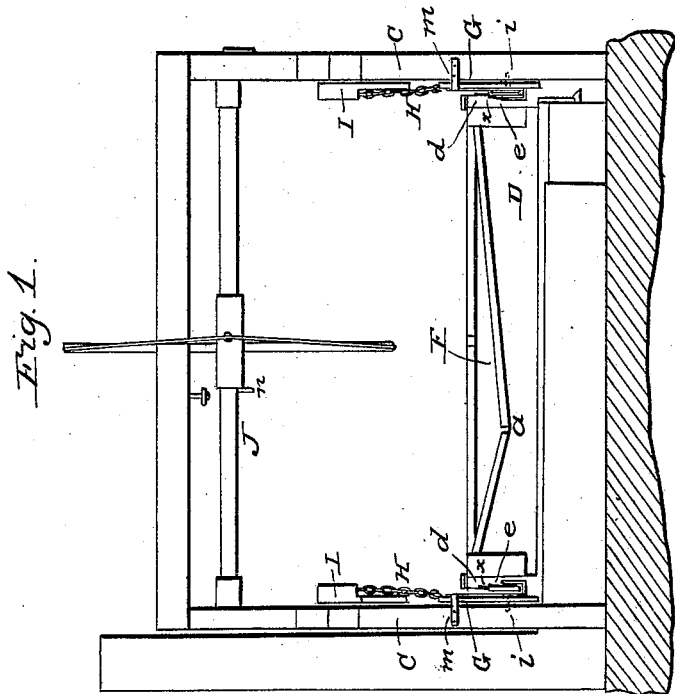
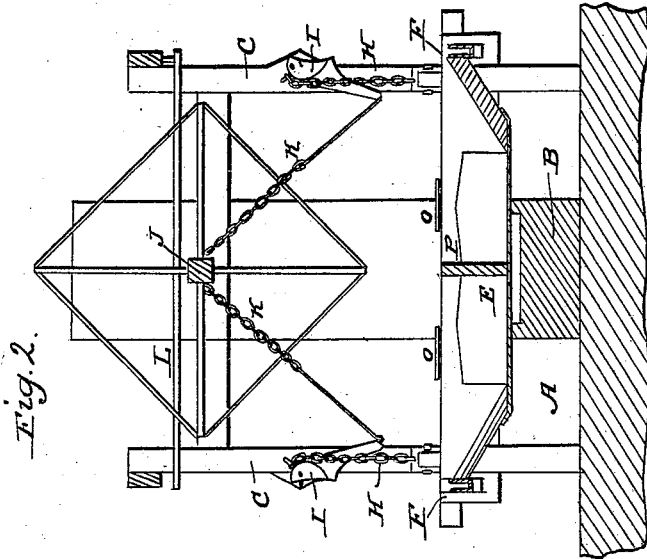


C. T. & E. W. MOORMAN.

Sorghum Evaporator.

No. 53,028.

Patented March 6, 1866.



Witnesses:  
John P. Jacobs  
Charles H. Anderson.

Inventors:  
C. T. Moorman  
E. W. Moorman  
by  
Alexander S. Mason  
Attorney.

# UNITED STATES PATENT OFFICE.

CHARLES T. MOORMAN AND ELI W. MOORMAN, OF JAMESTOWN, OHIO.

## IMPROVED SORGHUM-EVAPORATOR.

Specification forming part of Letters Patent No. 53,028, dated March 6, 1866.

*To all whom it may concern:*

Be it known that we, C. T. MOORMAN and E. W. MOORMAN, of Jamestown, in the county of Greene and State of Ohio, have invented certain new and useful Improvements in Machines for Evaporating Sorghum or other Sirups; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the annexed drawings, making part of this specification, A represents the foundation upon which the machine is erected.

B is the furnace, which is made in any of the known and usual ways. C C represent four posts, which, together with the cross-pieces which connect them, form a square frame over the furnace or about it.

D represents the evaporating-pan, which is provided with a partition, E, said partition running in the direction of the furnace. This pan is also provided with a cross-brace, P, and on its two sides with two troughs with sloping bottoms. These troughs receive the scum from the sirup and discharge it into vessels through an opening or openings, *a*, in their bottoms.

At the ends of the pan are secured two bars, *d d*, to which are secured two thin pieces of metal, which project below the bars, and which rest in the grooves in the pulleys *e e*.

G G represent four slides, which lie close to the posts C C, and which are kept in their positions by means of the keepers *m m*. These slides are provided with grooves on their sides next to the posts, in which play the pins *i i*, to keep them in position partly, and at the same time allow them to move a little from the posts to prevent binding of the pan. The pulleys *e e* are secured to the slides G, and move up and down with them.

H H represent chains, which are secured at their lower ends to the slides G G and at their upper ends to the levers I I, said levers being pivoted to the posts C C and formed with a cam on each one, over which the chains pass.

K K represent chains, which connect to one end of the levers I I and pass and are secured to a windlass, J. The windlass has an enlargement at each end, around which the chains pass, so that when it is revolved for the purpose of raising the pan, the said pan is at the same time raised a little higher on one side

than the other, so as to enable the operator to skim the sirup more easily.

A bar, L, which is provided with a notch, passes across the frame above the windlass, and a pin upon the windlass catches into said notch when desirable to station the windlass at any required position.

It will readily be seen that the pan, resting as it does upon the pulleys *e*, can be moved laterally as also vertically.

The object of having two partitions is this: The pan, after having green or fresh juice placed in one partition, is moved so that this partition will be immediately over the furnace, and while this is being boiled fresh juice is placed in the other partition. When the partition which is boiling has had its juice sufficiently evaporated the pan is moved again, so that the partition with the fresh juice will be above the furnace, while the one which has just been over the furnace is being cooled, the sirup removed, and a fresh supply of juice placed in it.

With this machine the operation of evaporation is conducted with great ease.

O O are stops placed upon the pan to prevent its moving farther than necessary when moved laterally.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the pan provided with partitions over the furnace, in the manner herein set forth, and operating it as and for the purpose herein specified.

2. The arrangement of the bars *x x* on the end of the pan, and the pulleys *e e*, as and for the purpose specified.

3. The arrangement of the bars *x x*, pulleys *e e*, slides G G, chains H H, levers I I, with the chains K K and windlass J, substantially in the manner and for the purpose herein specified.

4. The troughs F, constructed and arranged with the pan, in the manner and for the purpose herein set forth.

In witness that we claim the foregoing we have hereunto set our hands in the presence of two witnesses.

CHARLES T. MOORMAN.  
ELI W. MOORMAN.

Witnesses:

THOMAS LUCAS,  
JAMES C. MOORMAN.