

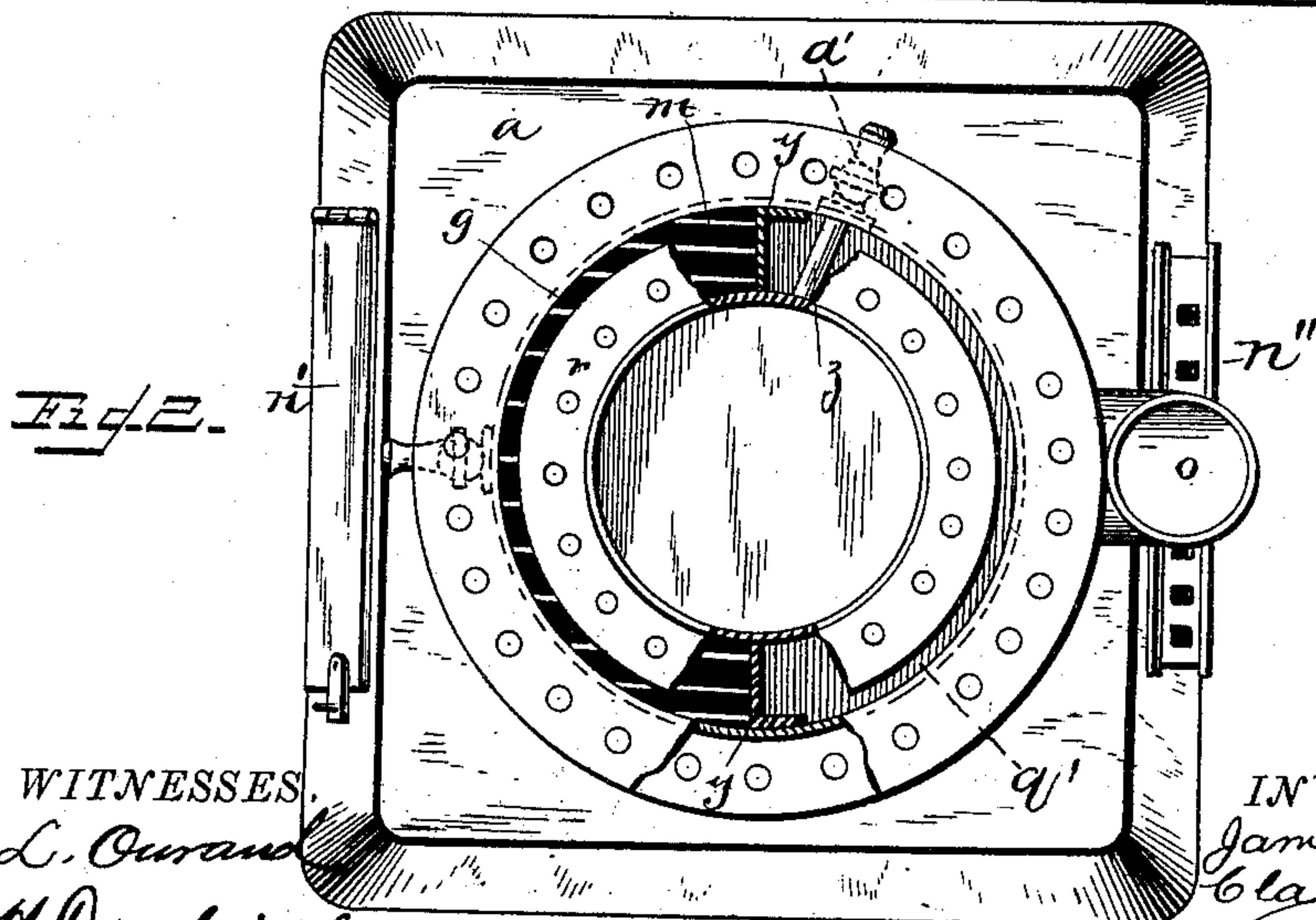
