

(No Model.)

J. S. BOREN.
MOLASSES EVAPORATOR.

No. 277,206.

Patented May 8, 1883.

Fig. 1.

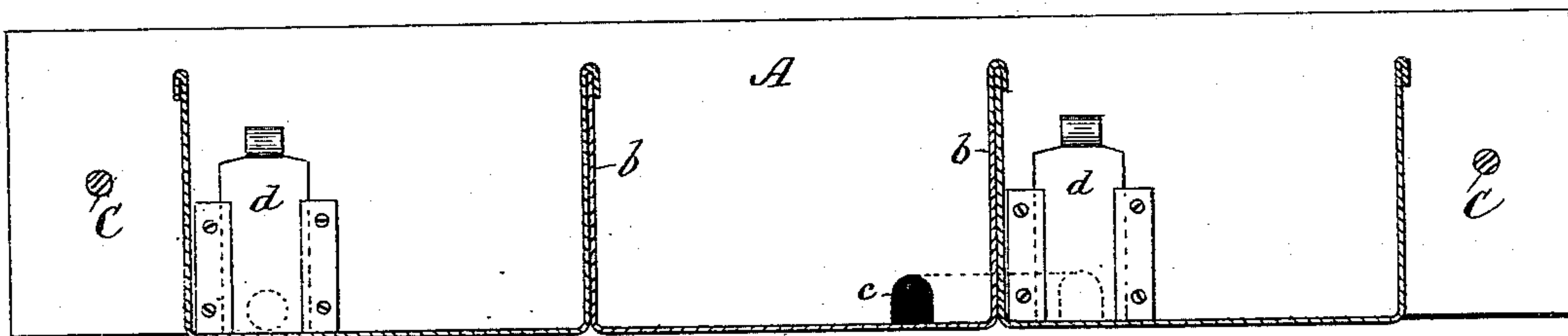


Fig. 2.

