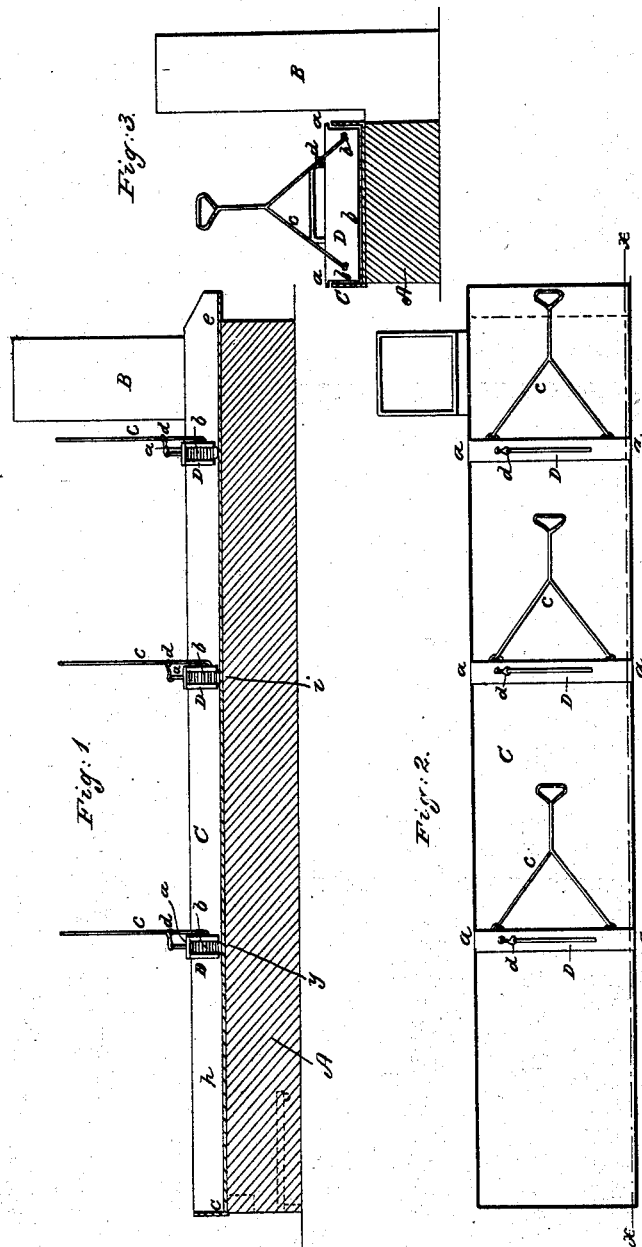


J. KINDLEY.  
Sorghum Evaporator.

No. 49,534.

Patented Aug. 22, 1865.



Witnesses:  
Theo Fusch  
Wm. J. Irwin.

Inventor:  
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attys.

# UNITED STATES PATENT OFFICE.

JOEL KINDLEY, OF OSKALOOSA, IOWA.

## IMPROVED SORGHUM-EVAPORATOR.

Specification forming part of Letters Patent No. 49,534, dated August 22, 1865.

### *To all whom it may concern:*

Be it known that I, JOEL KINDLEY, of Oskaloosa, in the county of Mahaska and State of Iowa, have invented a new and Improved Sorghum-Evaporator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, an end view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved pan for evaporating sugar, designed chiefly for evaporating sorghum; and it consists in the employment or use of movable partitions with an open-end pan and also a side chimney for the furnace, all arranged as hereinafter set forth, whereby a superior article of sirup is obtained and the evaporating process rendered continuous, it not being necessary to stop in order to cleanse the pan and remove the latter from the furnace, as is now required.

A represents the furnace, which may be constructed of masonry and in such a manner as to inclose the flue, which communicates with a vertical smoke-stack or chimney, B, the latter being built at one side of the flue, as shown clearly in Fig. 3.

C represents the pan, which may be constructed of sheet metal or metal bottom with wooden sides, and of such dimensions as to cover the top of the masonry comprising the furnace and the horizontal flue. This pan is closed at its end directly over the furnace, but is open at the opposite end.

D represents a series of movable partitions which are fitted in the pan C. These partitions may be constructed of wood. Maple would answer a good purpose. They have a projection or lip, *a*, at each end at their upper part, said projection or lips extending over the sides of the pan, and the bottoms and sides of the partitions have packing *b*, of cotton-twist or other suitable material, attached to them, and

the edges of the bottoms and sides are slightly rounded in order to admit of the partitions being moved easily in the pan. Each partition is provided with a metal handle, *c*, and these handles may be held in an upright, when required, by hooks *d*.

The device is used as follows: At the commencement of the operation one partition is placed in the pan C, as shown at *e*, and the pan is supplied with water to a depth of about two inches. A partition is then placed in the pan at *f* and shoved along to the point *g*, the water being, of course, shoved along in front of the partition, so as to leave an empty chamber, *h*, to receive the green sap, and when this sap has been sufficiently boiled and skimmed the partition is moved from the point *g* to the point *i*, and another partition is then placed in the pan at *f* and moved to *g*, so that an empty chamber, *h*, is again obtained to receive another supply of green sap. The partition at *e* is then removed and the one at *i* shoved along to *e*, removing all the water which was used to avoid the burning of the pan. The sap first commenced on is now between *e* and *g* and nearly completed, and when the evaporating process is finished the partition at *e* is removed and the molasses taken out. The evaporating of the sap is thus continued, green or fresh sap being placed in the pan as the finished sap or molasses is taken from it. The work may be continued night and day, it not being necessary to stop in order to clean the pan or to remove it from the furnace.

By having the chimney B at the side of the horizontal flue it does not interfere with the discharge of molasses from the open end of the pan, and it also tends to lessen the heat at that part of the pan, so that the molasses will not be in danger of being scorched.

I claim as new and desire to secure by Letters Patent—

The divisions D, which are moved, in the manner and for the purpose described, consecutively along the pan and out at open end.

JOEL KINDLEY.

Witnesses:

W. H. SEEVERS,  
L. M. PRESNALL.