D. A. JAMES.

METHOD OF EXPRESSING LIQUIDS FROM SOLIDS.

No. 77,194. Patented Apr. 28, 1868.

Fig. 2

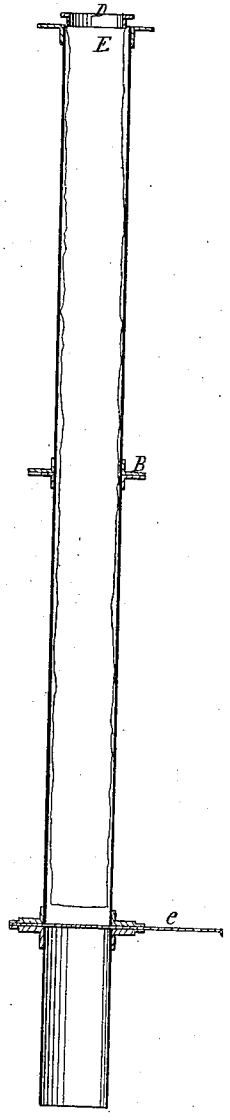
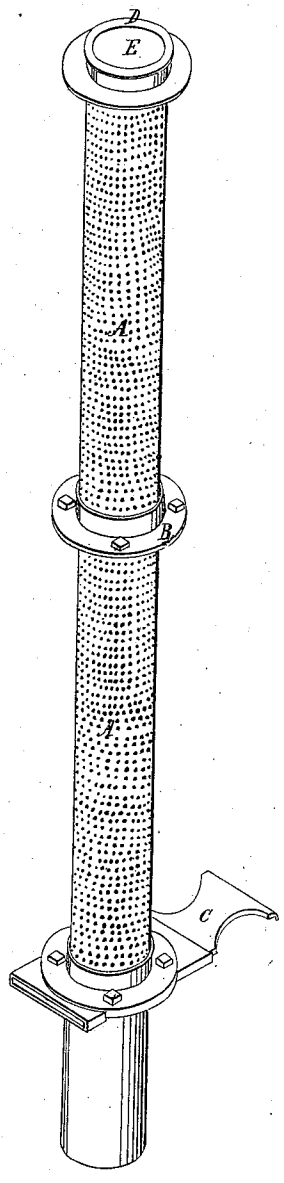


Fig. 1.



Witnesses

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DAVID A. JAMES, OF CINCINNATI, OHIO.

Letters Patent No. 77,194, *dated April* 28, 1868.

IMPROVED METHOD OF EXPRESSING LIQUIDS FROM SOLIDS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DAVID A. JAMES, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a certain new and useful Method of Expressing Fluids from Solids; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view of an apparatus illustrating my method.

Figure 2 is a longitudinal sectional view of the same apparatus.

My invention consists of a method of expressing fluids from solids, by means of a vertical trunk or tube, perforated with numerous holes, and provided with a cloth or canvas lining throughout its entire length, into which the substance from which the fluid is to be expressed is introduced, until the pipe is full, or nearly so, when the weight of the material to be acted upon will force the fluid through the pores of the lining and the perforations in the tube, while the solid remains in the trunk, and is discharged through the bottom.

This invention is especially adapted to the separation of oleine from stearine, but it is obvious that it may be applied to other analogous purposes.

To enable others to use my method, I will describe the form in which I have embodied it for the expression of oil from lard, and which form is shown in the drawings.

A is a tube or trunk, from thirty to fifty feet in length, placed in a vertical or nearly vertical position. It may be made in a single piece, or it may be made in sections, connected by flanges, as at B, which flanges may also serve as ledges or shelves, to receive the expressed fluid at different elevations. This tube may be made of wood or metal, and perforated, or may be made of woven-wire cloth. It may also be cylindrical, square, or of any convenient form in cross-section. Near the lower end, and below the perforations, is a door or valve, C. At the top is a ring, D, to which is attached a bag or lining, E E. This lining may also be made in sections, attached to the sides of the tube, or to the flanges, when the pipe is made of more than one piece. The ring D is provided with a flange, by which it rests upon the trunk.

Into the bag or lining the lard or other material to be acted upon is introduced, and, if deemed necessary, it may be kept in a funnel-shaped or other receptacle, above the tube, so as to be self-feeding. The weight of the superincumbent lard forces the oleine through the pores of the lining and perforations of the tube, while the stearine gradually descends, and is discharged through the gate C, at the bottom.

It is obvious that the details of the construction of this apparatus may be considerably varied without departing from the principle of my invention. The tube need not be perforated throughout its entire length, and the perforated portion may be either a continuation in the line of the upper part, as shown, or may be placed at any convenient angle to it. Instead of the cloth or canvas lining, the material to be acted upon may be enclosed in bags and thrown into the tube.

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

1. The method of expressing fluids from solids, by the pressure of the material to be acted upon, in a tube or trunk, substantially as described.

2. The perforated trunk, in combination with the cloth or canvas lining, substantially as and for the purposes described.

3. The combination of the perforated trunk with the discharge-valve C, substantially as and for the purposes described.

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Witnesses:

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