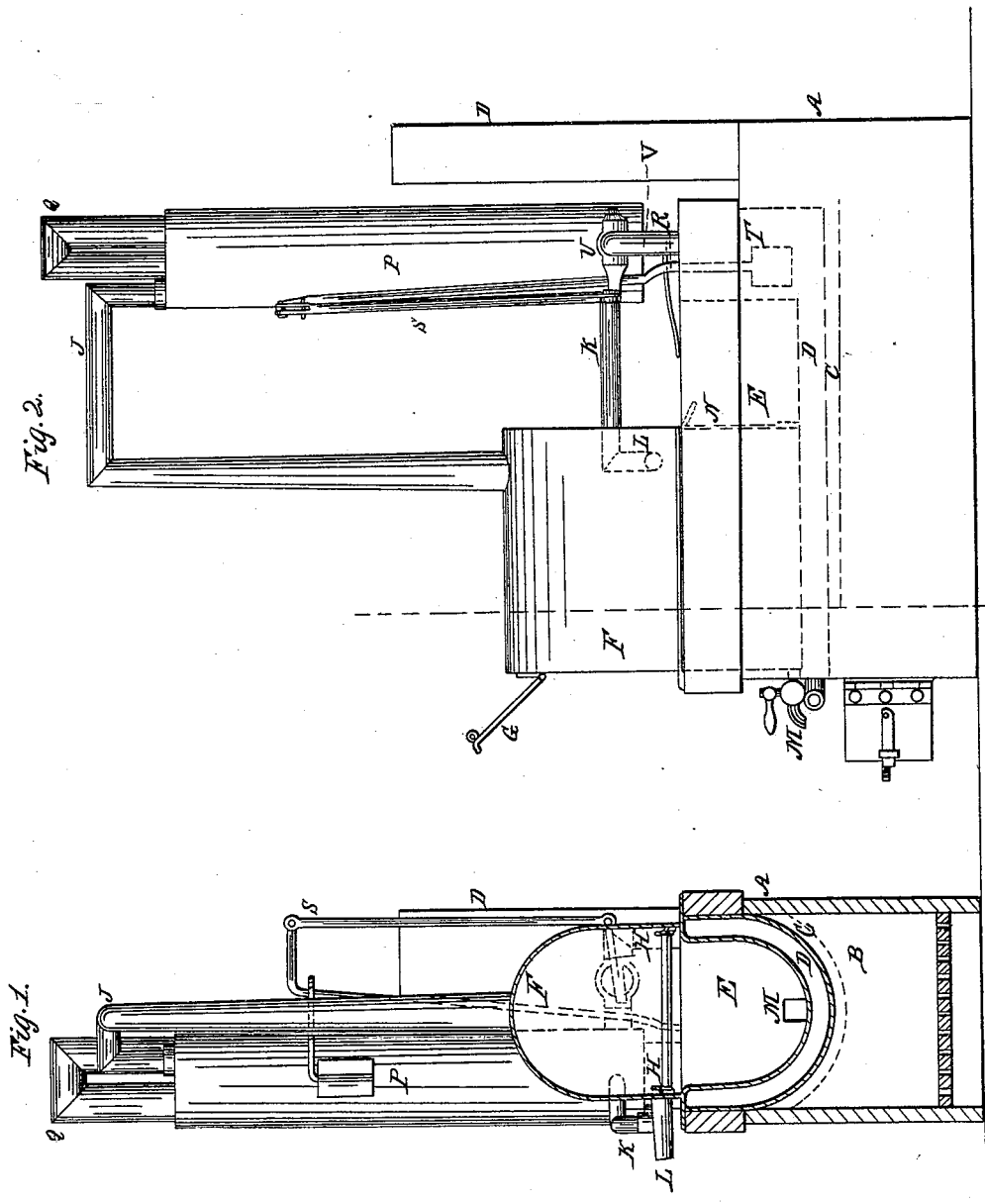


G. W. SAYRE.

Manufacture of Molasses.

No. 53,887.

Patented April 10, 1866.



53,887

Witnesses:

Franklin Stuart
C. Rade

Inventor:

George W. Sayre

UNITED STATES PATENT OFFICE.

GEORGE W. SAYRE, OF PISGAH, OHIO.

IMPROVEMENT IN THE MANUFACTURE OF MOLASSES.

Specification forming part of Letters Patent No. 53,887, dated April 10, 1866; antedated March 25, 1866.

To all whom it may concern:

Be it known that I, GEORGE W. SAYRE, of Pisgah, Butler county, State of Ohio, have invented an Improved Mode of Manufacturing Molasses, Sugar, &c., from Sorghum; and I do hereby declare the following to be an exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the arrangement, construction, and combination of the steam-boiler, sirup-pan, dome, condensing-pipes, and water-tank, as herein described.

Figure 1 represents a front elevation; Fig. 2, a side elevation.

A is the foundation, of mason-work, or of sheet-iron when intended to be smaller in size, as a portable machine. B is the furnace with its flue and chimney.

C D is the semicircular steam-boiler, extending the whole length of the furnace, and is concave-shaped, so that the semicircular sirup-pan or sirup-boiler E fits and corresponds with the shape of the steam-boiler, a boiler-iron bottom dividing the steam-boiler from the sirup-pan—that is, the top of the steam-boiler is the bottom of the sirup-pan.

The front part of the sirup-pan has a dome, F, with a door, G, above. The door G is for the purpose of watching the boiling of the sirup, and also for the purpose of cleaning out the pan after the boiling is completed and the sirup or molasses is drawn off. On each side of this dome there is a trough, H, to collect the steam or spirit of the boiling sirup that may condense along its top and sides.

The pipe carries off the steam or spirit from the boiling sirup to its condensing-pipe or worm J, thence through its branch pipe K to the discharge-pipe L of the dome. The spirit that is thus carried off from the dome of the sirup-pan E and condensed and discharged at

pipe L is a strongly-scented or aromatic liquor, which, by my arrangement and apparatus, I purpose to collect and preserve.

M is the front faucet for drawing off the molasses. The rear end of the boiling-pan is open for the purpose of putting in the raw juice and skimming of the scum at the top during the process of boiling, with an aperture and sliding door, N, in the partition between the front and back part of the pan.

P is the water tank or reservoir to supply the steam-boiler, and has a condensing-pipe, Q, extending up through it, and a safety-valve, R, below.

The upright S has a buoy, T, below, that floats upon the top of the water of the boiler, so that as the water of the boiler lowers or diminishes the buoy also lowers and opens the valve U, and the water from the tank runs through the pipe V and keeps the steam-boiler always supplied with water.

I also purpose using the steam from the steam-boiler to apply to an engine for cutting and grinding the cane or for other purposes by merely attaching a branch pipe from the boiler to the engine.

During the process of boiling the sirup I stir in soda, sulphate of lime, and pulverized alum in equal parts, or in such quantities as may be required for the purpose of clarifying the sirup.

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

The arrangement, construction, and combination of the steam-boiler D, sirup-pan E, and dome F with condensing-pipes H, J, and K and water-tank P, as herein described, and for the purposes set forth.

GEORGE W. SAYRE.

Witnesses:

J. FRANKLIN REIGART,
EDM. F. BROWN.