

(No Model.)

M. KNOPF, Jr.
EVAPORATING PAN.

No. 246,789.

Patented Sept. 6, 1881.

Fig. 1.

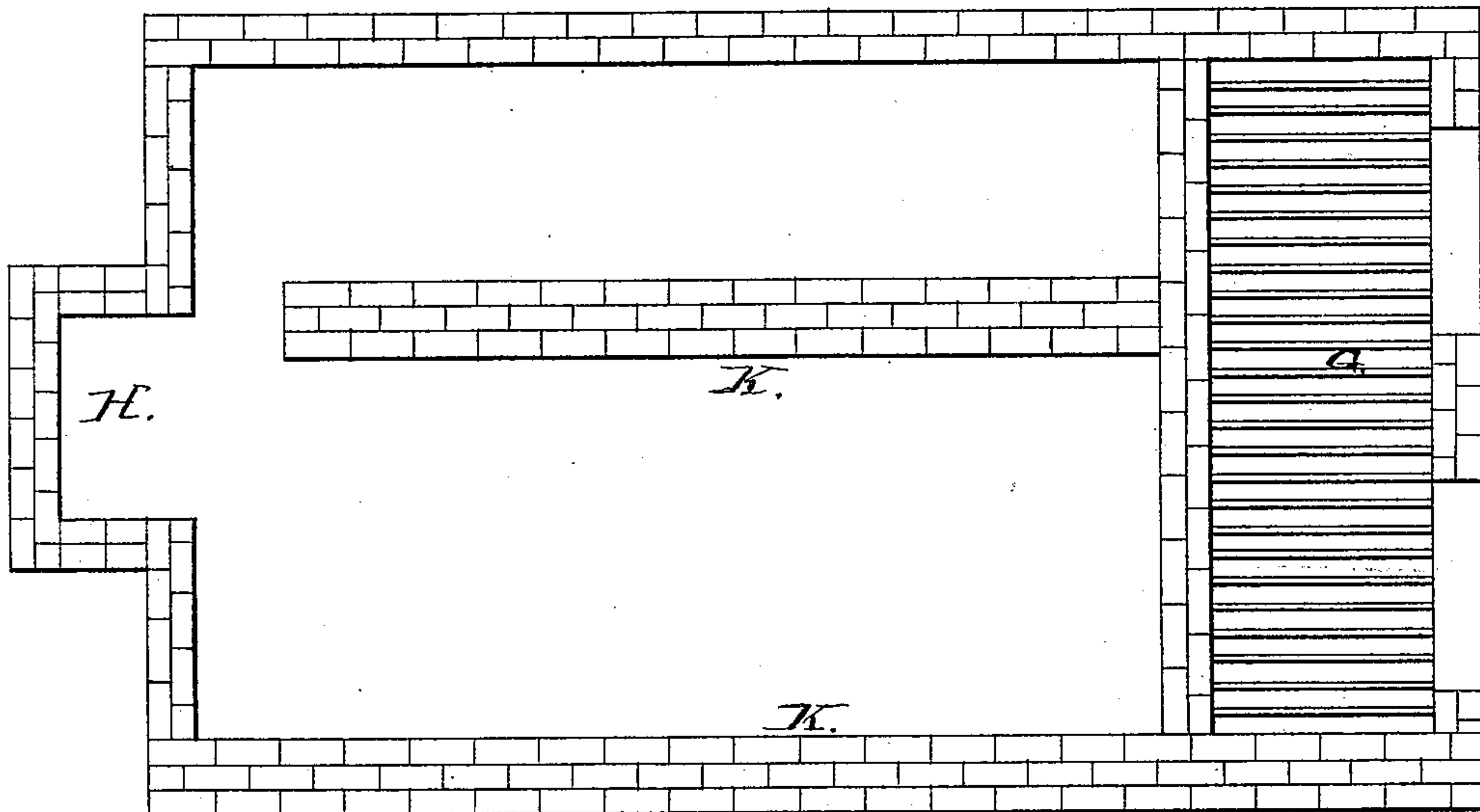
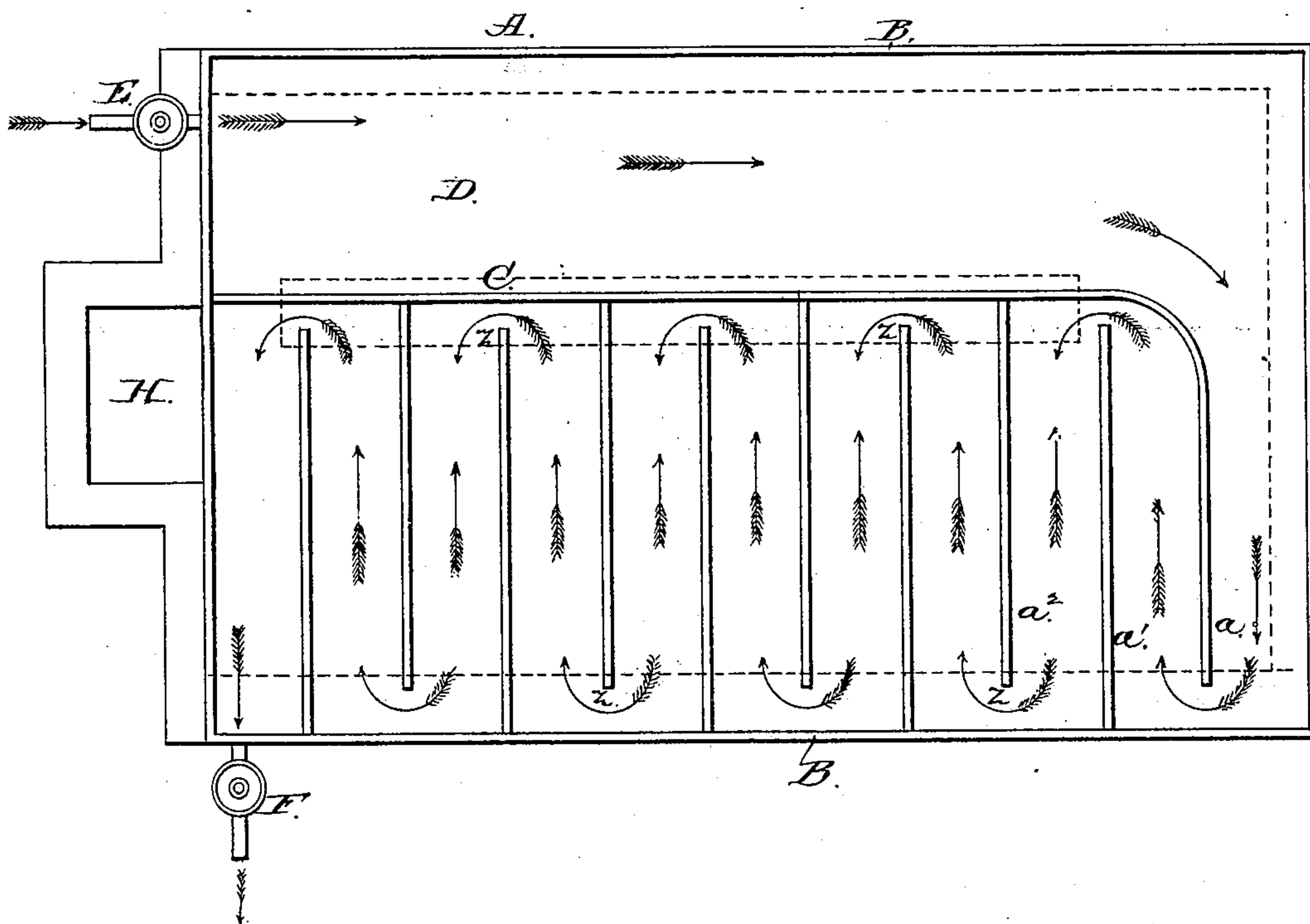