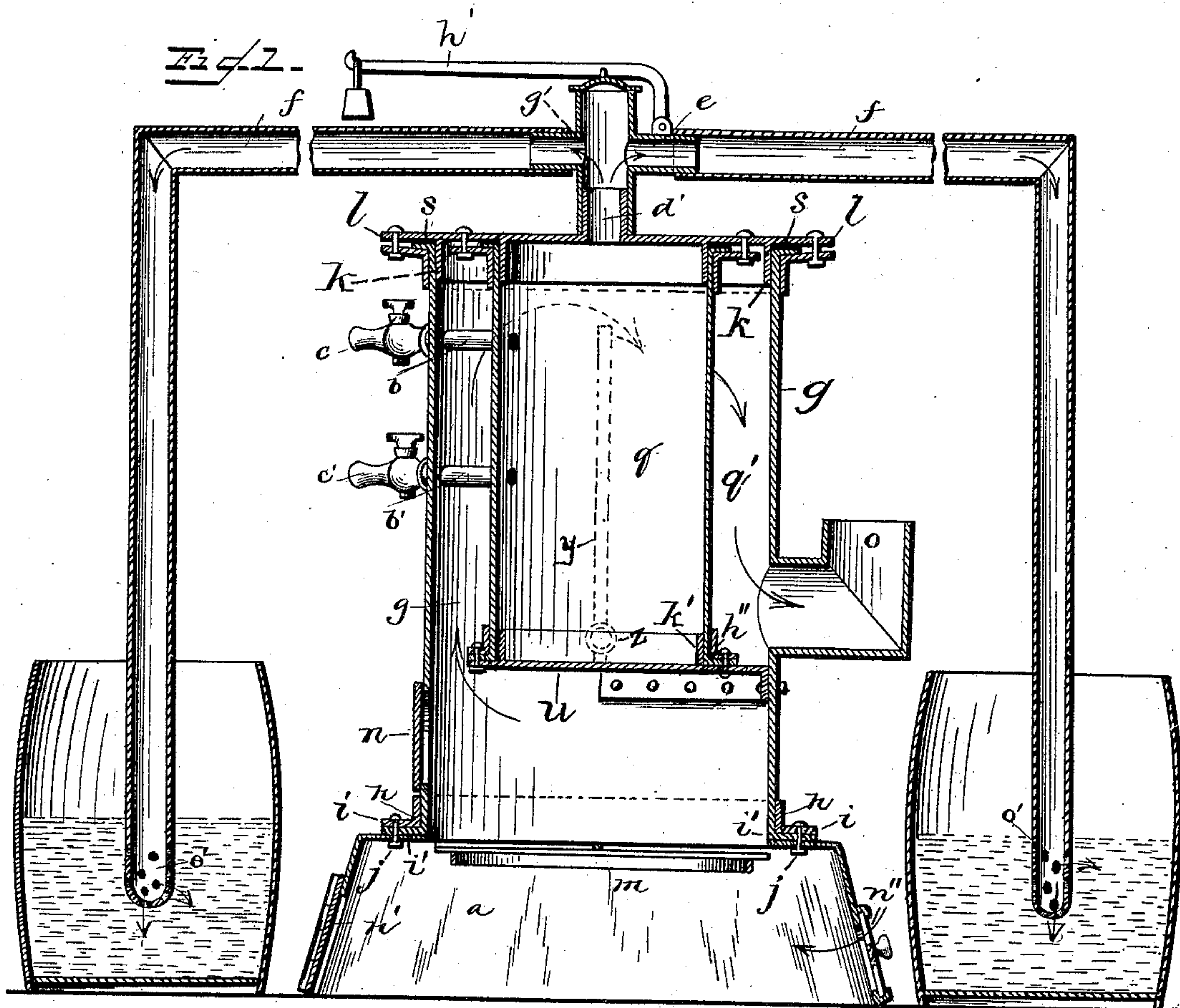
(No Model.)

