

J. HIGH.
SUGAR EVAPORATOR.

No. 40,934.

Patented Dec. 15, 1863.

Fig 2.

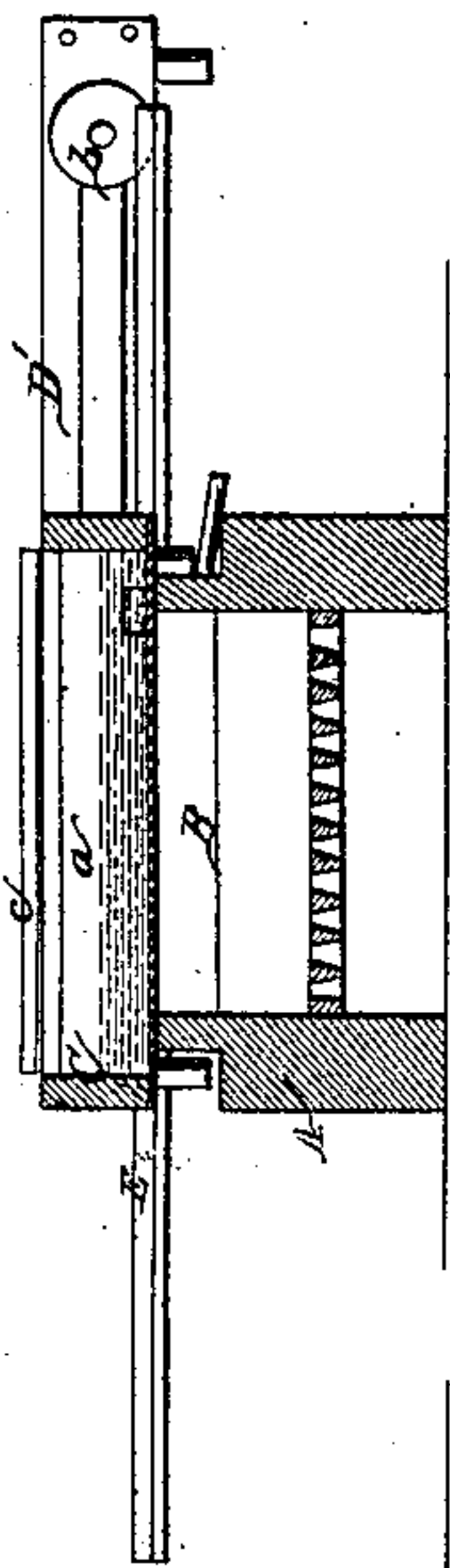
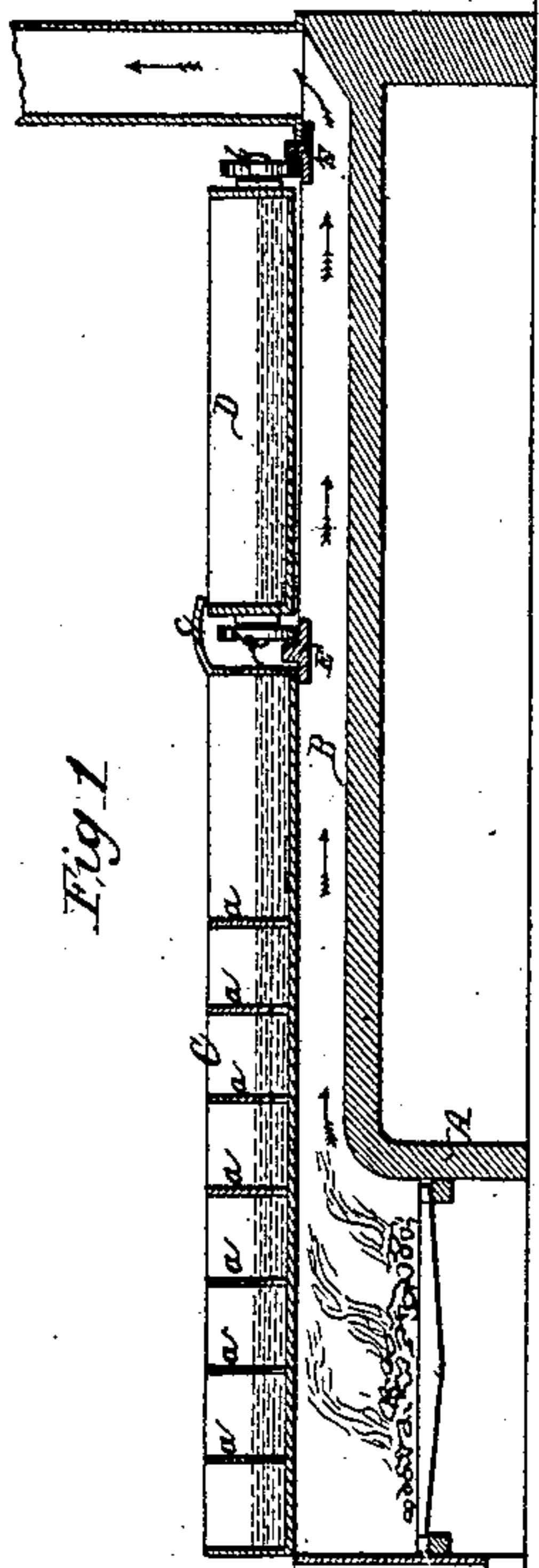


