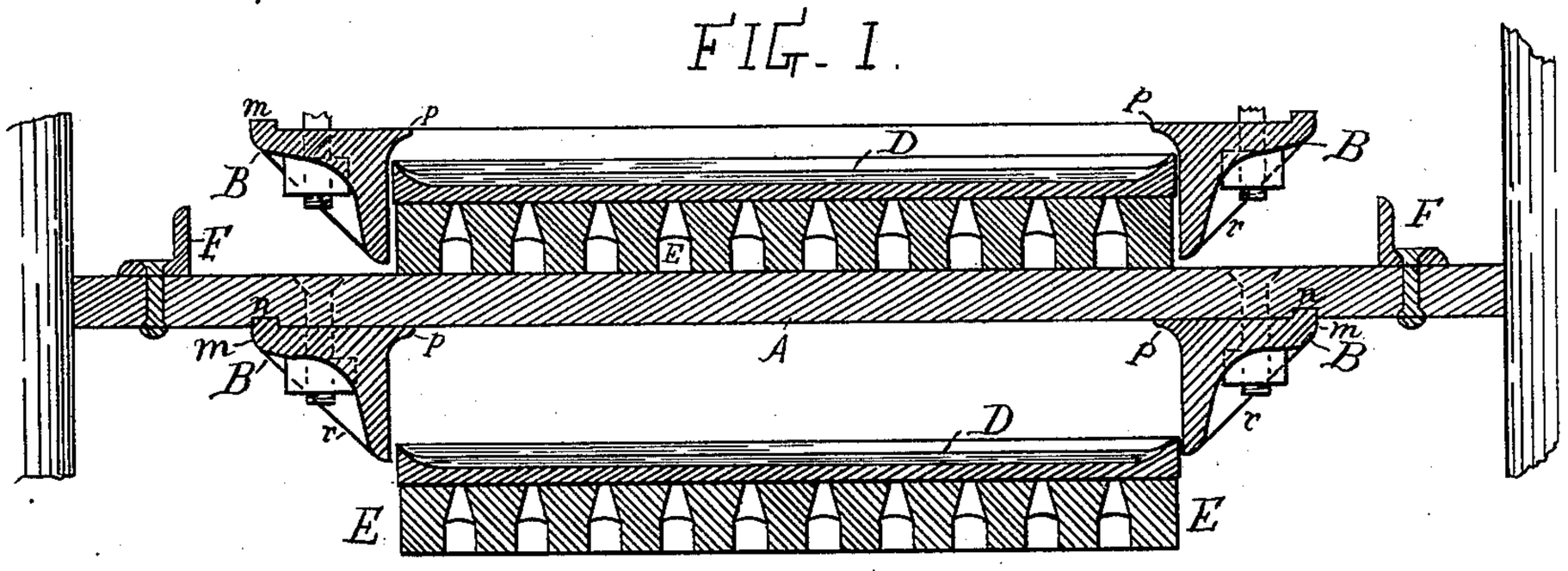


FIG. 2.

