

903,520.

Patented Nov. 10, 1908.



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UNITED STATES PATENT OFFICE.

THOMAS W. WADE, OF SPRINGFIELD, MISSOURI.

COOKER AND EVAPORATOR.

No. 903,520.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS W. WADE, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented new and useful Improvements in Cookers and Evaporators, of which the following is a specification.

My invention relates to improvements in cookers and evaporators. More especially to that class of evaporators and cookers which applies pressure of steam or liquid to the articles to be cooked, or evaporated.

My invention consists in having a plurality of retorts separably connected with each other, and each separably connected with two water reservoirs as hereinafter more specifically described and set forth in the claim.

Figure 1, is a view in elevation of the entire device a part of the furnace walls being cut away. Fig. 2, is a vertical cross section on the line $x x$ of Fig. 1 showing a kettle suspended inside of the retort. Fig. 3, is a top view of one of the retorts showing the cover fastenings.

Similar letters of reference indicate corresponding parts in the several figures.

A, represents an ordinary furnace made any desired size and shape which receives the frame work for the retorts S , S^2 and S^3 .

B is a support and B^2 is a bridge wall in the furnace.

C is the grate-bar and D are the doors of the furnace.

F represents a blow off pipe or water pipe connecting the retorts S , S^2 and S^3 . Said pipe is preferably placed below the retorts for completely cleaning the same by opening the valve F^2 on the outside of the furnace.

J is a steam pipe connecting all of the retorts and also the water gage G which also connects with the lower water or blow off pipe F. The steam pipe J at the outer end is also connected with the water tanks or reservoirs Q and Q^2 by pipe P. This connecting pipe P is provided with suitable cut off valves O so that water can be taken from either tank. Surplus steam can be connected through the steam pipes K and P to tank Q and steam can be connected from one of the retorts into another by means of this same connection of the pipe K with the different retorts. One of the tanks of water can be kept cool for cooling either of the retorts for changing its contents and the other tank kept hot by the surplus steam from the retorts for supplying

either of the retorts with hot water when desired to reheat the retort taking hot water instead of cold into the retort, thus saving steam, heat, time and fuel in reheating one of the retorts and also in taking extra water from the hot tank instead of the cold.

L represents a safety valve and L^2 a steam gage on each of the retorts.

L^3 a thermometer for determining the heat or pressure of the contents of the retorts.

M is a steam tight cover for each of the retorts. It is provided with a suitable gasket M^2 . Said cover is secured firmly and quickly in position by means of a set screw and lever N^2 which turns down on the handles N; for this purpose a washer N^3 may be used on the handles. Other means of securing the cover or steam tight lids may be used but I prefer the one just described. This steam tight cover is used when we cook or process vegetables or other things in the retort.

The can containing the vegetables, fruit or other things are placed in baskets and the baskets are supported upon a projecting rim T which passes around in the inside of each retort at or above the water line. When evaporating syrup or other substances I use a vessel, W, set inside of the retort with a space for steam below and on all sides and at the top it is made steam tight, preferably by means of a gasket M^2 placed on the upper edge of the retort and by the use of clamps Y the vessel is secured steam tight to the top of the retort. This leaves the suspended vessel W open at the top to evaporate its contents which is facilitated by the pressure of steam on its bottom and sides.

R represents the smoke stack of the furnace. In each of the retorts S may be placed or suspended a kettle, basket or other receptacle for the fruit or vegetables to be cooked or evaporated as above described. For the purpose of increasing heat in each of the retorts I have placed pipes E below each of the retorts which extend down into the furnace, circulating the water of the retorts through the pipes and the pipes being in the furnace giving it great steam producing power for increasing the steam in the retorts and by means of the safety valve L any explosion is prevented. By my construction either of the retorts may be shut off from the others and from the water tanks when desired, and connected with the cold water tank for cooling down the retorts when desired to be opened. By this means I can have several retorts and

open either one of them for changing its contents at any time and disconnect from all the others and as soon as the change is made of the contents it can be again connected with the others ready for another process, and by opening steam valves the steam is immediately equalized.

The pipe P which extends from the retorts to the water tanks is provided with cutoff valves O so that the steam can be put into tank Q at the top through the pipe P² for heating the water in tank Q and hot water can be taken from said tank into either of the retorts.

In operation the fruit to be evaporated or cooked is placed in the retorts S, S² and S³. The water is heated by the furnace and the steam therefrom passes around the receptacle to heat and cook the contents thereof. After the fruit has been properly cooked one of the retorts is cut off from the others and cold water is admitted thereto to cool the contents of the receptacle. The top is then removed and the fruit is removed from the retort without in any way interfering with the cooking of the fruit in the other retorts.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States is:

In a cooking device, the combination with a plurality of retorts of a common steam pipe connecting all of said retorts, valves in said pipe for cutting off each of said retorts from the others, a common cold water supply pipe leading to each of said retorts, valves in said last named pipe for controlling the passage of water to each of said retorts independently of the others, a receptacle located within each of the retorts and spaced therefrom to permit the passage of steam or water therearound a cover for said receptacle, a plurality of handles for said receptacle adapted to overlie the cover, and a set screw and lever, said lever being adapted to be screwed down upon said handles to thereby lock said cover in position.

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

THOMAS W. WADE.

Witnesses:

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