

H. P. NINDE.
Sorghum Evaporator.

No. 54,196.

Patented April 24, 1866.

FIG. I

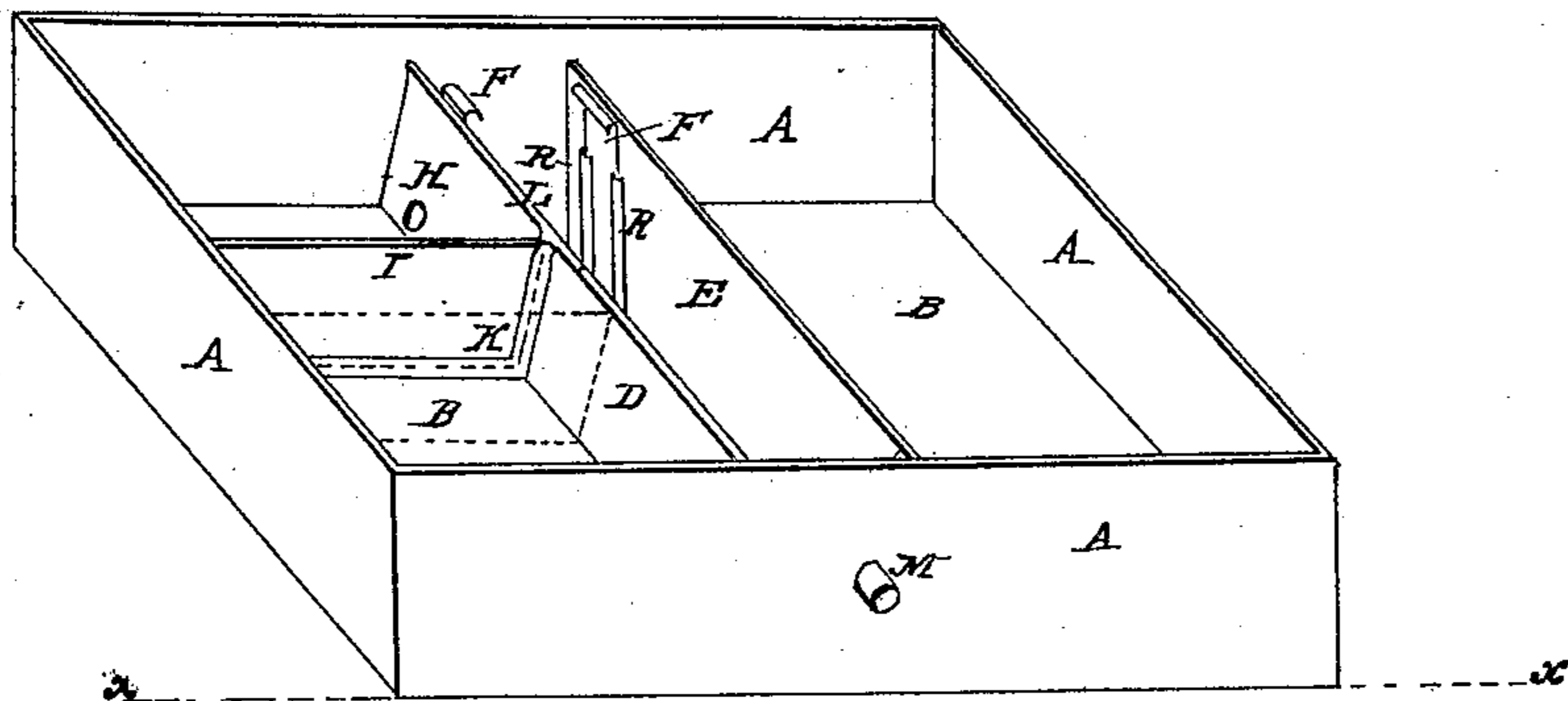


FIG. II.

