

(No Model.)

J. S. McCULLOUGH.
COVER FOR EVAPORATING PANS.

No. 566,005.

Patented Aug. 18, 1896.

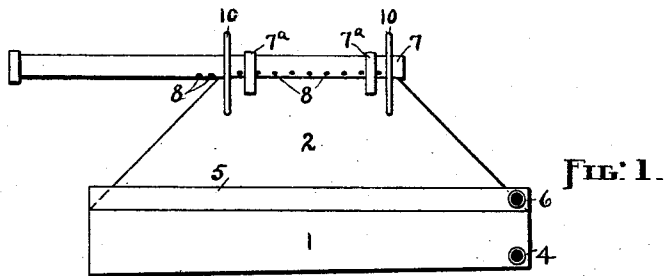


FIG. 1.

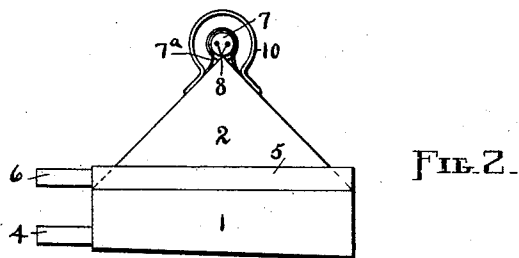


FIG. 2.

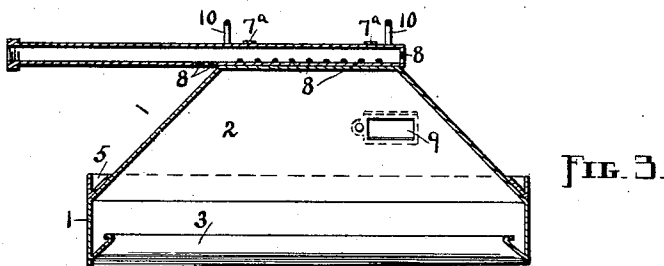


FIG. 3.

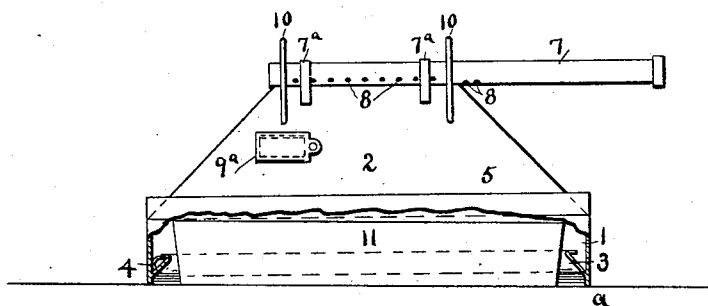


FIG. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES S. McCULLOUGH, OF POLAND, OHIO, ASSIGNOR OF ONE-HALF TO
J. H. DAVIDSON, OF SAME PLACE.

COVER FOR EVAPORATING-PANS.

SPECIFICATION forming part of Letters Patent No. 566,005, dated August 18, 1896.

Application filed April 21, 1896. Serial No. 588,507. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. McCULLOUGH, a citizen of the United States, residing at Poland, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Covers for Sap-Pans, of which the following is a full, clear, and exact description.

My invention relates to covers for inclosing pans in which maple-sap is boiled or condensed; and it consists of the peculiar device hereinafter fully described and especially claimed.

The object of my improvement is to provide a cover of the class designated above which accelerates the ebullition of the sap with a decreased amount of fuel and at the same time protects the contents of the pan or receptacle containing the boiling liquid from smoke, leaves, and other foreign substances. My cover is simple and inexpensive in construction and far more serviceable than the cover commonly used, which causes the vapor arising from the boiling liquid to fall back into the same, where it must be again heated and driven off.

That my invention may be seen and fully understood by others, reference will be had to the following specification and annexed drawings, forming a part thereof, in which—

Figure 1 is a side view of my cover; Fig. 2, an end view of said cover; Fig. 3, a longitudinal vertical section of the same, and Fig. 4 a side view partially broken away to show the pan inside.

Similar figures of reference designate like parts in the drawings and specification.

The cover shown in the drawings consists of the rectangular vertical base 1 and the top 2, shaped like a hip-roof. The base 1 is open at the bottom and the top 2 closed. Sheet metal is preferably used in constructing this cover. The trough 3 surrounds the bottom of the base 1 on the inside and has its outlet through the pipe 4 at one corner of said base. The trough 5 extends around the outside of the cover at or just above the junction of the top 2 with the base 1, and said trough opens through the pipe 6, which is above the pipe 4. The pipe 7, provided with the end and under-side perforations 8, is attached by the

straps 7^a 7^a to the ridge of the top 2, and may be connected by a suitable supply-pipe (not shown) to any convenient water tank or reservoir. The opening 9 in one side of the top 2 is for the introduction of sap or other liquid into the pan 11 beneath. The corner *a* is deeper than the base 1 at any other point, and the diagonally opposite corner, where the pipes 4 and 6 are located, is the shortest. Hence the troughs 3 and 5 pitch downward to said pipes, thereby facilitating the escape of any liquid contained in said troughs. The rings 10 10 serve as handles for moving the cover.

My cover is used with the ordinary shallow sap-pan 11, which is heated from beneath, the two being of suitable size to allow the former to fit freely over the latter. The vapor emanating from the heated contents of the pan 11 rises to the top 2, against which it impinges, condenses, and flows down the inside of the sloping sides of said top into the trough 3 to escape through the pipe 4. Once eliminated the vapor does not again enter the pan 11 to be revaporized at the expense of heat energy, but effects still further economy in fuel by heating the interior of the top 2, thus subjecting the liquid in said pan to an upper as well as an under heat. It will be readily understood from the foregoing description how extensively this device increases the capacity of the heated pan 11 to free its contents from water, and this effect is greatly enhanced by discharging cold water through the perforated pipe 7 over the outside of the top 2. The water from the pipe 7 chills the top 2 before reaching the trough 5 and passing out through the pipe 6 augments the condensation of the steam, which comes in contact with the inside of said top from the pan 11.

I do not wish to confine myself to the exact shape of cover herein shown and described, since it may be circular or have more or less than four angles at the base without departing from the nature of my invention. The cover is applicable to other utensils employed for boiling purposes besides sap-pans and may be used in connection therewith.

After the pan 11 and the cover are in place sap may be kept constantly flowing into said pan through the opening 9, or said opening

may be closed by means of the shutter 9^a.
The opening 9 may be located at any convenient place in the top 2.

What I claim as my invention, and desire
5 to secure by Letters Patent, is—

A cover for evaporating-pans consisting of
an open base having an interior trough with
an outlet, a closed top, a perforated pipe sur-
mounting said top, and an exterior trough at

or near the junction of said base and top, sub- 10
stantially as and for the purpose set forth.

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

JAMES S. McCULLOUGH.

Witnesses:

N. B. HOLTON,
J. H. DAVIDSON.