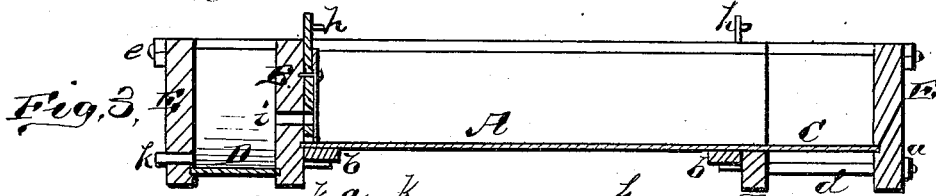
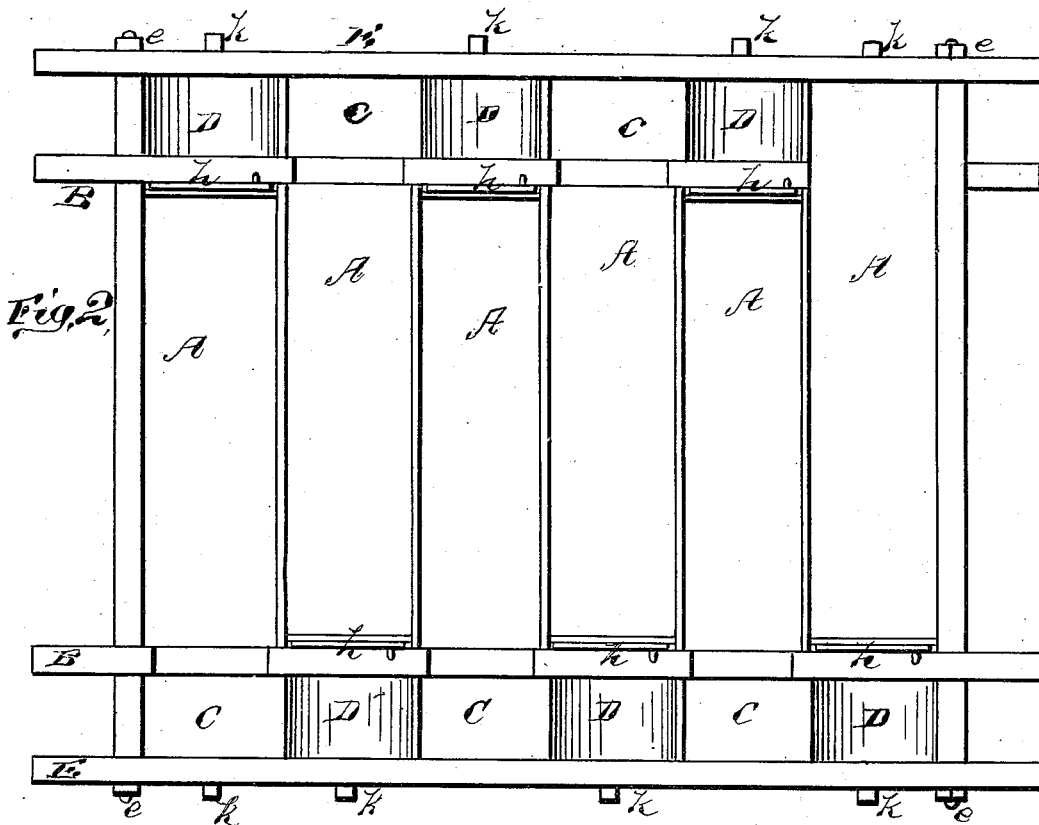
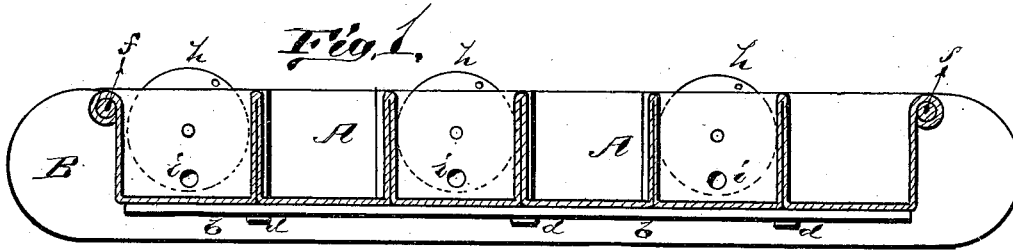


J. W. MILLER.  
EVAPORATING-PAN.

No. 193,539.

Patented July 24, 1877.



WITNESSES  
A. Bates  
George E. Upham

INVENTOR.  
James W. Miller  
Fig. 5, Gilmore, Smith & Co.  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JAMES W. MILLER, OF SCOTLAND, INDIANA.

## IMPROVEMENT IN EVAPORATING-PANS.

Specification forming part of Letters Patent No. **193,539**, dated July 24, 1877; application filed May 19, 1877.

*To all whom it may concern:*

Be it known that I, JAMES W. MILLER, of Scotland, in the county of Greene and State of Indiana, have invented a new and valuable Improvement in Evaporating-Pans; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical central sectional view of my evaporating-pan. Fig. 2 is a plan view of the same. Fig. 3 is a transverse sectional view, and Figs. 4 and 5 are details.

The nature of my invention consists in the construction and arrangement of an evaporating-pan for molasses, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

My evaporating-pan is composed of a series of pans, A A, made of one continuous sheet of metal, and of any suitable form and size, the said sheet metal being held between two parallel side pieces, B B, as shown.

The pans A are open alternately at opposite ends, and each pan thus at one end opens into a passage, C, leading into a sink, D, which latter is directly opposite the closed end of the adjacent pan.

The passages C and sinks D, along each side of the evaporating-pan, are formed of one continuous piece of sheet metal, held between the side piece B and an outer side piece, E, by the following means: A metal bar, *b*, is riveted to the bottom of the pan A, close to the inner side of the side piece B. From this metal bar extend a series of bolts, *d*, through the sides B E, and nuts *a* are screwed up tightly on the ends of the bolts *d*.

At each end of the evaporating-pan is a

bolt, *f*, passing through all the pieces B E, and fastened by nuts *e*, as shown.

Each pan A communicates with the sink D, at the end thereof, through a passage, *i*, which may be opened and closed at pleasure by means of a rotary valve, *h*, and through the side piece E each sink D may be drained, through an outlet, *k*, ordinarily closed by a plug.

The sinks or side pans D, in which the sirup accumulates through from one pan to the other, catch all the scum and dirt as it is thrown from the main pans to the outside, where it collects and remains until drawn off by means of the drains at the sides. The sinks and drains *k* are also of importance in cleaning from time to time.

The check-valves *h* are used in changing "crops" or charge of juice in commencing and finishing up. It is not necessary to stop boiling to change from one crop to another; and in commencing and finishing the operator can use water to precede or succeed the juice, and it can be regulated to run off the molasses continually, if desired.

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

1. The combination of the pan A, sink D, communicating passages *i*, and valve *h*, substantially as and for the purposes herein set forth.

2. The combination of the pans A, passages C, sinks D, valves *h*, and drains *k*, all substantially as and for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES WILLIAMS MILLER.

Witnesses:

R. J. LAUGHLIN,  
WILLIAM T. O'DONOLD.