J. W. MARTIN & C. H. REINHOLDT.

STEAM FEED COOKER.

No. 387,525.

Patented Aug. 7, 1888.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

JAMES W. MARTIN AND CLAUS H. REINHOLDT, OF MANNING, IOWA.

## STEAM FEED-COOKER.

SPECIFICATION forming part of Letters Patent No. 387,525, dated August 7, 1888.

Application filed January 26, 1888. Serial No. 261,937. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES W. MARTIN and CLAUS H. REINHOLDT, citizens of the United States, residing at Manning, in the county of Carroll and State of Iowa, have invented certain new and useful Improvements in Steam Feed-Cookers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to that class of devices for steaming food in which the steam is generated and conveyed by pipes to feed-receptacles, into which it escapes; and our invention has for its object simplicity of construction, combined with excellence of operation and increased durability of parts and facilities for performing work.

With these ends in view our invention consists in the novel construction and combination of parts, more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of our complete device, part of the outer shell being removed to show the internal construction; and Fig. 2, a plan with the top crown-plate removed.

The reference-letter *a* indicates the base portion, which is given a rectangular form in horizontal cross-section. The sides are sloping to prevent overturning. The front is provided with a hinged door, *n'*, for the removal of ashes from beneath the grate *m*, and the rear is provided with a draft-register, *n''*. The heating-chamber shell *g* is provided with a flange, *i'*, which rests upon the base *a*. The collar *h* encircles the bottom of the shell, and is provided with a flange, *i*, which is drawn down upon the shell-flange *i'* and securely fastened to the base by the bolts or rivets *j*. The upper end of the shell is joined to the crown-plate *l* in a like manner; but a packing of asbestos, *s*, is interposed, and the crown-plate is provided with a flange, *k*, which telescopes with the upper end of the shell *g* for the purpose of perfecting a gas-tight joint. The boiler *q* is located in the center of the heating-chamber, and its upper end is joined to the crown-plate in the same manner as the shell *g*. The lower end of the boiler is seated upon a shelf, *u*, and is joined thereto by a flange, *k'*, and collar *h''*,

forming a telescopic connection in the same manner as its upper end is joined to the crown-plate. The shelf closes the lower rear half, *q'*, of the heating-chamber, as will be observed in Fig. 2. The crown-plate and shelf are thus made to serve the double purpose of end plates and supports for the boiler.

A pair of partitions, *y*, are placed upon diametrically-opposite sides of the boiler, between the shell *g* and the boiler. They extend from the bottom of the boiler upward almost to the top of the chamber for the purpose of directing the heat of the fire over the front half and down over the back of the boiler to the outlet or smoke pipe *o*, thereby deriving the full benefit of the fire.

*z* represents the outlet-pipe, which is provided with a cock, *a'*, for the purpose of drawing the water off at will. Two short pipes, *b* *b'*, located one above the other and communicating with the boiler, are provided upon their outer extremities with cocks *c* *c'*, whereby the height of the water in the boiler may be easily determined. The steam-outlet orifice *d* is located in the center of the crown-plate, and is provided with a T-pipe, *e*. A pair of pipes, *f* *f'*, extend laterally from this T and thence downwardly into the feed-receptacles. Their escape-nozzles *o'* may be provided with any suitable steam-spreading devices in order to cook the food equally as well at the sides of the barrel as in the center. At the elbow *g'* of the T an ordinary pop-valve, *h''*, is placed as a safeguard against accident.

The construction of our device having been set forth, we will now describe its operation.

The products of combustion of the fire are made to pass around the front part of the boiler, between the boiler and the outer shell, *g*, by means of the partitions. They then pass down over the back side of the boiler, and thence out of the smoke-pipe located just above the bottom of the boiler. The products of combustion are thus made to pass completely around and envelop the boiler before passing out. The steam passes out at the escape-orifice in the crown-plate, thence to the T, where it is divided and conveyed off at right angles, and thence through pipes *f* to the escape-nozzles, where it passes into the feed being cooked.

Among the advantages of our invention are



those of exceeding simplicity, great strength, ease of operation, the quickness with which it can be repaired, the cheapness of manufacture, and the perfect safety with which it can be

5 used.

It is evident that many slight changes in material and arrangement of parts might be resorted to without departing from the spirit of our invention. Therefore we wish it understood that we do not limit ourselves to the precise construction herein shown and described, but consider ourselves entitled to all such variations as come within the scope of our invention.

15 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a feed-cooker, a heating-chamber and a boiler therein having flanged ends provided with collars, in combination with a crown-plate and shelf attached to the boiler in such a manner as to form end plates and supports for the boiler, substantially as described.

2. In a feed-cooker, a boiler and a surrounding shell forming the heating-chamber, said boiler and shell being provided with flanges and flanged collars, in combination with a crown-plate to which said collars are attached, whereby said plate is made to close the upper

30 end of the boiler and heating-chamber, for the purpose and in the manner substantially as described.

3. In a feed-cooker, a fire-chamber shell and boiler having the upper ends provided with

35 flanges, in combination with a crown-plate

having downwardly-extending flanges fitting within the ends of said shell and boiler, and collars provided with flanges, whereby the ends of the boiler and shell are closed, substantially as described.

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4. In a feed-cooker, a boiler located in the upper part of the fire-chamber, and a shelf supporting said boiler, said shelf being arranged to form the bottom of the boiler, in combination with partitions located upon diametrically-opposite sides of the boiler, substantially as described.

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5. In a feed-cooker, a boiler located in the top of the heating-chamber and having its upper end plate arranged to close the top of said chamber, in combination with partitions located upon diametrically-opposite sides of the boiler, and a bracket or shelf arranged to form the lower end plate of the boiler and to close the space behind the same, substantially as described.

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6. In a feed-cooker, a boiler located above the fire-chamber, the upper end of said boiler being arranged to close the top of said chamber, in combination with partitions at the sides and a shelf or bracket at the lower part of the boiler, substantially as described.

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In testimony whereof we affix our signatures in presence of two witnesses.

JAMES W. MARTIN.  
CLAUS H. REINHOLDT.

Witnesses:

C. D. DEWING,  
W. G. STEVENSON.