

N. H. WHISEMAND.
Sorghum Evaporator.

No. 64,606.

Patented May 7, 1867.

Fig. 1

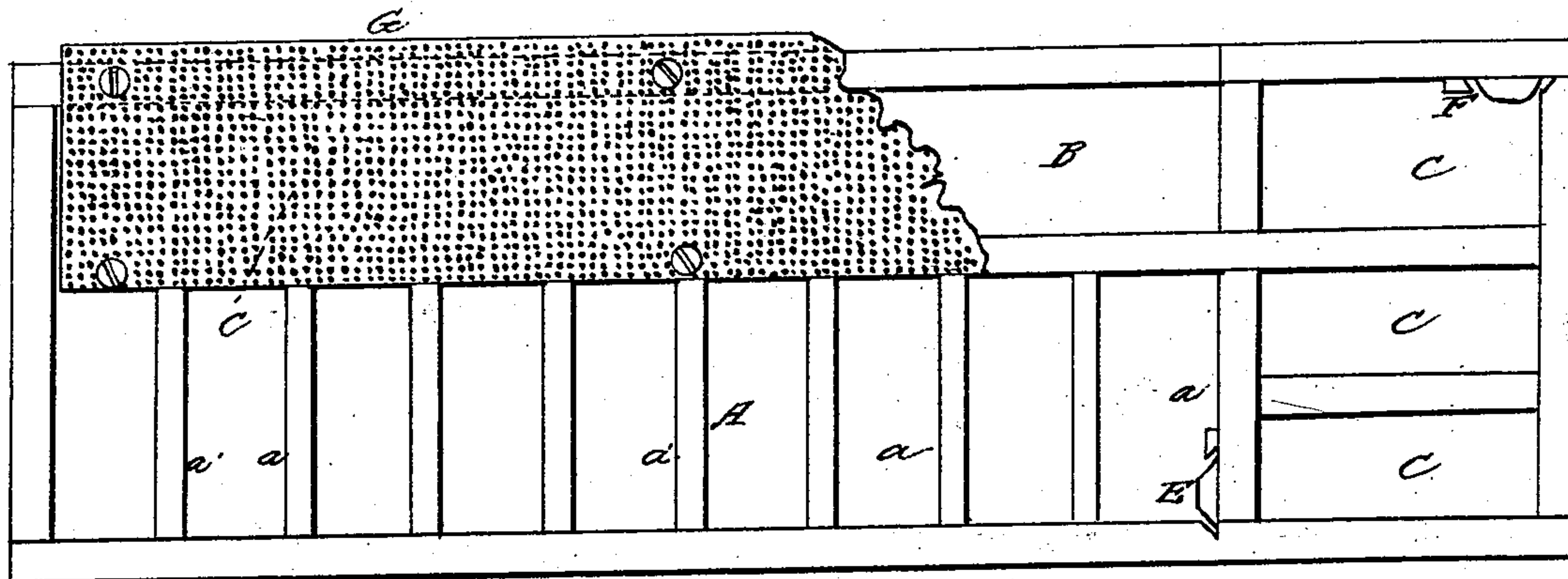


Fig. 2

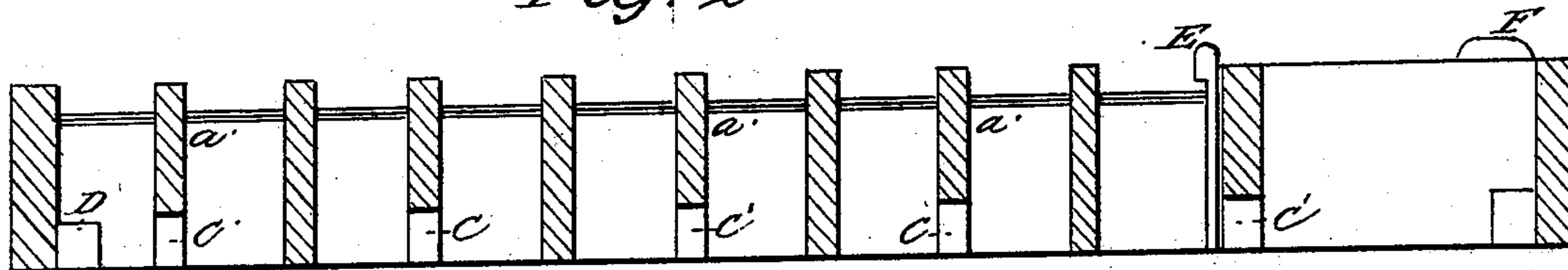
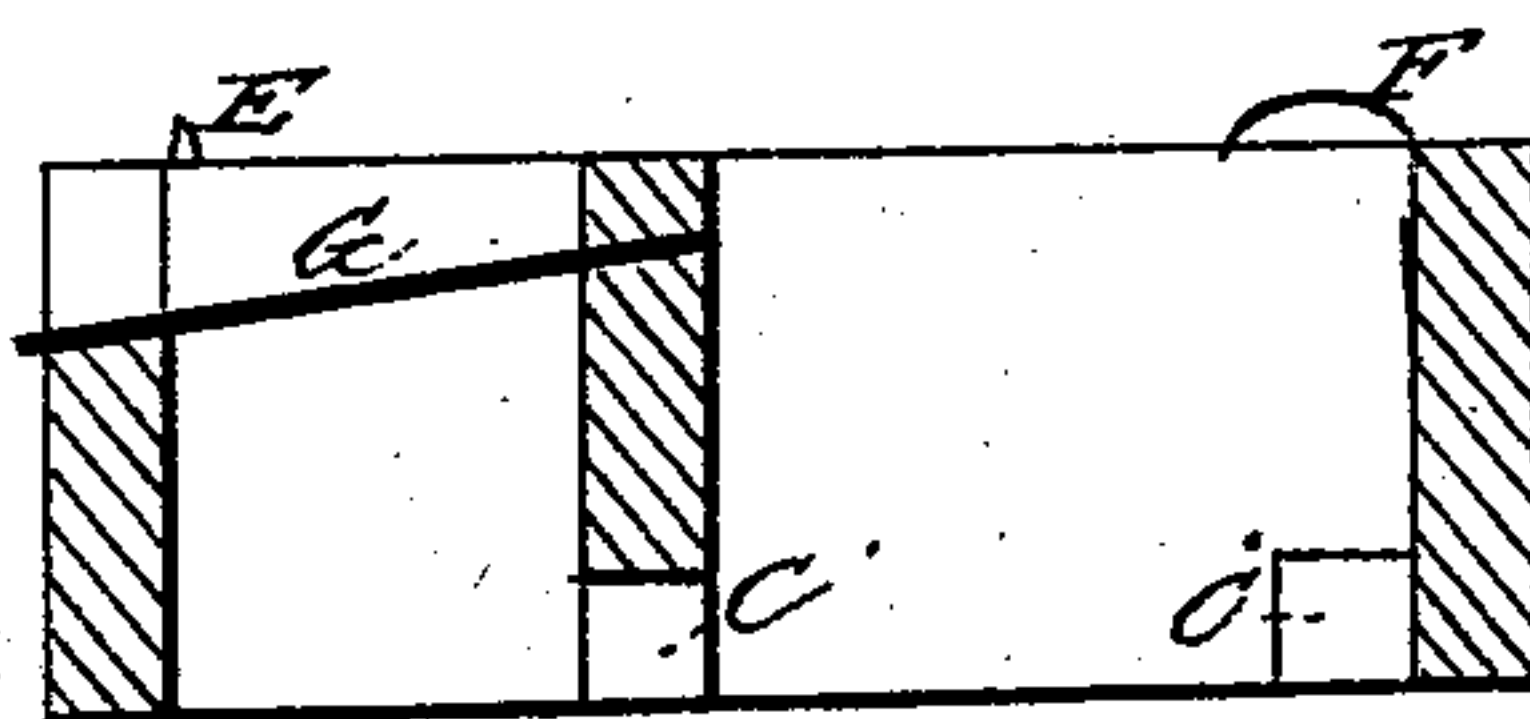


