H. L. CUNNINGHAM.

COOKING AND CANNING TANK.

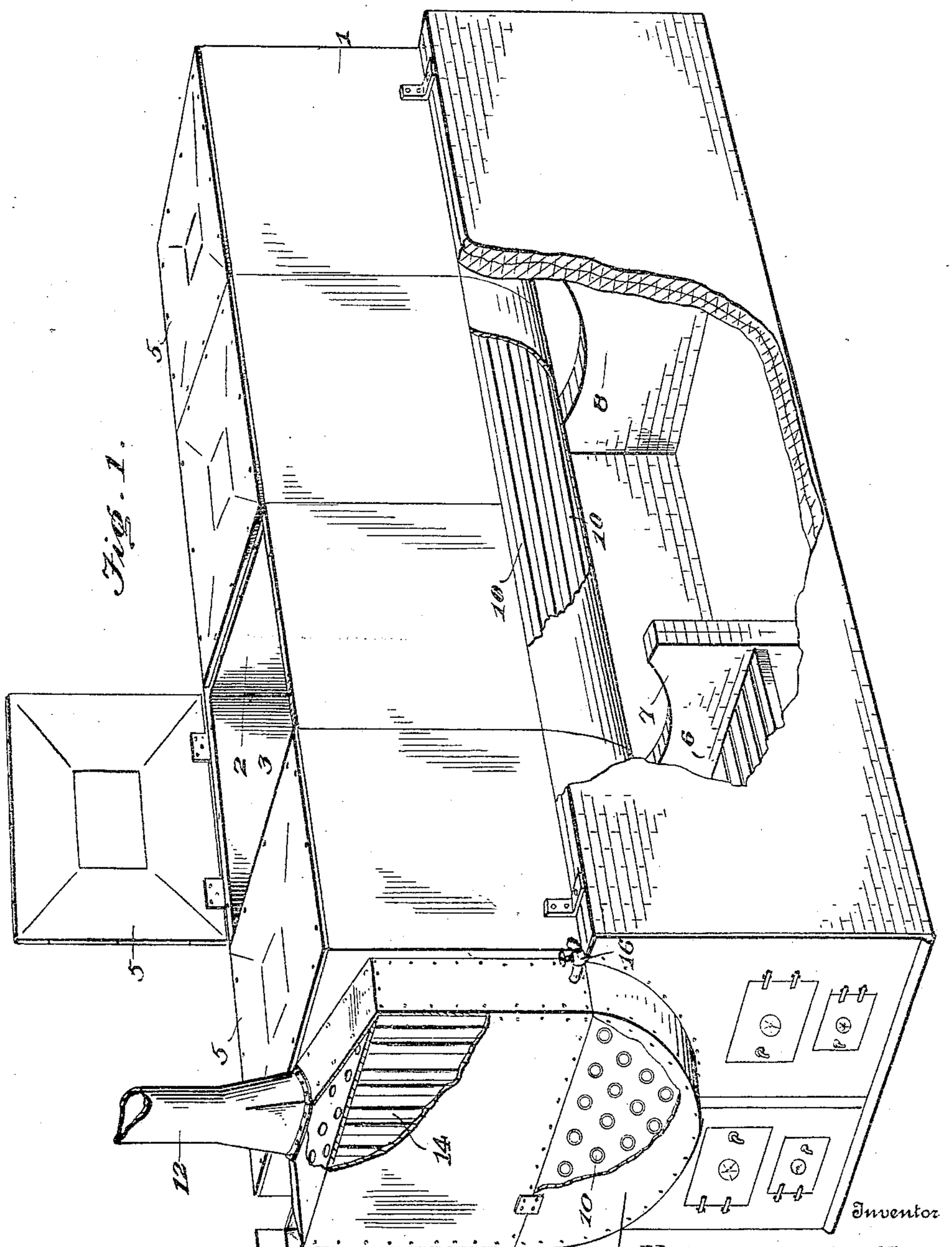
APPLICATION FILED OCT. 28, 1907.

923,339.