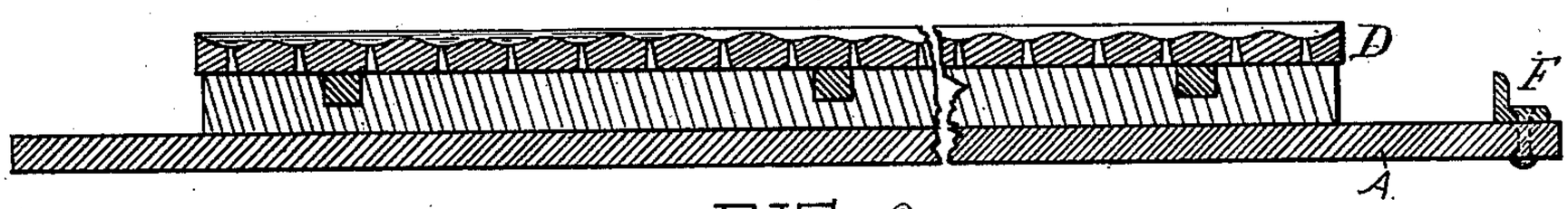
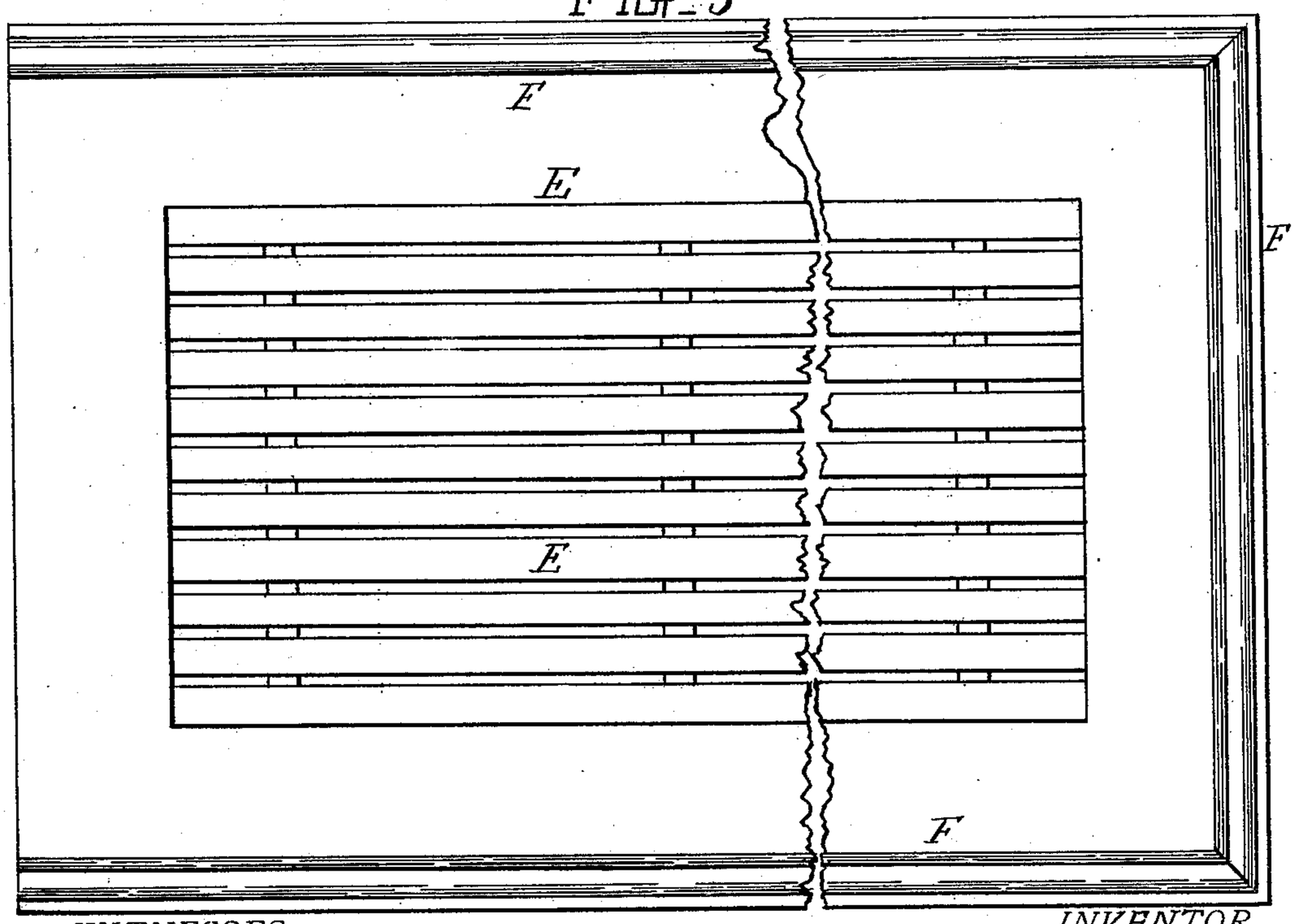


FIG. 3



WITNESSES:

Walter T. Forbes.

James A. Ramsey.