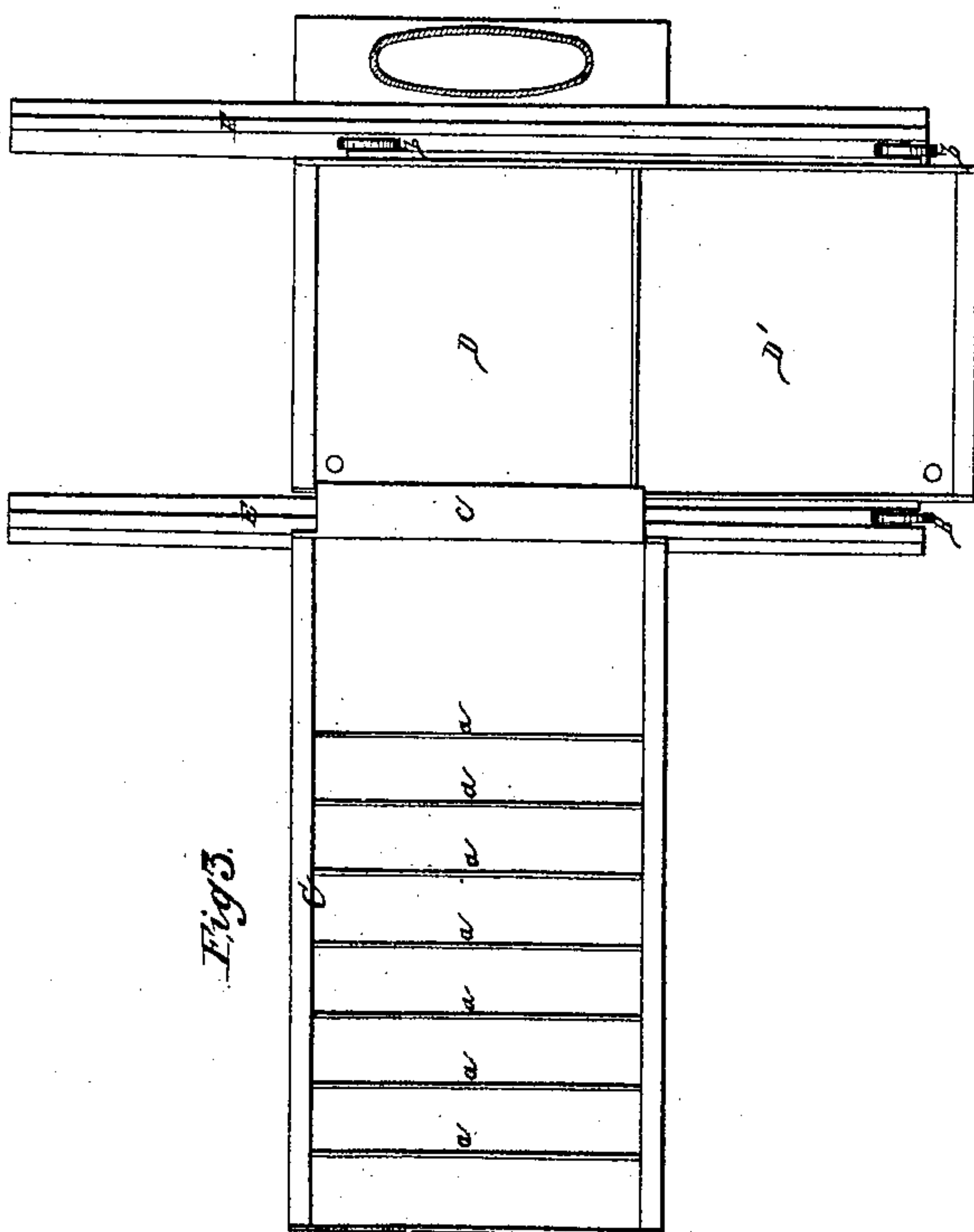
Fig 1.