Patented June 1, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

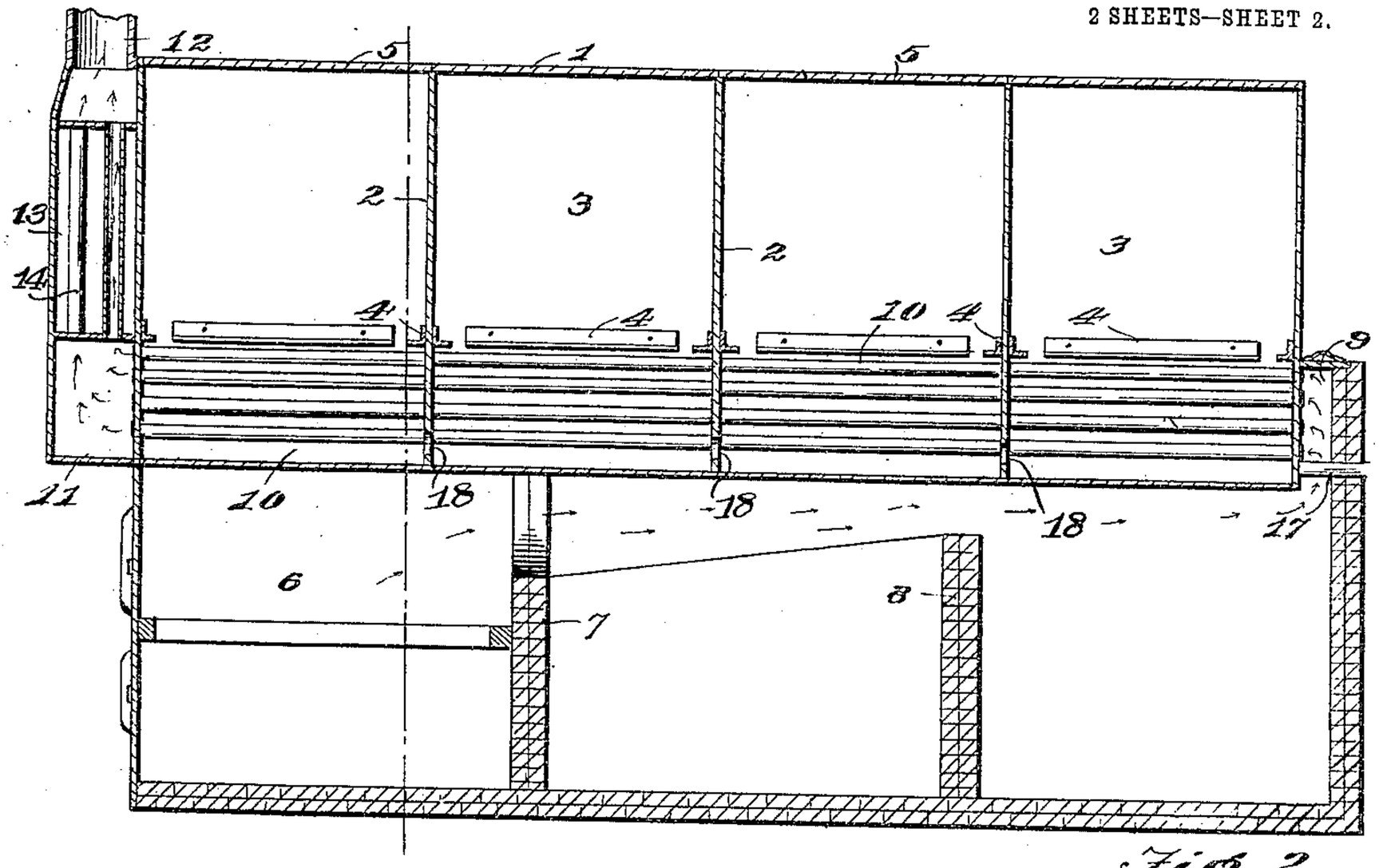

Fig. 2.