INVENTOR

George W. Hatfield

by Parker & Burton

ATTORNEYS

N. PETERS, Photo-Lithographer, Washington, D. C.

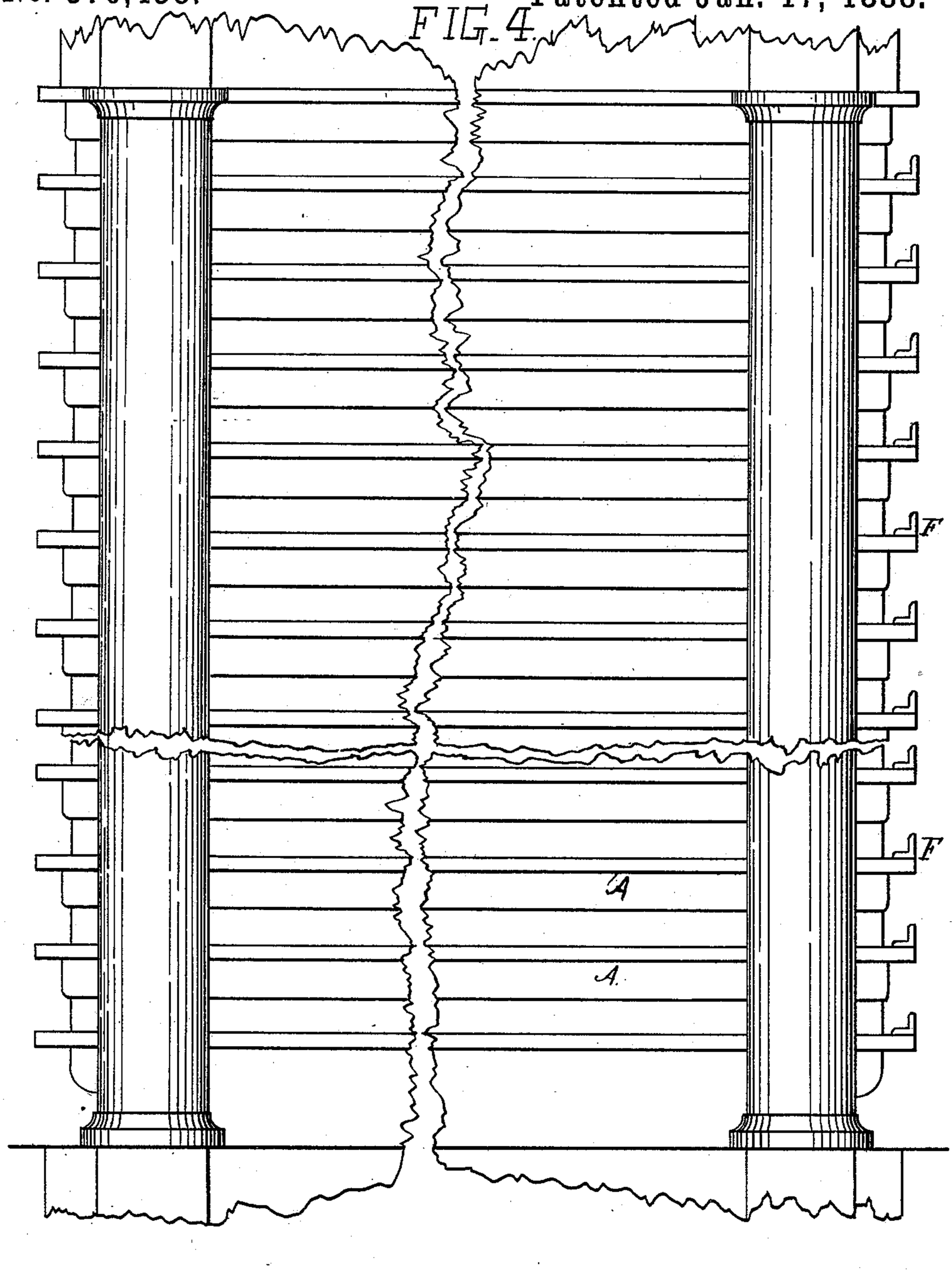
(No Model.) 2 Sheets—Sheet 2.

G. W. HATFIELD.

OIL PRESS BOX.

No. 376,438. Patented Jan. 17, 1888.

FIG. 4.



WITNESSES:

Walter J. Forbes.

James A. Ramsey

INVENTOR

George W. Hatfield

by Pentleton & Pentleton

ATTORNEYS.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

GEORGE W. HATFIELD, OF TEXARKANA, ARKANSAS, ASSIGNOR TO WALTER T. FORBES, OF ATLANTA, GEORGIA.

OIL-PRESS BOX.

SPECIFICATION forming part of Letters Patent No. 376,438, dated January 17, 1888.

