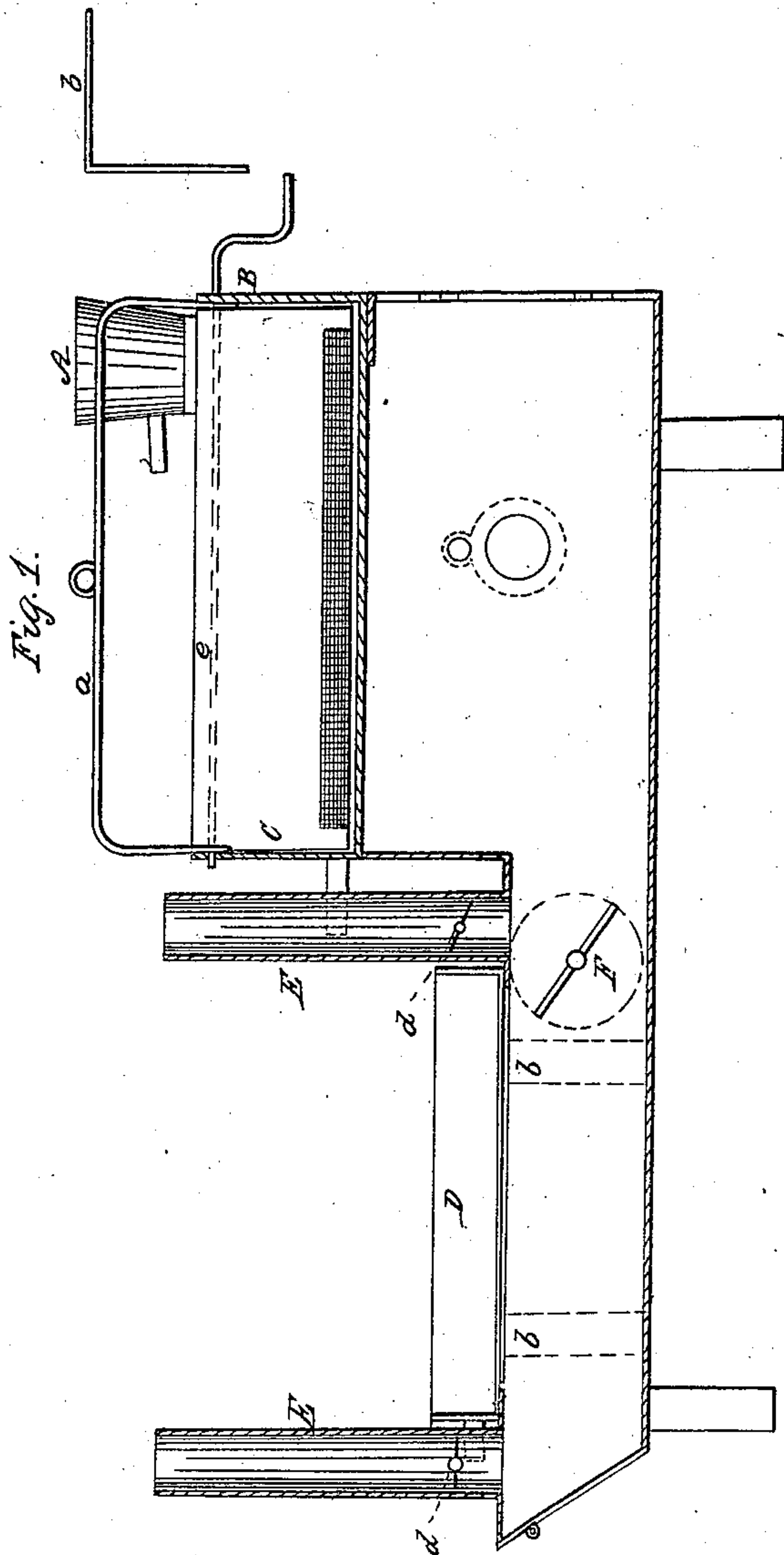
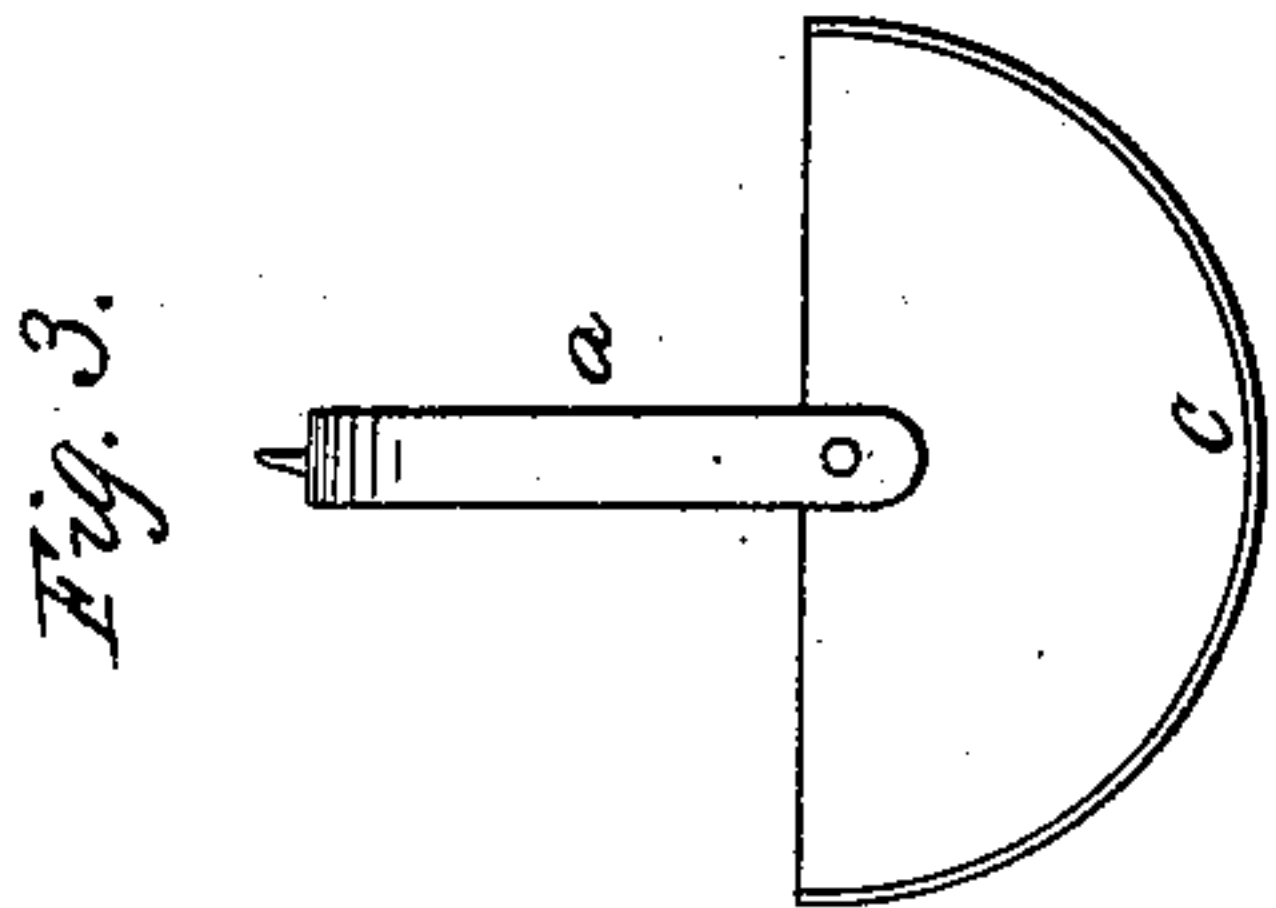