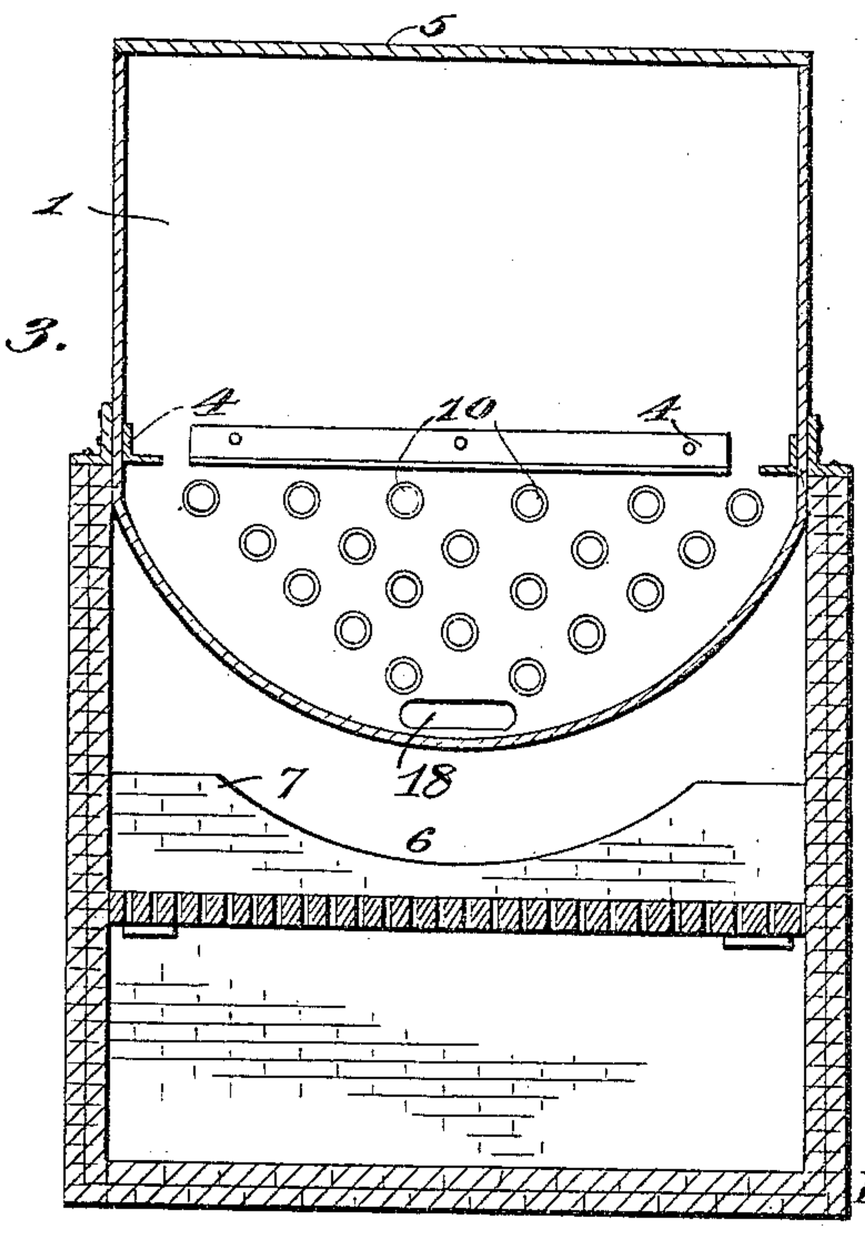

Fig. 3.

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UNITED STATES PATENT OFFICE.

HUGH LAWSON CUNNINGHAM, OF SPRINGFIELD, MISSOURI.

COOKING AND CANNING TANK.

No. 923,339. Specification of Letters Patent. Patented June 1, 1909.

Application filed October 28, 1907. Serial No. 399,613.

To all whom it may concern:

Be it known that I, HUGH L. CUNNINGHAM, a citizen of the United States, residing at Springfield, in the county of Green and State of Missouri, have invented certain new and useful Improvements in Cooking and Canning Tanks, of which the following is a specification.

The present invention provides a novel boiler for scalding, cooking or otherwise preparing vegetables, fruits or the like for canning and has for its object to economize in the consumption of fuel and to lessen the work as compared with that required to be expended with apparatus now in vogue.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a perspective view of a boiler embodying the invention, parts being broken away and having one of the covers of a compartment raised. Fig. 2 is a vertical central longitudinal section of the boiler. Fig. 3 is a transverse section on the line *x*—*x* of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The boiler is set in brick work or masonry and may be of any capacity and is long and narrow and arranged horizontally, its bottom being rounded in transverse section. The boiler 1 is subdivided by vertical partitions 2 into a series of compartments 3, rests 4 being provided about in line with the top of the rounded bottom to support tanks or other receptacles containing the articles to be scalded or cooked. Covers 5 close the respective compartments 3 and are preferably hinged so as to be raised from one side. The boiler and adjunctive parts are preferably constructed of boiler plate, the several parts being riveted or bolted at their points of juncture. The rounded bottom portion of the boiler is inclosed by the brick work or masonry, whereas the body portion is preferably exposed. The furnace 6 is located beneath the front portion of the boiler and may be of any construction. A space is formed between the bottom of the boiler and the bridge wall 7, and a like space is formed between the boiler and the fire wall 8 for the passage of the smoke, hot air and products of combustion. The brick work or masonry extends a short distance in the rear of the boiler to provide a space 9 which is closed at the top so as to direct the smoke and products of combustion into the rear ends of a series of tubes 10 arranged in the lower portion of the boiler, the front ends of said tubes opening into the box 11 at the front end of the boiler.

