

(No Model.)

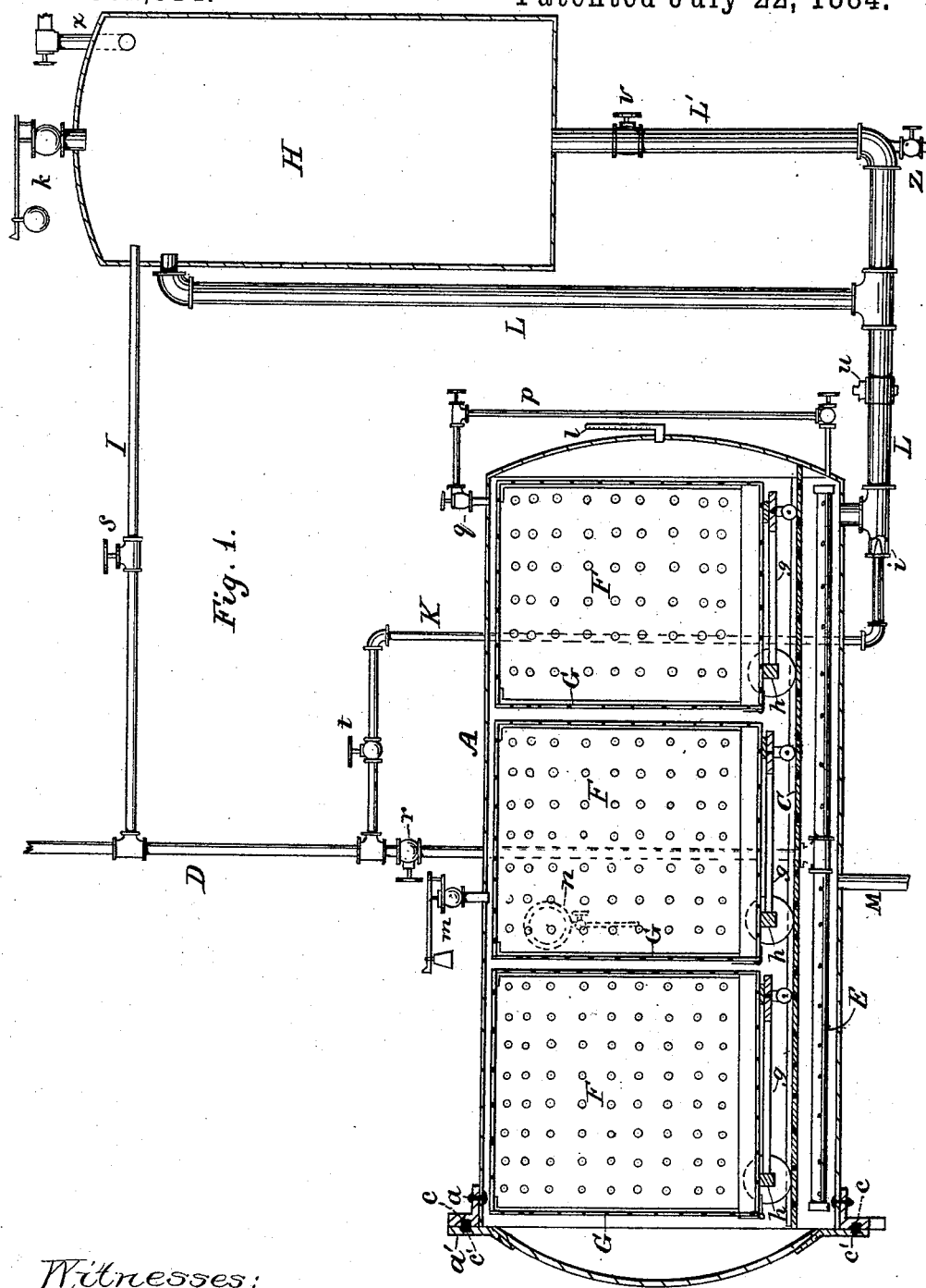
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J. BAKER.

### HORIZONTAL PROCESS KETTLE.

No. 302,314.

Patented July 22, 1884.



