J. Thomas,

Evaporating Pan.

No. 107,124. Patented Sept. 6. 1870.

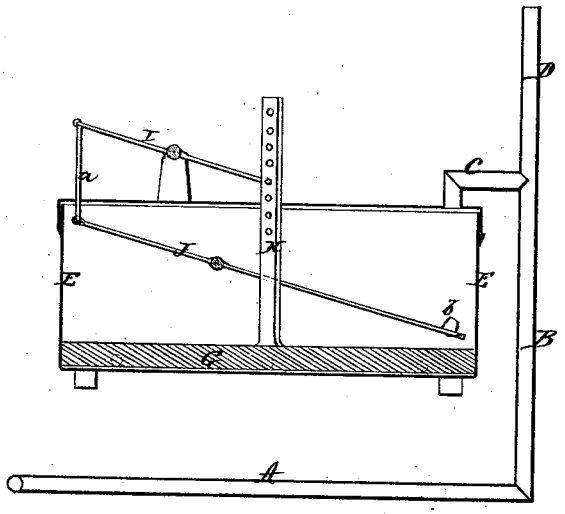

Fig. 1.

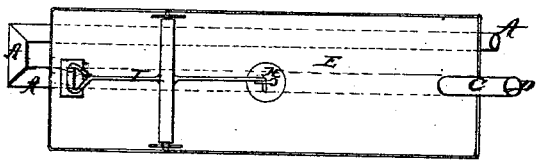

Fig. 2.

Witnesses:

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Per

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United States Patent Office.

JOHN THOMAS, OF HARDWICK, VERMONT.

Letters Patent No. 107,124, *dated September* 6, 1870.

IMPROVEMENT IN DEVICE TO REGULATE THE FLOW OF SAP TO EVAPORATING-PANS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN THOMAS, of Hardwick, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Sap-Regulators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a device for regulating the amount of sap passing into the pan while boiling.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a longitudinal vertical section, and

Figure 2, a plan view of my device.

A A represent the tubes, or rather a part of the tubes now in use passing under the sap-pan, wherein the sap is heated before it reaches the pan, thus saving the time of heating the sap in the pan.

In the machines now in use, the tube B, leading from the heating-tubes A A, comes up by the side of the pan, and the knee marked C is put onto the top of the tube B, carrying the sap over into the pan. But by this arrangement it is impossible to regulate the amount of sap passing into the pan through the knee C, on account of confining the steam.

To obviate this difficulty I extend the tube B above the knee C, by means of the tube D, as high as the top in the feed-tub or reservoir.

By this addition, the flow of the sap may be entirely stopped at the end of the knee or tube C, and the steam can pass up out of tube D, and pass off.

The sap-regulator consists of a tin box, E, of any suitable size, the height being in accordance with the depth of the sap-pan used, and is designed to rest or sit on the bottom of the pan.

Inside of the box E is a drum, G, which is air-tight, and provided in its center with an upright standard, H, to which is pivoted a lever, I, which is further pivoted to a smaller standard or ear on the top of the lid of the box E.

The other end of the lever is, by a rod, *a*, connected with another lever, J, pivoted within the box, and provided at its opposite end with a cork, *b*, as shown in fig. 1.

The box E, being perforated around its sides near the bottom, it follows that, as the sap rises in the pan, it raises the air-tight drum G inside, and raises the cork *b* up to the place where the tube C enters, and through which the sap is to pass into the pan, or really into the regulator, and thence into the pan.

The cork *b* is to be so adjusted as to fit into the tube C, and, when the sap gets to a certain height, this tube will be entirely closed by the cork.

The lever I may be raised and lowered at will on the standard H, thereby regulating the height to which the sap in the pan must rise before the knee or tube C becomes closed.

Having thus fully described my invention,

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

1. The tube D, extended above the knee C, substantially for the purpose described.

2. The levers I J, in combination with standard H, said standard being provided with adjusting holes, and all arranged to operate substantially as set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

JOHN THOMAS.

Witnesses:

R. F. PARKER,

G. W. PENNOCK.