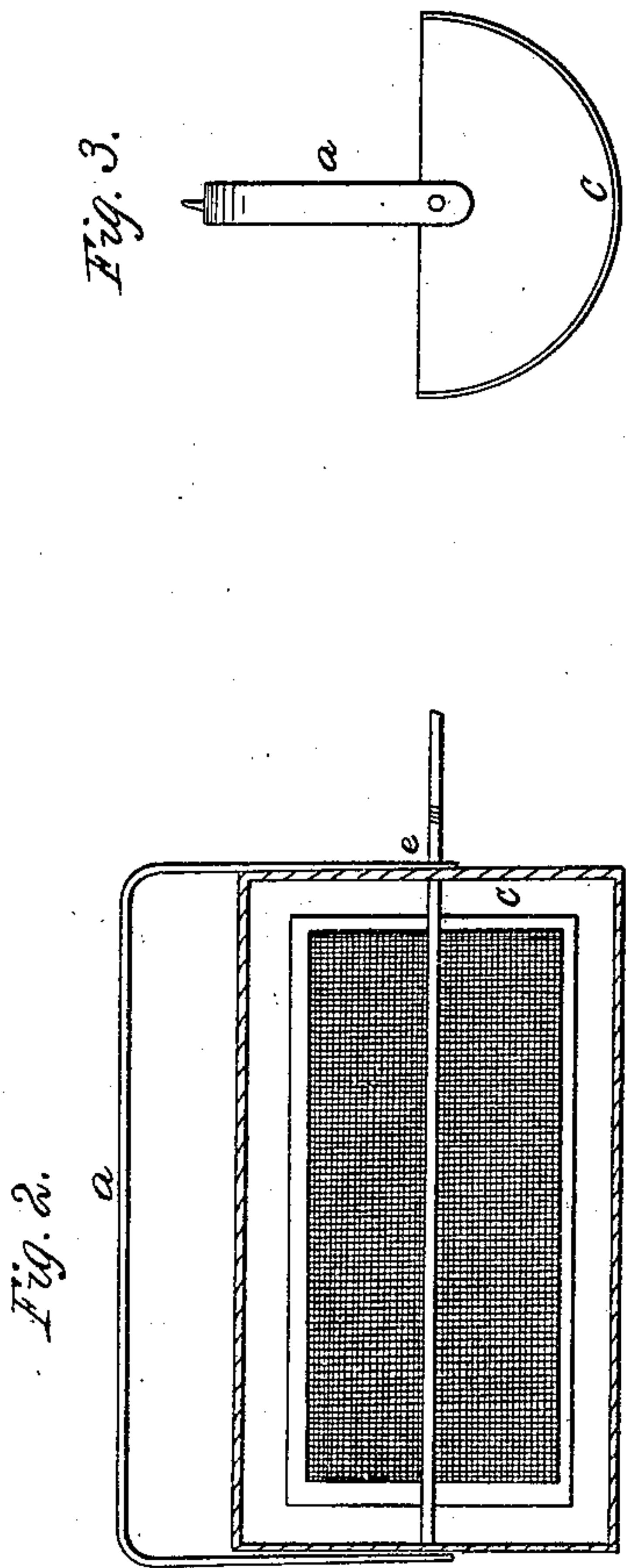