Witnesses:

M. A. Rosenbaum  
G. B. Towles

*Inventor:*  
*John Baker*  
*By M. Purvis*  
*Atty*

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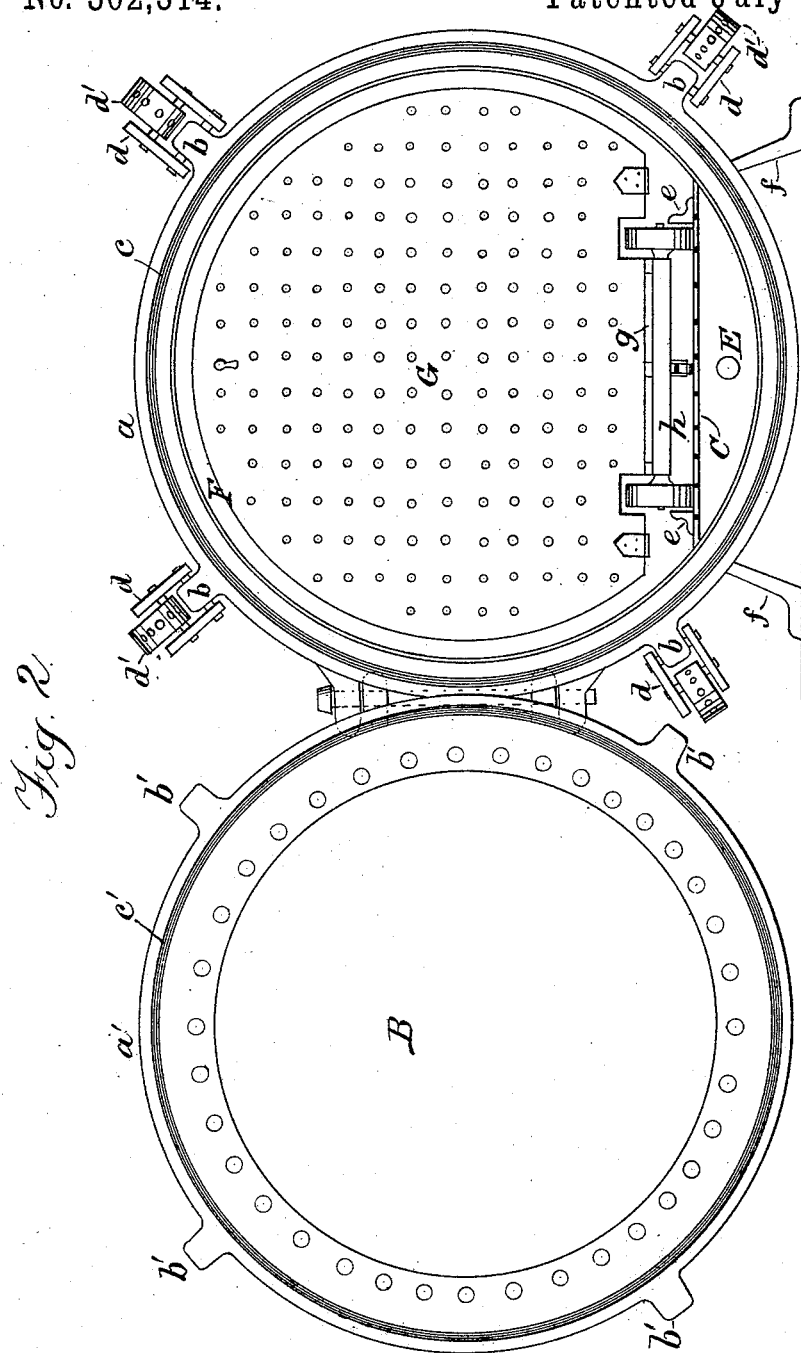
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# UNITED STATES PATENT OFFICE.

JOHN BAKER, OF MUSCATINE, IOWA.

## HORIZONTAL PROCESS-KETTLE.

SPECIFICATION forming part of Letters Patent No. 302,314, dated July 22, 1884.

Application filed October 24, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BAKER, a citizen of the United States of America, residing at Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Horizontal Process-Kettles Used in Cooking Canned Fruit and other Articles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to process-kettles used in preparing fruit and other articles of food in canning the same; and it consists in certain improvements in the construction of such process-kettles, as hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal section of a retort or process-kettle having my improvements. Fig. 2 is a front end view of the process-kettle, showing the same open.

A designates the body or shell of a cylindrical process-kettle constructed of wrought-iron and placed in a horizontal position, as shown.

To the front or open end of the shell A is riveted a cast-iron ring, *a*, which is provided with lugs *b*, and a hinge for a door, B, which has a corresponding cast-iron ring, *a'*, with lugs *b'* on its periphery, the opening within the ring being closed by a wrought-iron plate riveted thereto. The ring *a* has a groove, *c*, formed therein, and a similar groove, *c'*, is formed in the ring *a'* of the door, these grooves being intended to receive suitable packing for tightly closing the kettle. When the door is closed, the lugs or projections *b'* bear upon the projections *b* on the ring *a*, and the door is secured by means of the links *d*, pivoted to the lugs *b*, and carrying the eccentric rollers *d'*. The links are then turned forward over the lugs *b'*, and by means of a hand-bar inserted in one of the holes in the eccentrics they are then turned until they impinge tightly against, and thus hold firmly the lugs *b'* in the closed position, thus fastening the door. The kettle is provided with a perforated false bottom, C, within the casing A, to which it is riveted, the same being of boiler-iron and extending the entire length of the kettle. Two angle-iron bars or rails, *e*, extending the en-

tire length of the false bottom and secured thereto, form the guides or way for the wheels of the trucks with which the trays containing the cans are provided. The kettle, being circular in cross-section, has the legs *f* secured thereto to support it in position.