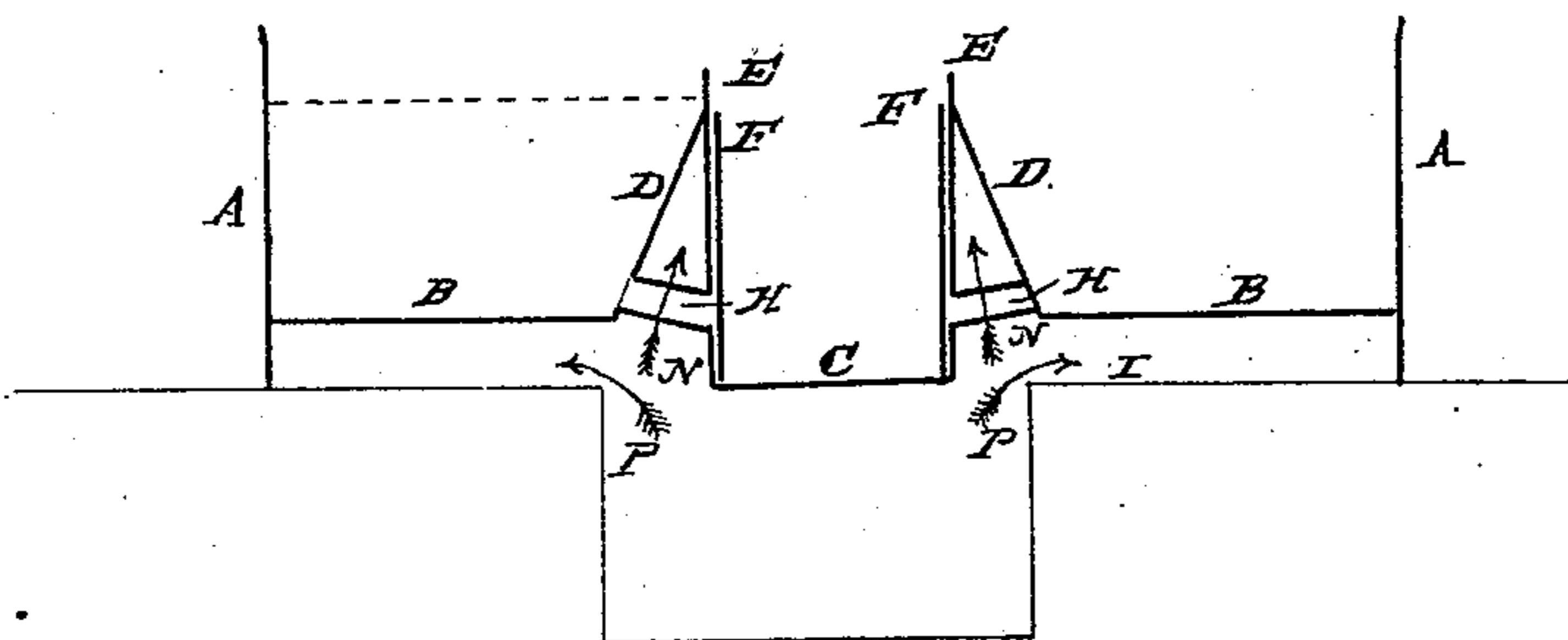
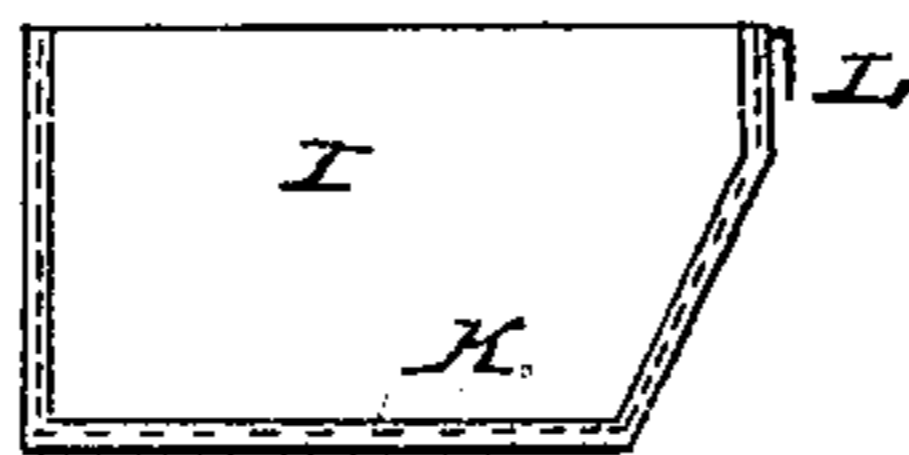


FIG. III.