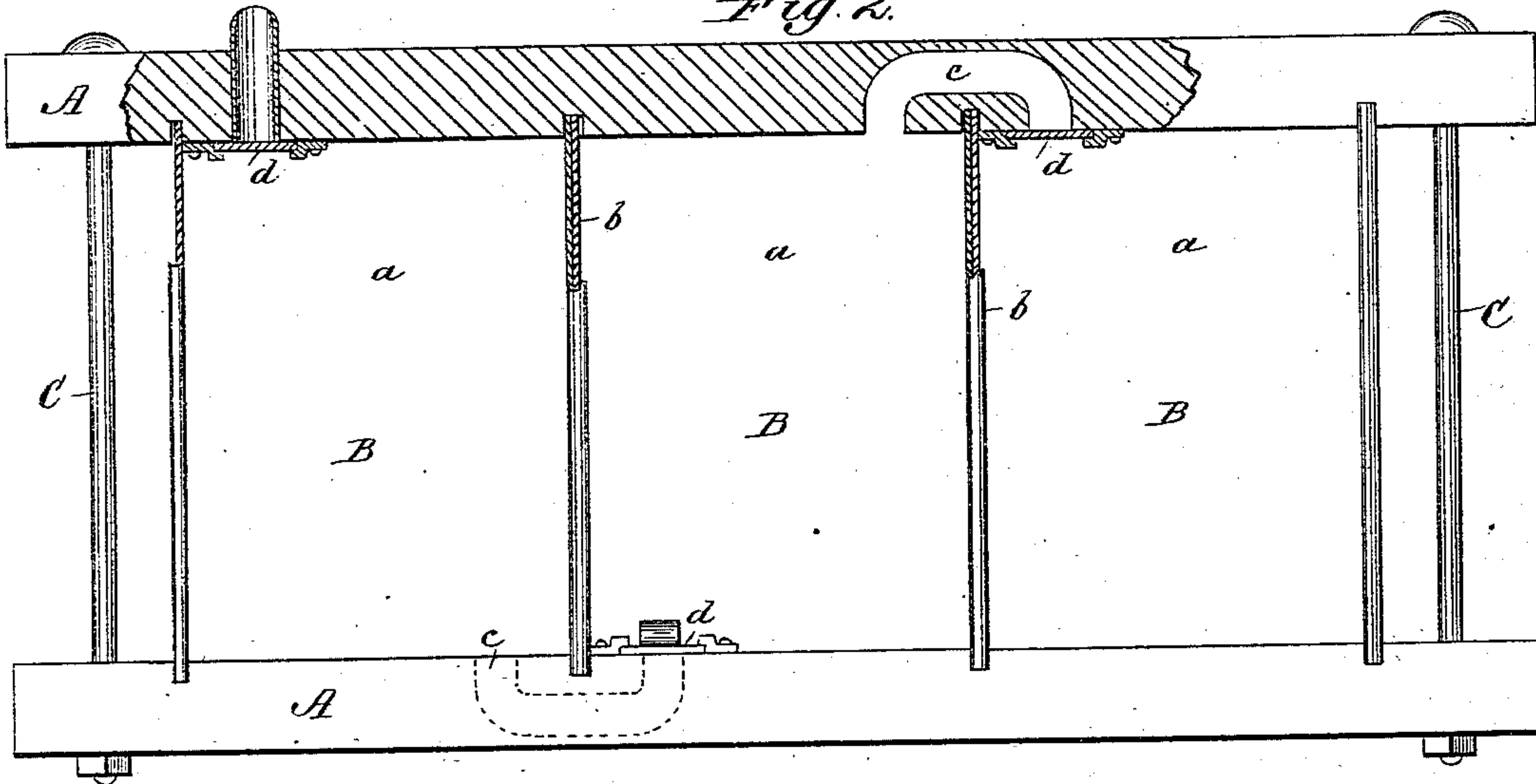
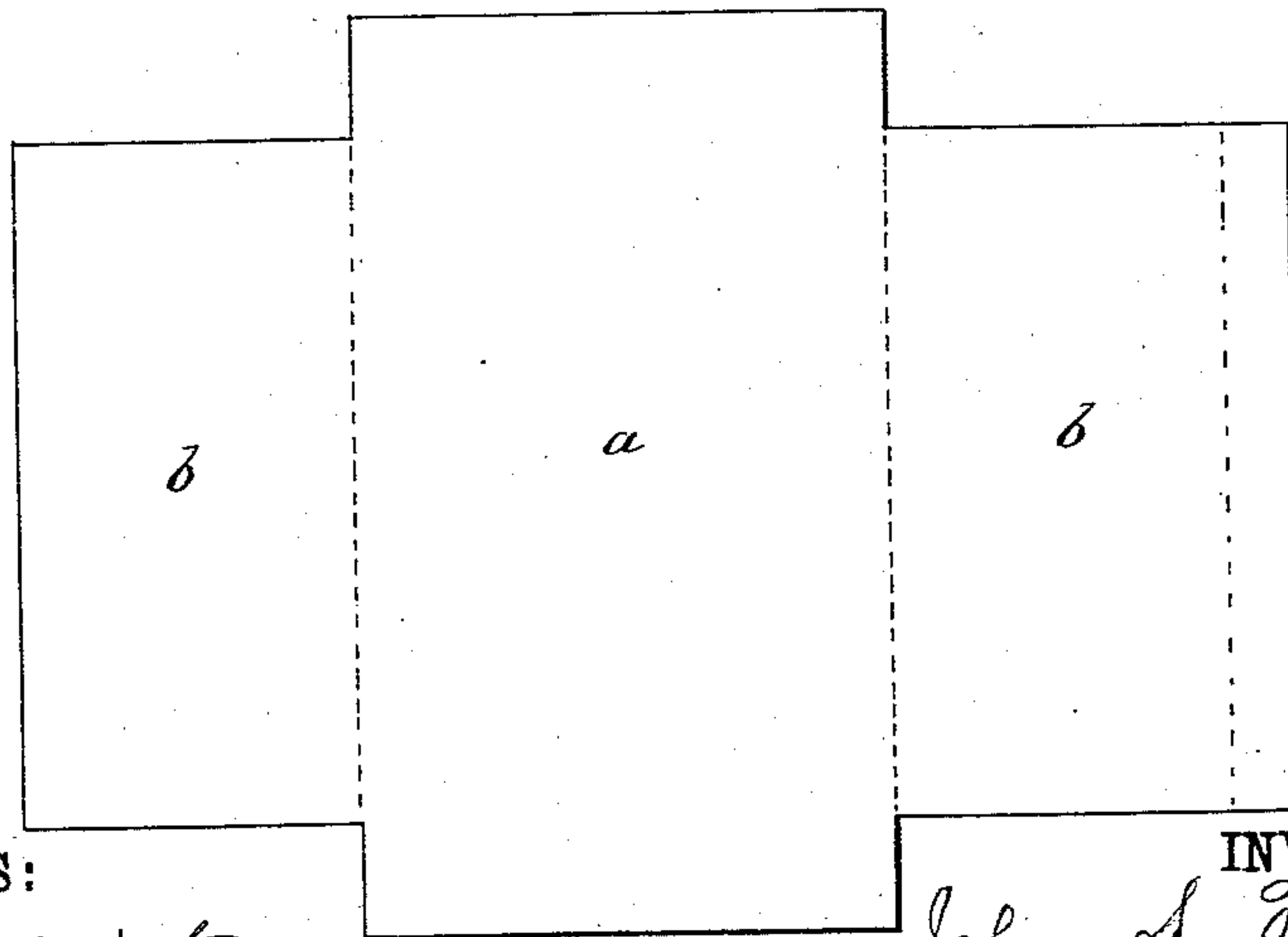