D is the main supply-pipe for steam or hot water, leading from the boiler and passing into the process-kettle under the false bottom C, where it connects with a perforated pipe, E, which extends longitudinally along the kettle under the false bottom. Both ends of the pipe E are closed, and the steam entering it is distributed through its perforations and rises through the perforated bottom C to all parts of the kettle.

F represents trays for containing cans of fruit, or other articles to be heated, several trays being employed in filling the kettle. As shown in the drawings, the trays conform to the interior of the kettle, and are of suitable size to be easily placed in and removed from the kettle. The casings of the trays are of perforated sheet metal, with angle-irons fastened along the corners, and they are provided with hinged doors G, which are usually secured, when closed, by locks and keys. To the bottom of each tray is secured an iron frame, *g*, having three wheels, two being on an axle, *h*, and one being connected with the frame by a pivot; and the tray is moved along on the wheels in the kettle, between the angle-irons or guides *e*.

H represents a pressure-reservoir, supported in a vertical position, the lower end being nearly on a level with the top of the process-kettle, and it is connected by a branch steam-pipe, I, with the main supply-pipe D.

K is a branch pipe, leading from the supply-pipe D to a pipe, *i*, in an elbow of the blow-off pipe L, leading from the bottom of the kettle, and connecting with the upper portion of the reservoir H, as shown. On the closed top of the reservoir H is placed a safety-valve, *k*. The kettle is also provided with a safety-valve, *m*, and a steam-gage, *n*; also, a glass water-gage, *p*, and a vacuum-valve, *q*. A thermometer to indicate temperature is usually attached to the kettle, as seen at *l*. The pipes D, I, K, and L are respectively provided with stop-cocks *r*, *s*, *t*, *u*, and *v*, for directing, as desired,

the passage of water or steam between the pressure-reservoir and the process-kettle through the several pipes. Water is introduced through a pipe into the reservoir at *x*, or at any suitable point, the water passing from thence through valve *v* and pipe *L'* into the process-kettle. When the kettle is sufficiently charged with water, all the valves and cocks are closed except *v*, which is opened, admitting steam, heating the water, and cooking the contents. This being effected valve *v* is closed and *t* and *u* are opened, and the steam, rushing through pipe *K* to pipe *L*, forces the water through pipe *L* into reservoir *H*, the jet of steam through *K* entering pipe *L* at *i* and forming a current and carrying the water with it.

It will be seen from the construction described that the water may be readily driven from the reservoir to the kettle and from the kettle to the reservoir, as desired.

If it is desired to use the process-kettle by steam alone, the reservoir and its connecting-pipes are dispensed with and connection with the reservoir shut off. A drainage-pipe, *M*, however, in such case should be provided for the kettle, the latter being tapped at some suitable point in the bottom for such purpose. A drainage-pipe for reservoir *H* is usually attached at *z*.

In my pending case No. 109,691, filed October 22, 1883, I claim in the particular combination therein set forth a process-kettle with a removable lid having rims, lugs, pivoted links, and eccentrics for fastening the

lid to the kettle, all of which devices *per se* and their particular combinations, as claimed in the said application, are hereby disclaimed in connection with this application.

I am aware that perforated bottoms and trays conformed in shape to the interior of process-kettles, and trucks constructed to run on ways in kilns used for drying fruit and grain, are not new.

I claim—

1. The combination of the horizontal kettle *A*, the trays *F*, conformed in shape to the interior of the kettle, the perforated bottom *C*, having the guides *e*, which bottom and guides are constructed and arranged to constitute a steam-distributor and a truckway, and the trucks *g*, attached to the trays and constructed to run on the bottom between the guides, substantially as and for the purposes described.

2. The combination, with the kettle *A*, having the perforated bottom *C* and perforated supply-pipe *E*, arranged under the said bottom, and connected with the induction-pipe *D*, of the elevated reservoir *H*, connected with the kettle and its induction-pipe by valved pipes adapted to supply the kettle with water and to return the water into the reservoir, substantially as and for the purposes described.

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

JOHN BAKER.

Witnesses:

CHAS. PAGE,  
C. A. WELTZ.