Application filed August 29, 1887. Serial No. 248,131. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HATFIELD, of Texarkana, in the county of Miller and State of Arkansas, have invented a new and useful Improvement in Oil-Press Boxes, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to give greater efficiency to the press to enable it to resist with less liability of breakage the severe pressure to which it is exposed, to prevent waste of the oil, to guard against lateral escape of either meal or oil, and to accomplish the largest amount of work within a given space.

My present invention is an improvement on that for which Patent No. 272,134 was granted me February 13, 1883, and retains the general plan of telescopic boxes therein exhibited.

Figure 1 is a cross-section through two boxes in the series, the upper box being shown in closed position and the lower open. Fig. 2 is a longitudinal section taken through the meal-pan, grating or platen, and division-plate. Fig. 3 is a top view of the grating or platen. Fig. 4 is a side elevation of a press consisting of a series of my boxes, the middle portion being omitted.

These presses are subjected to a high degree of pressure, usually about four thousand pounds to the square inch, and sometimes exceeding this. It is desirable to make the division-plates of steel or wrought-iron, as cast-iron plates are liable to breakage. The side walls must be connected to these division-plates in such a manner as to resist the great lateral pressure to which they are subjected and to prevent the escape of the meal or oil at the joint formed between them. It is also important to provide for the ready escape of the oil from the meal-pan into the channels which conduct it to proper receivers, so as to prevent any reabsorption of it into the meal through capillary attraction. All these objects are effectually accomplished by my invention, while I also obtain great economy in space.

A represents the division-plate, preferably made of steel or wrought-iron; E, a grated platen, which may be made of cast or wrought iron or any other suitable material.

D is the meal-pan, which I form, preferably, of either brass or malleable iron, cast or milled out to form corrugations on its upper surface. In the interstices between these corrugations are longitudinal slots, which may be formed by milling, through which the oil escapes into the channels between the grating of the platen. These slots are widened at the bottom, thus securing a ready discharge of the oil without reabsorption.

B represents the side walls of my box, made preferably of brass, wrought-iron, or malleable iron, having on their upper face a lip or tongue, *m*, which enters the corresponding recess, *n*, in the bottom of the division-plate, to which plate it is secured by bolts or rivets, as shown. The inner face of these side walls is coved out to form a projecting lip, *p*. The lip *m*, taking into the recess *n*, serves at once to brace the side walls against the lateral pressure to which they are subjected and to form a snug joint by which the escape of oil or meal between the division-plate and side walls is prevented. The projecting lip *p*, receiving the upward pressure of the meal beneath it, serves also to lock the side wall and division-plate together at this point and counteract the tendency of the lateral pressure to force them apart, thus aiding in preventing either oil or meal working into the joint between the side walls and division-plate, while it also gives the desired compression to the edges of the cake. The lip *m* and recess *n* may be formed either in the front or rear of the rivet or bolt which secures the side wall to the division-plate. The position of this lip and recess may also be reversed—that is, the lip may be formed in the division-plate and the recess in the top of the wall B; but I prefer to form the lip on the top of the wall and the recess in the plate. These side walls may be strengthened by ribs *r* between the rivet-holes, as indicated partly by dotted lines in Fig. 1.

F represents ribs, which may be made of rolled angle-iron, extending around both sides and one end of the division-plates and serving to confine the oil, which is thus caused to flow off over the open end of this plate and thence into suitable receptacles.

I claim as my invention—

1. In combination with the division-plate of

an oil-press box, the lateral wall having a lip on its upper face fitting into a corresponding recess in the division-plate to which it is attached, for the purpose described.

2. In combination with the division-plate of an oil-press box, the side wall united thereto by a tongue-and-groove connection and having an inwardly-projecting lip, for the purpose described.

3. In combination with the division-plate of an oil-press box, the lateral wall secured to the under surface thereof and having an inwardly-projecting lip, whereby the upward pressure of the meal tends to tighten the joint between the division-plate and side wall, as and for the purpose described.

4. The combination, in an oil-press box, of the division-plate, the side wall united thereto by a tongue-and-groove connection and having inwardly-projecting lip bearing against the division-plate, the grated platen, and the corrugated pans with slots therein, for the purpose described.

GEO. W. HATFIELD.

Witnesses:
WALTER T. FORBES,
AUGUST F. HERBSLET.