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

MICHAEL KNOFF, JR., OF WHEELING, MINNESOTA.

EVAPORATING-PAN.

SPECIFICATION forming part of Letters Patent No. 246,789, dated September 6, 1881.

Application filed July 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL KNOFF, JR., a citizen of the United States, resident of Wheeling, in the county of Rice and State of Minnesota, have invented a new and valuable Improvement in Evaporating-Pans; 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 a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of the base or masonry portion of my invention. Fig. 2 is a plan view of the pan.

This invention has relation to evaporators or purifying apparatus for cane-juice; and it consists in the construction and novel arrangement of the longitudinal and transverse partition-walls of the pan, and, in connection therewith, the furnace-walls under the points of the partitions, all as hereinafter set forth.

In the accompanying drawings, the letter A designates the evaporating-pan, having the marginal wall B.

C represents a vertical partition, extending lengthwise in the pan, and separating the entering portion or forebay D from that portion through which the juice afterward passes. This partition extends from the rear end of the pan, and forms a bend near the front end, which is over the hottest part of the furnace-fire, and terminates at *a* near the side wall. In rear of this transverse branch or termination of the partition C extends transversely from said side wall a partition, *a'*, which terminates near the middle partition, C. In rear of this transverse partition *a'* a second transverse partition, *a''*, extends from the long partition C toward the side wall, and these transverse partitions follow in this alternate manner, forming a sort of zigzag passage in this portion of the pan until the end farthest from the fire-box is reached.

E represents the valve or opening through which the juice is fed into the forebay, and F the discharge spout or faucet.

Under the pan is the furnace, having in its front portion the fire-box G and in rear the smoke-flue H.

K K indicate heavy brick walls, which are located under the ends *z* of the transverse partitions, and serve to keep down the heat when the juice is passing around these ends.

The green juice is fed in at E, and follows around the main partition C to the transverse partitions, and through the passage between the latter back to the rear again, and is here discharged at F. The object is to have the entering portion or forebay of the pan over a moderate heat, this being the part wherein the juice is freed from its impurities. Then as the juice advances toward the other end of the pan the heat increases until the first partitions of the transverse series are reached. The intensity of the heat then diminishes as the juice moves back toward the rear end of the pan, becoming heavier and requiring a lower degree of temperature.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The evaporating-pan having the longitudinal partition C extending from one end and terminating in a transverse bend, *a*, and the succeeding transverse partitions *a' a''*, &c., alternately extending from the side wall and the longitudinal partition, and the inlet E and discharge F, arranged at the same end of the pan, substantially as specified.

2. The combination, with an evaporating-pan having partition C and transverse partitions *a' a''*, of the heavy furnace-walls K K under the free or terminal ends *z* of said transverse partitions, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MICHAEL KNOFF, JR.

Witnesses:

GEO. B. WHIPPLE,
A. D. KEYES.