Fig. 3



witnesses:
J. H. Burdette
J. H. Jones

Inventor:
N. H. Whisemand

United States Patent Office.

N. H. WHISEMAND, OF INDEPENDENCE, IOWA.

Letters Patent No. 64,606, dated May 7, 1867.

IMPROVED SORGHUM-EVAPORATOR.

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, N. H. WHISEMAND, of Independence, in the county of Buchanan, and State of Iowa, have invented certain new and useful improvements in Sorghum-Evaporators; and I do hereby declare that the following is a full and complete description of the construction of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of the evaporator.

Figure 2 is a longitudinal section.

Figure 3 is a transverse section.

Like letters of reference refer to like parts in the views.

This evaporator consists of a shallow wooden vat, and in shape an oblong square, as represented in fig. 1, the bottom of which is of metal, and is made tight by being luted and closely nailed. This vat is divided into three sections, A, B, and C, fig. 1. Section A is subdivided into several compartments *a a*. Section C is also subdivided into three compartments, in the same way, and of the same size. These compartments have communication with each other by the means of the small opening C'. These are made by cutting out the lower corners of the division planks *a'*. The openings are not directly opposite each other, but are alternating, *i. e.*, the right-hand corner of the first division is cut out, as shown at C, fig. 3, whereas the left-hand corner of the second division is removed, and so on, through the whole number of divisions, as indicated in fig. 2. The two longitudinal sections A B have communication with each other by the opening D, fig. 2; and so also are the three compartments at the end in communication with each other in the same way. E is a gate, by the means of which the communication between the compartments in section A and those in section B may be closed. F is also a gate, to which reference will be made. The outer side of section B is made lower than the inner side, so that the perforated plate, or strainer G is slanting outward from the vat, and the purpose of which will hereafter be shown.

The manner of operating this apparatus is as follows: It is placed upon the top of two parallel walls, and which are of sufficient height for convenience, and to secure room for fuel and a good draught. The juice is thrown into the section A, and is then brought to a boiling point. As fast as the dross accumulates, it is skimmed off and thrown upon the strainer G, referred to, the better portion of which runs through into the section of the vat B, to be again heated or boiled, and the scum falls over the side of the vat, the strainer being made to project over the sides of the vat for that purpose. The two sections being connected by the opening D, as aforesaid, by this means there is a free mingling of the contents of the two sections. When the juice has been sufficiently boiled, it is allowed to run into the section C, by raising the gate E, for the purpose of cooling before being drawn off. This end of the vat is a little lower than the other, in order to cause a current in that direction. By having the openings arranged in the manner as above described, the direction of the sirup in flowing through the several compartments is transversely, or from side to side of the vat. By this means it is kept at a more uniform temperature, by being more equally exposed to the fire, than it would be if it flowed in a straight direction. When the sirup has been sufficiently boiled and cooled in the cooling section of the vat, it is then drawn off through the gate E, referred to.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The arrangement of the sectional compartments *a*, openings C', compartments C, and gates E F, in combination with the section B and strainer G, operating conjointly as and for the purposes set forth.

N. H. WHISEMAND.

Witnesses:

J. HOLMAN,

Z. T. LONG.