Fig. 3.



WITNESSES:

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JOHN SPENSER BOREN, OF BOONEVILLE, MISSISSIPPI.

MOLASSES-EVAPORATOR.

SPECIFICATION forming part of Letters Patent No. 277,206, dated May 8, 1883.

Application filed February 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN SPENSER BOREN, of Booneville, in the county of Prentiss and State of Mississippi, have invented a new and useful Improvement in Molasses-Evaporators; 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 longitudinal section. Fig. 2 is a plan view with one of the sides in section. Fig. 3 is a plan view of one of the blanks which form the troughs.

My invention is in the nature of an evaporator for concentrating cane-juice or other kinds of saccharine juices to form sugar and molasses, and its object is to simplify and strengthen the construction of such devices, as will be hereinafter fully described.

In the drawings, A A represent the two sides of the evaporator, which sides are made of wood, and are bolted together upon intermediate metal troughs, B B, by means of the tie-rods C C at the ends of said wooden side pieces. Each of these troughs has a bottom and two sides of its own, so that each trough is wholly independent of the next. The troughs are composed of blanks of the shape shown in Fig. 3, in which the part *a*, that forms the bottom of the trough, is longer than the parts *b b*, which form the sides of the trough. In forming and fitting the troughs in place the two sides *b b* of each blank are bent up at right angles, and are fitted at their ends in vertical cuts or grooves in the inner faces of the two wooden side pieces, while the longer middle sections, *a*, which form the bottoms of the troughs, lap under the edges of the side pieces and are tacked or nailed there-to. For connecting the adjacent walls of two troughs, the edge of one of the trough-walls at the top is bent over the edge of the other, and these two walls, at the end, are received into the same groove or slit in the side pieces. For

permitting a movement of the juice from one trough to the next, conduits *c* are formed in the lower edge of the wooden side pieces, leading from one trough to the next, and gates or doors *d* are arranged in vertical guides to slide over and close these conduits when desired.

A great advantage of my evaporator is that as each trough is independent the latter is much stronger and does not sag from the weight of the juice. The sides of the trough being bent up also, it makes a round corner at the bottom that is more readily cleaned than when a partition is run straight down to the bottom; and, furthermore, the construction is a very simple, cheap, and practicable one. The troughs are to be made of copper or galvanized iron, and the sides are preferably of wood, but may be of any other suitable material.

I am aware that a molasses-evaporator has been made up of several independent troughs, and I do not claim this, broadly.

By making the troughs of blanks shaped as in Fig. 3 the nailing or screwing of the ends of the section *a* to the side pieces tends to hold the side pieces together and keeps them from drawing from each other between the tie-rods and opening the joints at the ends of the troughs.

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

The combination, with the side pieces, A, having grooves cut in their inner faces, of the troughs B, formed of blanks having long section *a* and shorter wings or side sections, *b b*, the said sides *b b* being turned up and having their ends entered into the grooves of the side pieces, and the ends of the long section *a* being nailed, screwed, or otherwise fastened to the underneath edge of the bottoms of the side pieces, as shown and described.

JOHN SPENSER BOREN.

Witnesses:

P. M. WALKER,

WM. H. DAVENPORT.