(No Model.)

H. O. AMES.

Evaporating Pan.

No. 235,613. Patented Dec. 21, 1880.

Fig. 1.

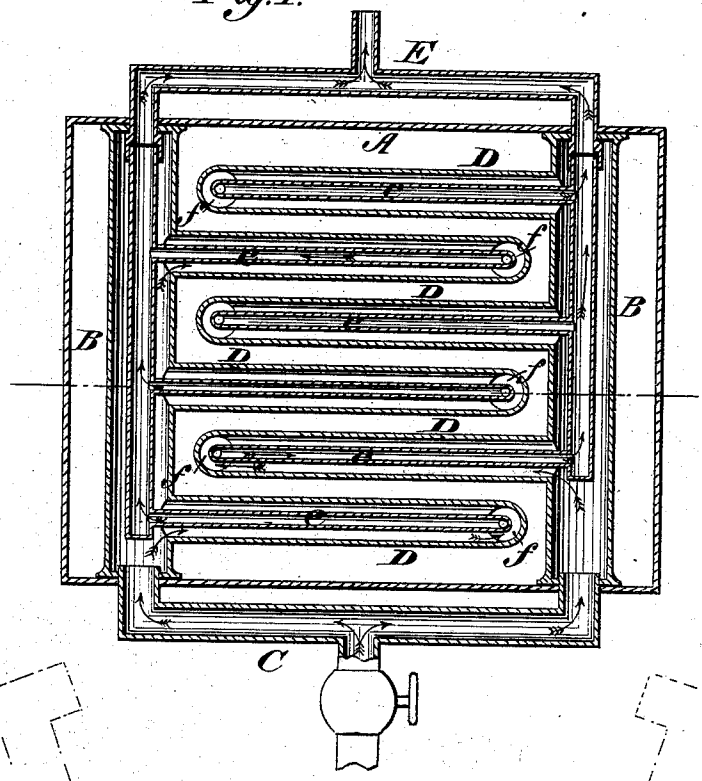
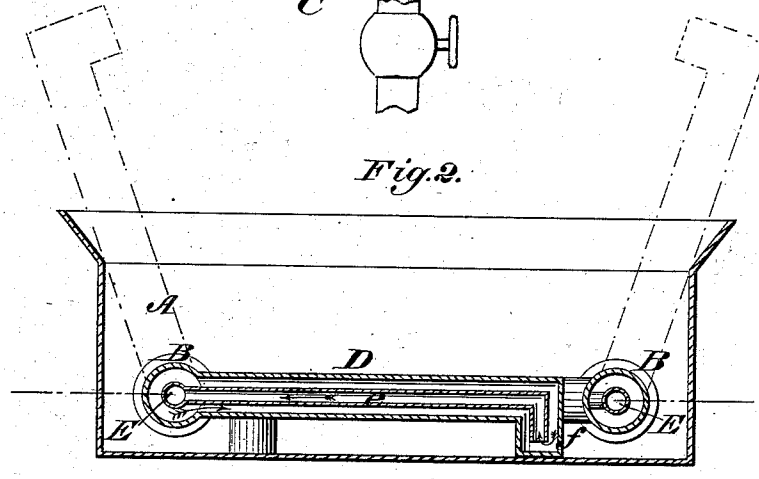


Fig. 2.



WITNESSES:

Donn S. Twitchell.

C. Sedgwick

INVENTOR:

H. O. Ames

BY Munn & Co

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HUGH O. AMES, OF NEW ORLEANS, LOUISIANA.

EVAPORATING-PAN.

SPECIFICATION forming part of Letters Patent No. 235,613, dated December 21, 1880.

Application filed March 5, 1880. (No model.)

To all whom it may concern:

Be it known that I, HUGH O. AMES, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Improvement in Evaporating-Pans, of which the following is a specification.

My improvements relate to evaporating-pans wherein steam-pipes are fitted to form a horizontal grate which may be turned upward on its axis to permit cleaning of the pans; and the object of my invention is to obtain an equal diffusion of temperature throughout the pan, so that the whole body of sirup shall be brought to a striking-point at once, and also to prevent leaks by unequal expansion of the steam and water pipes.

My invention consists in an evaporating-pan wherein the pipes for condensed water are fitted within the steam-pipes and detached therefrom, whereby the difference in expansion does not tend to open the joints, and the steam-pipes are arranged to supply steam equally from both sides of the pan, which construction will be more particularly explained with reference to the accompanying drawings, wherein—

Figure 1 is a sectional plan view of an evaporating-pan fitted with my improvements, and Fig. 2 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

A is an evaporating-pan of usual size and shape. B B are main steam or stock pipes, fitted lengthwise of the pan at opposite sides thereof. C is the pipe for supplying steam to both pipes B, and fitted with a valve for regulating the flow. D are the evaporating-pipes connected to pipes B, and extending, alternately, in the same plane from either side to form a horizontal grate within the pan. E is the condensed-water pipe, formed in two branches, that extend into the pipes B B at the ends opposite to where the steam-pipe C enters, and fitted with branches *e*, that extend into the evaporating-pipes D and terminate at the outer ends thereof.

The water-pipes E and the ends of steam-pipe C serve as axes on which the pipes B are fitted to turn, the joint being made steam-tight, by which construction the pipes B, with the attached pipes D, may be turned upward for facility of cleaning the pan. The closed outer end of each pipe D is turned downward to rest on the bottom of pan A, and to form pockets *f* for accumulation of condensed water, and the open ends of the pipes *e* are extended down into the said pockets, so that the water will flow into the pipes *e*. The steam enters by pipe C, and, as shown by the arrows, passes to both pipes B and the pipes D, the fresh steam being thus supplied at both sides of the pan and equally throughout the same. The condensed water passes, by the interior pipe, *e*, in each pipe C, to the discharge-pipe E.

It will be seen that the water-pipes *e* E are separate from the steam-pipes, and are not jointed to or a part of the same. The variations in expansion and contraction can therefore take place without opening joints or causing leakage, which leakage has heretofore been the great objection to this class of pans.

I am aware that it is not new in evaporating-pans to use two independent series of swinging pipes, each on the sides of the pan and connected by tubes projecting into the pan; but

What I claim as new is—

1. In evaporating-pans, the steam-pipes B B, fitted at opposite sides of the pan, the steam-supply pipe C, entering the pipes B, the heating-pipes D, extending alternately from the opposite sides of the pan in the same plane from pipes B, and formed at their outer ends with pockets *f*, and the inner pipes, E *e*, extending through the steam and heating pipes, combined together and with the pan A, substantially as shown and described.

2. In evaporating-pans, the combination, with the steam-pipes, forming a grate within the pan of the interior separate pipes, E *e*, for discharge of condensed water, such pipes extending throughout the steam-pipes and through the side of the pan to a common discharge-pipe, substantially as shown and described.

HUGH OSWALD AMES.

Witnesses:
ANDREW HERO, Jr.,
D. P. J. CRAVEN.