The smoke, hot air and products of combustion, after leaving the furnace or combustion chamber, pass beneath the bottom of the boiler to the rear thereof, thence rise into the space 9 and pass forward through the series of tubes 10 into the box 11, and thence outward through the stack 12. The water heater 13 is located in front of the boiler and above the box 11 and connects at its top with the smoke stack 12, the top sloping toward the stack so as to facilitate the escape of the smoke, gases and the like. A series of tubes 14 open through the bottom of the heater 13 and communicate with the box 11 and open through the top of the heater so as to deliver the smoke, hot air and the like into the space in communication with the stack 12. Water is supplied to the heater 13 by means of a lateral extension 15 at one side and near the top thereof. The provision of the water heater 13 utilizes the heat which otherwise would be lost and warms the water preliminary to its admission into the boiler. A valve 16 controls communication between the lower portion of the heater 13 and the boiler 1, so that water may be drawn from the heater 13 into the boiler to replace that lost by evaporation or which may be drawn off through a drain pipe 17 at the rear end of the boiler and extending through the rear wall of the brick work or masonry.

The rounded form of the boiler at its bottom results in the provision of an extended surface for the action of the heat. By having the rests 4 arranged just above the rounded bottom of the boiler, a body of water extends below the tank or other receptacle holding the articles to be cooked, thereby preventing the chilling of the entire

body of water when placing the articles in the compartment either to be scalded or cooked. By having a series of compartments, vegetables, fruits or the like may be placed in one or removed from another without interfering with the remainder, hence one may be filled and another emptied while the others may remain closed, so as to either scald or cook the articles being prepared, the several portions being effected at one and the same time without interference one with the other. It is observed that but one fire is necessary with a series of cooking compartments, thereby resulting in economy in the consumption of fuel. By having the several compartments arranged in series and of uniform temperature, the process of scalding or cooking may be more readily controlled and the compact arrangement results in materially reducing the labor, hence the output for a given amount of fuel and labor is materially augmented.

In the operation of the invention, the heat from the furnace, such as smoke, hot air and products of combustion, passes beneath the bottom of the boiler from front to rear thereof, thence vertically into the space 9 and forward through the tubes 10 into the box 11, thence vertically through the tubes 14 into the space at the top of the water heater 13 and out through the stack 12. The water in the boiler is heated and articles of food placed in the compartments 3 are either scalded or cooked as may be required. As the water diminishes in the boiler either by drawing off portions of the same through the drain pipe 17 or by escape of steam, it may be replenished by opening the valve 16, thereby admitting hot water from the heater 13 into the boiler without chilling the same. The compartments 3 are in communication at their lower ends by means of openings 18 formed in the lower portion of the partitions 2, so that water may pass from one compartment into the other so that the level of the water in the several compartments will be the same. The heater 13 is replenished from time to time by pouring water therein through the extension 15.

Having thus described the invention, what is claimed as new is:

1. A boiler for use in preparing vegetables, fruits and the like for canning, said boiler being oblong and having a horizontal arrangement and subdivided by vertical partitions into compartments, said partitions having openings in their lower portions to establish communication between the several compartments, a series of heating tubes located in the lower portion of the boiler and passed through the several partitions, and rests applied to the sides of the boiler and the partitions at a point above the series of tubes to support the cans or receptacles containing the vegetables or the like to be cooked.

2. In apparatus for preparing vegetables, fruit or the like for canning, a boiler having a box at its front end, a setting for the boiler having a space between its rear wall and the rear of the boiler, a series of vertical partitions subdividing the boiler into compartments and having openings in their lower portions to establish communication between the several compartments, a series of heating tubes extended through the partitions and the front and rear walls of the boiler and opening into the said box at the front of the boiler and the space in the rear thereof, and rests applied to the sides of the boiler and partitions to support cans or receptacles containing the vegetables or the like to be prepared.

3. In apparatus for preparing vegetables, fruit or the like for canning, a boiler having a box at its front end, a setting for the boiler having a space between its rear wall and the rear of the boiler, a series of vertical partitions subdividing the boiler into compartments and having openings in their lower portions to establish communication between the several compartments, a series of heating tubes extended through the partitions and the front and rear walls of the boiler and opening into the said box at the front of the boiler and the space in the rear thereof, a water heater at the front end of the boiler above the said box, tubes extended through the water heater and in communication at their lower ends with the said box, and a stack in communication with the upper ends of said tubes to carry off the smoke and products of combustion.

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

HUGH LAWSON CUNNINGHAM. [L. S.]

Witnesses:
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