Witnesses:

John C. Smith
Wm. Reed

Fig 3.



Inventor:

James High
Per Munn & Co. Attorneys

UNITED STATES PATENT OFFICE.

JAMES HIGH, OF WALNUT FORK, IOWA.

IMPROVEMENT IN SUGAR-EVAPORATORS.

Specification forming part of Letters Patent No. 40,934, dated December 15, 1863.

To all whom it may concern:

Be it known that I, JAMES HIGH, of Walnut Fork, in the county of Jones and State of Iowa, have invented a new and Improved Evaporator for Saccharine Liquids, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a plan or top view of the same.

Similar letters of reference in the three views indicate corresponding parts.

This invention relates to evaporators provided with a transverse track at the rear end of the flue, in combination with two wheeled pans and with a stationary heating-pan in such a manner that the juice after it has been boiled in the heating-pan and freed from scum can be conveniently ladled over into either of the wheeled pans and exposed to a moderate heat over the rear end of the flue, for the purpose of finishing the sirup, and that one of said wheeled pans can be emptied while the contents of the other are finished.

The invention particularly consists in the use of wheels mounted on the sides in such a way as to more fully expose the bottom of the pan, in combination with a guard to cover the space necessarily intervening between pans when thus mounted.

To enable others skilled in the art to make and use my invention, I will proceed to describe it.

A represents a furnace built up of brick or any other suitable material, and provided with a flue, B, which extends from the fire-place to the chimney.

C is the heating-pan, which is placed over the front part of the flue B, where it is exposed to the greatest heat. This pan is divided into eight (more or less) compartments by means

of transverse partitions *a*, with openings at opposite ends, so that the juice is compelled to pass through the pan in a zigzag channel, and that in its passage from one side of the pan to the other, whenever it reaches the middle or hottest portion of the bottom, the scum rises and is thrown toward the sides, where it can be readily removed. In this manner the juice is perfectly freed from all scum and other impurities, and the clear juice collects in the last or eighth compartment. From this compartment it is ladled over into one of the pans D D', which is provided with wheels *b*, running on a track, E. This track is secured on the rear end of the furnace A, and it extends in a lateral direction over both sides of the same far enough to permit of moving either of the pans D D' over the rear end of the flue B. A curved shield, *c*, which rises from the rear end of the pan C, and extends over the edge of the pans D D', prevents the loss of juice during the ladling operation.

The pans D D' may either be made so that they form two compartments of one and the same pan, or they might be made separate and placed side by side. During the time one of these pans is over the flue in order to finish its contents, the finished sirup can be conveniently drawn from the other pan, and vice versa, so that no time is lost.

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

The combination, with the finishing-pans D D', mounted on wheels attached to their sides, as herein shown and described, of the guard *c*, supported on either the stationary or moving pans and projecting over the space between the two, in the manner and for the purposes specified.

JAMES HIGH.

Witnesses:

JOHN HICKS,
THOMAS SMITH.