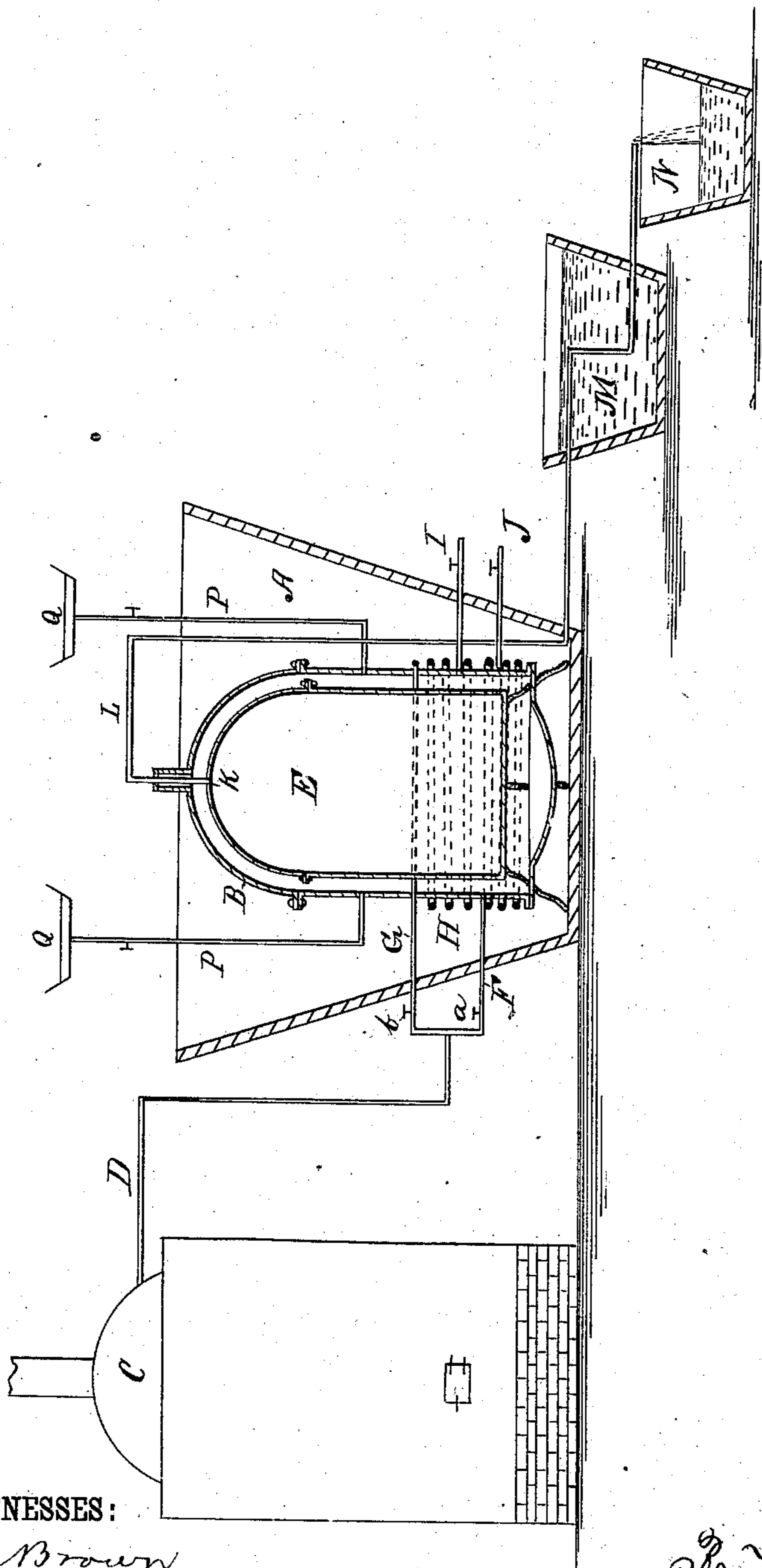


(No Model.)

R. W. TURNER.
STEAM HEATED EVAPORATOR.

No. 292,768.

Patented Jan. 29, 1884.



WITNESSES:

H. B. Brown
A. G. Lyne.

INVENTOR:

R. W. Turner
BY *Munn & Co.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT W. TURNER, OF THORNTON, TEXAS.

STEAM-HEATED EVAPORATOR.

SPECIFICATION forming part of Letters Patent No. 292,768, dated January 29, 1884.

Application filed June 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. TURNER, of Thornton, in the county of Limestone and State of Texas, have invented a new and useful Improvement in Steam-Heated Evaporators, of which the following is a full, clear, and exact description, reference being had to the annexed drawing, forming part of this specification.

10 This invention relates to a steam-heated evaporator for the reduction of cane-juice to sirup and for other purposes; and the invention consists of the novel construction hereinafter described and claimed.

15 The drawing is a sectional elevation of my improved evaporator.

A indicates a vat for holding cane-juice, in which vat is supported on suitable legs a steam-chest, B, adapted to be supplied with steam from the generator C by means of the pipe D.

25 Within the chest B is supported a receptacle, E, so arranged that it shall be completely enveloped in the steam of chest B. The pipe D is provided with two branches, F G, the former of which, when the cock *a* is open, will admit steam into the chest B, and the latter, when the cock *b* is open and the cock *a* is closed, will allow steam to pass down into the coil H, which surrounds the lower part of the chest B.

I is a cock for letting off steam from the chest, and J is a cock for letting off steam from the coil H.

35 The substance to be boiled is placed in the receptacle E by first removing the tops of the chest B and said receptacle. These tops are

to be secured in place by means of screws or bolts, to make a strong steam-tight joint. As the vapor rises from the substance in the receptacle E it will be allowed to pass through the neck K of the receptacle, which extends through the top of the chest, and from thence into the pipe L, which is extended down through the vat A and through a vat, M, which is filled with cold water, and as it becomes condensed by the effect of the cold water it is discharged in liquid form into the receptacle N. In this manner the extract of any substance may be obtained, while the same heat serves to boil down the cane-juice in the vat.

The receptacle or retort E may be adapted to be emptied by being blown out by steam and refilled by means of a pump.

55 P P represent pipes for conducting steam from the chest B to the heaters Q when it is desired to utilize the steam for cooking.

What I claim is—

The combination of the receptacle E, the chest B, inclosing the receptacle, the coil H, surrounding the chest, the vat A, containing the chest and coil, the pipe D, having branches F G, communicating, respectively, with chest B and coil H, and cocks *a b*, for controlling the passage of steam to the chest and coil, and the pipe L, for condensing the vapor from the receptacle, substantially as shown and described.

ROBT. W. TURNER.

Witnesses:

J. L. WHITE,
HAMPTON STEELE.