THOMPSON & ROGERS.

Evaporating Pan.

No. 36,179.

Patented Aug. 12, 1862.



Witnesses:
J. L. Clayton
A. A. Seaborn

Inventors:
G. W. Thompson
A. M. Rogers
J. W. Alexander

UNITED STATES PATENT OFFICE.

A. H. ROGERS AND G. W. THOMPSON, OF MARION, IOWA.

IMPROVED SUGAR-JUICE EVAPORATOR.

Specification forming part of Letters Patent No. 36,179, dated August 12, 1862.

To all whom it may concern.

Be it known that we, A. H. ROGERS and G. W. THOMPSON, of Marion, Linn county, and State of Iowa, have invented certain new and useful Improvements in Apparatus for Evaporating the Juice of Sorghum; and we hereby declare that the following is a true and exact description of the same, reference being had to the accompanying drawings, and to letters of reference marked thereon.

The special design of our apparatus is to evaporate the juice of sorghum; but it may be used with equal efficiency in evaporating other saccharine juices.

In the drawings annexed, Figure 1 represents a longitudinal section of the furnace, with apparatus arranged in position. Fig. 2 is a plan view of skimmer and bail attached. Fig. 3 is an end view of bail and skimmer.

The body of the furnace is oblong, having a door at each end.

The letter A in Fig. 1 represents the filter through which the juice must pass before entering the heater B. The filter rests on a platform designed to be on a level with the upper edge of B, and fastened at the lower end to the side of the furnace A is rendered adjustable by turning on its axis, which passes through the center of the platform. A spout extends from the lower part of the filter to conduct the juice from it into the heater B.

C is a revolving skimmer forming the longitudinal section of a cylinder, with an iron rod passing through it lengthwise with a crank at the end, with which it is operated. The heater B has a notch cut at each end, into which the rod *e* rests, so that when the skimming process is to be performed by C (occupying an inverted position—that is, with the concave side down) all required is to give it a semi-revolution by means of the crank, and by this simple process remove the scum thoroughly from the surface of the saccharine juice in B. The moment the skimmer C has performed its office it may be removed from B by the means of the bail *a*, which may be connected by rope and pulley to the arm of a crane situ-

ated convenient to the furnace. At the end of B are two spouts or conduits for drawing off the juice into the sirup-pans D D, these also having conduits to draw off the sirup when sufficiently evaporated.

Between the two sirup-pans D D is a partition running in a line with the chimneys, making the pans of equal size. When the juice in one is sufficiently evaporated, the bottom of the other can be brought immediately over the furnace by sliding D D on the brackets *b b*, which are attached to the side of the furnace, so that the sirup in one compartment will be cooling while the other is boiling.

The furnace is supplied with two smoke-pipes or chimneys, E E, one situated at the end and the other midway of the furnace. Each of the chimneys has a damper, *d*, which in combination with the damper F at the center of the furnace, constitutes what is equivalent to a double furnace, whereby the heat can be retained under the heater B, shifted to the other end of furnace under the sirup-pan, or suffered to pass through the whole length of the furnace at pleasure. These several applications of heat are effected, first, by regulating the damper at the center of furnace in order to send the heat, from either end, to the center chimney; secondly, by closing the damper of center pipe and opening the one at the end the heat is sent the whole length of the furnace.

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

1. The revolving skimmer B or its equivalent, in combination with the bail C, to be operated in the manner and for the purpose herein set forth and described.

2. The two chimneys with accompanying dampers, in combination with damper in the furnace, as herein specified.

A. H. ROGERS.

G. W. THOMPSON.

Witnesses:

A. B. DUMONT,

A. J. MCKEAN.