(No Model.)

A. C. LANDRY.

FILTER PRESS.

No. 265,104. Patented Sept. 26, 1882.

FIG. 1

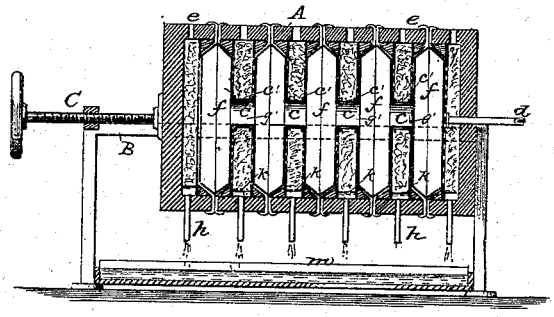


FIG. 2.

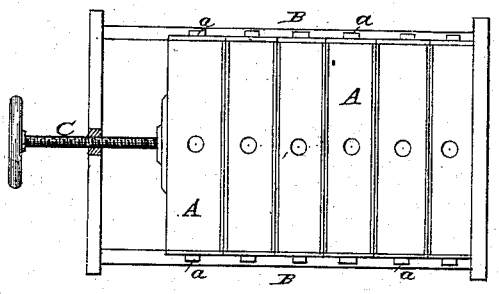


FIG. 4.

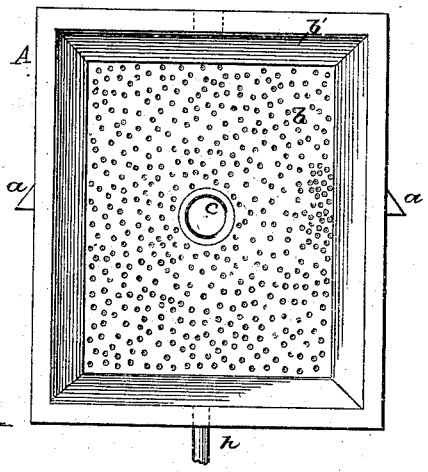


FIG. 5

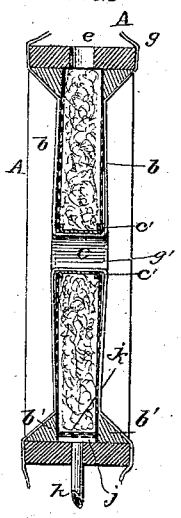


FIG. 3

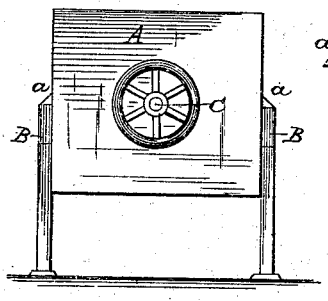


FIG. 6

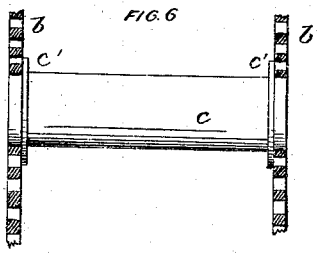
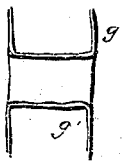


FIG. 7



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ALEXANDER C. LANDRY, OF NEW ORLEANS, LOUISIANA, ASSIGNOR TO HIMSELF AND CHARLES LAUGA, OF SAME PLACE.

FILTER-PRESS.

SPECIFICATION forming part of Letters Patent No. 265,104, dated September 26, 1882.

Application filed July 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER C. LANDRY, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Filter-Press; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section, Fig. 2 a plan view, Fig. 3 an end view, Fig. 4 an enlarged side view, and Fig. 5 a cross-section, of one of the filter-frames; Fig. 6, an enlarged detail of the thimble, showing its connection with the perforated plates. Fig. 7 is a detail of the sleeve of cloth passing through the thimble and connecting with the cloths on opposite sides.

My invention relates to a novel construction of filter-presses, designed more particularly for separating the sirup or juice from the solid residuum in the manufacture of glucose and grape-sugar, but applicable also for other purposes, such as oil-refining, &c. It is an improvement upon that form of filter-press in which a set of separable rectangular frames are clamped together in marginal contact, and are provided with filtering-partitions having a central hole that permits the mash to distribute itself through the entire series of chambers formed by the frames, which chambers retain the solid residuum, while the juices pass under pressure through openings in the partitions and are separated from said solid matters.

The improvement consists in the peculiar construction of the filtering-frames, as will be more fully described with reference to the drawings, in which—

A represents rectangular frames, which are provided with supporting-lugs *a a*, that rest above side rails, B, and which frames are made of equal size and arranged in series, and are forced into close marginal contact with each other by screw-rod C, so as to form tight joints between, that constitute a practically-closed case. Each of these frames has a partition or web portion in the middle, formed of two perforated plates, *b b*, whose outer edges are let into or fastened to the rectangular frames, which are preferably made of cypress wood, and which plates are held in place by beveled strips *b'*. In the middle the perforated plates have a thimble, *c*, with collars or flanges *c' c'* at each end, against which the perforated plates *b b* rest, and which resist the inward pressure on said perforated plate, and also give a passage-way for the mash to pass from one side of the partition to the other. Between the perforated plates *b b* and around the thimble *c* is packed the filtering, decolorizing, and neutralizing composition, or any other filtering medium, the said filtering medium being introduced through the opening *e* at the top of each frame. The dished faces of each frame form, when juxtaposed, chambers *f*, into which chambers and through which thimbles *c* the thick liquor or mash passes, under pressure, from the inlet-pipe *d*. Before fitting these frames A together filter-cloths *g* are placed over the perforated plates *b*, and have a tubular sleeve, *g'*, of the same material, passing through the thimbles. The margins of these filter-cloths are allowed to project beyond the edges of the filtering-frames, as shown in Fig. 5, so as to form a packing or gasket for the joint, as well as hold the said cloths in position. At the bottom of each frame there is also a false bottom, formed of slats *j*, above which is placed a filtering-cloth, *k*, to prevent the filtering composition from dropping down into the same, and from these false bottoms there emerges a drain-pipe, *h*, draining into a subjacent pan, *m*. Now, it will be seen the thick liquor or crude mash, coming in at the pipe *d* under pressure, distributes itself through the whole apparatus, depositing the heavy residuum in the chambers *f*, formed by the dished faces of the frame, while the pure juices pass through the cloths and the perforated plates *b*, and, traversing the filtering composition, accumulate in the false bottom below, and are carried off by the drain-pipes. When the heavy residuum in chambers *f* is to be removed the pressure of rod C is relaxed,

and the frame A can then be separated and the solid matters dumped out and utilized for cattle-feed, fertilizers, or for other purpose.

Having thus described my invention, what I claim as new is—

The filter-frames A, having filling-openings *e*, in combination with the perforated plates *b*, the beveled strips *b'*, the thimble *c*, and the false bottom *k*, with outlet-pipe, as shown and described.

The above specification of my invention signed by me in the presence of two subscribing witnesses.

A. C. LANDRY.

Witnesses:
EDWD. W. BYRN,
SOLON C. KEMON.