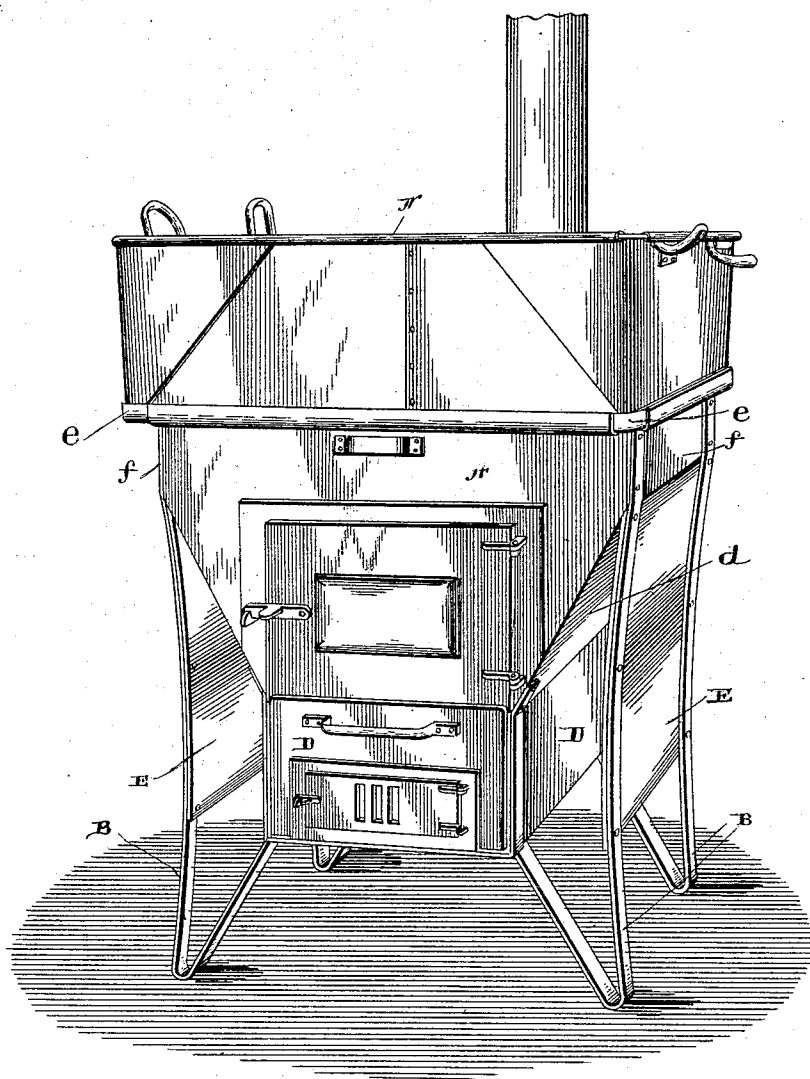


(No Model.)

C. C. ALFRED.
SUGAR EVAPORATING PAN.

No. 489,622.

Patented Jan. 10, 1893.



Witnesses

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UNITED STATES PATENT OFFICE.

CHAUNCEY C. ALFRED, OF FAIRFAX, VERMONT.

SUGAR-EVAPORATING PAN.

SPECIFICATION forming part of Letters Patent No. 489,622, dated January 10, 1893.

Application filed March 14, 1892. Serial No. 424,843. (No model.)

To all whom it may concern:

Be it known that I, CHAUNCEY C. ALFRED, a citizen of the United States, residing at Fairfax, in the county of Franklin and State of Vermont, have invented certain new and useful Improvements in Arches for Sugar-Making and other Purposes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in arches for supporting evaporating pans, and which is intended as an improvement upon Letters Patent No. 302,699 granted to me July 29, 1884, and it consists in the particular construction which will be fully described hereinafter and particularly pointed out in the claims.

The object of my invention is first to stiffen and render more firm and stable the supports for the arch; second to more completely concentrate all of the heat in the arch to the under side of the pan which rests upon it; third to construct the upper end of the arch to facilitate the application of intervening depending aprons to direct and concentrate the heat to the under surface of the pan and to prevent the escape of heat from the sides of the pan into the room, and against the operator which makes the arch more comfortable to work around.

The accompanying drawing represents a perspective view of an arch which embodies my invention complete.

A indicates the arch, at the bottom of which is a fire box D, the sides of the arch from the upper portion of this fire box extending upwardly and outwardly to cover and direct the heat radiated by the fire box to the entire under surface of the pan N placed upon the top of the arch. The outwardly flaring sides *d* are bent in a vertical direction at their upper ends as shown at *f*, to allow the metal ring or band *e*, to project beyond the said vertical portion, for a purpose to be presently set forth. The arch supports or legs B have their upper ends extended along the vertical portions *f* of the arch A, and their upper ends secured rigidly to the projecting ends of the band *e*. These vertical portions *f* also form upright surfaces substantially parallel with the ver-

tical portions of the legs B from which surfaces *f* are hung the aprons or plates E. The aprons can be detachably secured to the legs, or can have their upper ends secured to the faces *f* as desired. The purpose of these aprons is to prevent the radiation of heat from the outwardly inclined walls *d* of the arch into the room and against the operator, and also to direct and guide the heat upward to the upper end of the arch, thus increasing the heat at the evaporating pan. Owing to the use of these aprons, it is made very comfortable for the operator, as the heat does not escape against him, as it otherwise does. So also these aprons strengthen and make more firm and stable the legs B, which for the same purpose are slightly concaved from the surfaces *f* downward to the floor as shown. From their lower ends the legs B extend upward and inward and are secured to the under side of the arch as illustrated. By this construction the heat which would otherwise radiate so rapidly from the sides of the arch to the great discomfort of the operator, is directed upward to the pan, thereby greatly economizing in fuel, increasing the heat action, and adding much to the convenience and comfort of the operator or persons about the arch. At the same time the metallic supports of the arch are made more stable and reliable.

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

1. An evaporating arch having a fire box at its lower end, upwardly and outwardly inclined walls from the fire box upward, supports extending from the upper end of the arch down below the fire box and then upward and inward thereto, and depending plates secured to the supports and intersecting or joining the upper end of the said inclined walls, substantially as and for the purpose specified.

2. An evaporating arch having a fire box at its lower end, upwardly and outwardly inclined walls projecting from the fire box, the upper end of the inclined walls being made straight or vertical, supports extending downward from these vertical portions below the said fire box and upward and inward thereto, and depending plates or aprons extending

from these vertical portions of the walls downward and secured to the supports, substantially as set forth.

3. An evaporating pan having a fire box at
5 its lower end, inclined walls extending upwardly therefrom having vertical upper ends, a band or ring projecting beyond the said vertical walls, supports having their upper ends
10 extending along the said vertical walls and secured to the projecting ring, the supports extending below the fire box and upward and inward thereto, substantially as described.

4. An evaporating arch having a fire box at
15 its lower end, outwardly and upwardly inclined walls projecting from the fire box, the upper end of the inclined walls bent verti-

cally, supports extending downward from these vertical portions below the said fire box and upward and inward thereto, and depending plates secured to the inner sides of the
20 said supports, their upper ends abutting against the lower edge of the vertical portions of the said walls, whereby a tight joint is formed and the lower ends extending to or below the fire box, substantially as specified. 25

In testimony whereof I do affix my signature in presence of two witnesses.

CHAUNCEY C. ALFRED.

Witnesses:

GILBERT A. DOW,

WILLIAM E. WELLER.