WITNESSES:

Geo L. Chapin
Albert Hayward

INVENTOR

Henry P. Ninde

UNITED STATES PATENT OFFICE.

HENRY P. NINDE, OF OSKALOOSA, IOWA.

IMPROVED SORGHUM-EVAPORATOR.

Specification forming part of Letters Patent No. 54,196, dated April 24, 1866.

To all whom it may concern:

Be it known that I, HENRY P. NINDE, of Oskaloosa, in the county of Mahaska and State of Iowa, have invented an Improved Sorghum-Juice Defecator; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective representation of my improved sorghum-juice defecator. Fig. 2 is a longitudinal sectional elevation of the same. Fig. 3 is a longitudinal elevation of the sliding partition.

The object of my invention is to construct a series of pans which may be conveniently used with Cook's evaporator, or with those of similar construction, in purifying sorghum-juice preparatory to the process of evaporation; also, to so arrange the central pan that the heat from the furnace may be diffused over the sides and bottom of the pan and the inner sides of the end pans, so that they may be heated with less cost of fuel and at such points as will necessarily secure the flow of scum and extraneous matter outward to the sides of the end pans, where it may be removed.

It is a well-known fact that in defecating sorghum-juice the scum and impurities in the same have a tendency to that part of the defecator that is least heated.

By the use of my invention an important object is secured—first, by arranging the central pan so that it will be subjected to a much greater heat than the end pans; second, in arranging the end pans so that only the inner sides of the same may be much heated. By this construction of the central part of the defecator the heat can be better controlled and the process of purifying greatly facilitated.

My further object is to construct a sliding partition to operate in one or both of the end pans for the purpose of keeping, in a great measure, the raw juice from being incorporated with that which is partially purified.

To enable others skilled in the art to make and use my invention, I will describe the method of construction and operation.

A represents the metallic plate which forms the ends of the central pan and the ends and outer sides of the end pans.

E shows the sides of the central pan, which are a part of the same plate which forms the bottom of the pan, and are bent upward on an angle of ninety degrees, and extend to a point which is about three-fourths of the width of the plate A. The bottom C and the sides E of the central pan are secured to the outside plate, A, by means of rivets or otherwise, in a permanent manner.

D shows the inner sides of the end pans, and are a part of the plate B, which forms the bottom of the pans, and are bent upward on an angle of about sixty-five degrees, and attached to the top of the central pan, so as to prevent the escape of smoke.

It will be seen by this arrangement that the bottoms of the end pans are less in width than the tops of the same, which gives an angular space between the central and end pans, so that the heat from the furnace may come in contact with this part of the same. The sides and bottoms of the end pans are secured to the plate A in the same manner as the central pan.

H shows the pipes through which the partially-purified juice is conveyed from the end pans into the central pan.

F shows the gates which operate in the slides R, used for the purpose of shutting off the juice from the central pan when required.

J represents the sliding partition, which may be operated in either of the end pans for the purpose of dividing the raw juice from that which is partially purified, and for forcing the juice which is in the end pans into the central pan.

Only one sliding partition is represented in the drawings, which is sufficient for ordinary work; but if a great amount of work is required of a single defecator two sliding partitions may be used. The ends and bottom of this sliding partition are covered with rubber or some elastic material which will prevent leakage. In the drawings common cotton cloth is represented as being sewed fast to the partition by means of thread passing through the cloth and holes perforated in the edges of the partition.

It will be seen at Fig. 2 that the central pan has a greater depth than the end pans, which is for the purpose of securing all heat possible from the furnace.

Operation: The red line I represents the furnace, over which the defecator is supposed to set. The pans must be filled with raw juice in the common manner. After the same has become heated the scum will flow from the central pan into the end pans by passing over the partitions dividing the same. In filling the end pans the sliding partition must be forced toward the pipes H, and the vacant space filled with raw juice. This will keep the end pans cool while the central pan is heated and the scum is carried outward. When the

juice is purified the same can be drawn into the evaporator by means of the pipe M.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination of the three pans, when constructed as set forth, and operated in conjunction with the sliding partition J, as described.

HENRY P. NINDE.

Witnesses:

GEO. G. CHAPIN,
ALBERT HAYWARD.