Francis E. Butler.

# Evaporating Pan

PATENTED JUL 11 1871

116803

Fig. 1

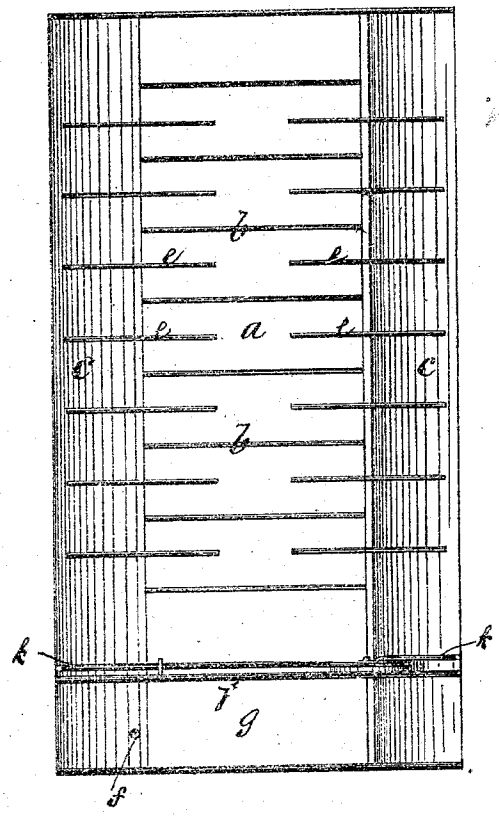
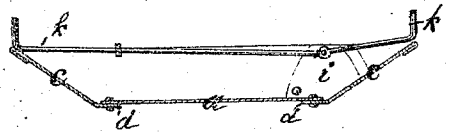
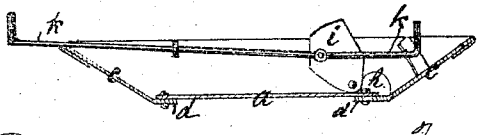



Fig. 2.




Witnesses:

E. W. Bliss

R. P. Edmunds

Inventor:

Franklin G Butler

By Jeremy W Bliss. Attorney

# UNITED STATES PATENT OFFICE.

FRANCIS G. BUTLER, OF BELLOWS FALLS, VERMONT.

## IMPROVEMENT IN EVAPORATING APPARATUS FOR MANUFACTURE OF SUGAR.

Specification forming part of Letters Patent No. 116,803, dated July 11, 1871.

*To all whom it may concern:*

Be it known that I, FRANCIS G. BUTLER, of Bellows Falls, county of Windham and State of Vermont, have invented certain new and useful Improvement in Apparatus for Making Sugar, &c.; and to enable others skilled in the art to make and use the same I will proceed to describe it, referring to the drawing, in which the same letters indicate like parts in each of the figures.

The nature of my invention consists in attaching to an evaporator, constructed as hereinafter described, a finishing-pan, (which corresponds in its use with the teache or battery of the kettle-range—commonly in use in the manufacture of cane-sugar,) and connected with the evaporator by an oscillating valve operating over an opening from the evaporator into the battery, which valve is operated by rods or levers reaching to each side of the evaporator or battery, thus making it convenient for the operator to move the valve from whichever side of the evaporator or battery he may be, and rendering it easy to let out charges or batches of clarified and condensed saccharine fluids from the evaporator into the battery, where it may easily be finished for sirup or sugar.

In the accompanying drawing, Figure 1 is a top or plan view of this pan. Fig. 2 are end-section views.

*a* is the bottom of the pan. *b* are partitions or corrugations of the same length as the width of the bottom sheet *a*. These partitions or corrugations are formed in the common way. *c* are flaring sides, formed at an angle of about forty-five degrees with the bottom, and having a lip or flange projection, *d*, which laps onto and is secured to the under side of the bottom *a*. *e* are scum-arresters arranged between a part or all of the partitions or corrugations. The lower edges extend onto the bottom about one-fourth of its width, and are fitted and secured to the flaring sides and extending nearly to the top or outer edge thereof, thus forming elevated compartments upon the sides for arresting and holding the scum until removed. *f* is a discharge-nozzle or opening. *g* is a finishing or sugaring-off pan extending from one end of the evaporating-pan, its bottom being of the same level with the bottom of the evaporating-pan. *h* is a passage from the evaporating-pan into the finishing-pan *g*. This passage *h* is opened and closed by an oscillating valve-plate, *i*, hinged to the partition *j* near the bottom and just one side of the passage, and is operated from one or both sides of the pan by means of the rod or rods *k* attached thereto so as to pivot near its upper edge.

To partially recapitulate: The battery consists of a plain-bottomed pan, of the same width and level at the bottom as the evaporator to which it is attached, and of any convenient length and depth, both pans having flaring sides. The valve consists of a flat piece of metal, which is secured to the end of the evaporator, just outside of the passage-orifice, by a bolt at one of the corners near the bottom, and to the upper edge whereof the rods or levers are attached so as to pivot, and by the pulling or pushing of which the operator covers or uncovers the opening from the end of the evaporator into the battery.

I believe I have thus shown the nature and construction of this invention so as to enable others skilled in the art to make and use the same therefrom.

What I claim, therefore, and desire to secure by Letters Patent, is—

1. A plain-bottomed battery or finishing-pan, in combination with an evaporator, the pan and evaporator both having flaring sides and communicating directly with each other, the bottoms of both being upon the same level.

2. An oscillating valve, operated by a pivoted rod or rods reaching to one or both sides of an evaporating-pan, substantially as shown and described.

FRANCIS G. BUTLER.

Witnesses:
W. S. MYERS,
HENRY F. KING.