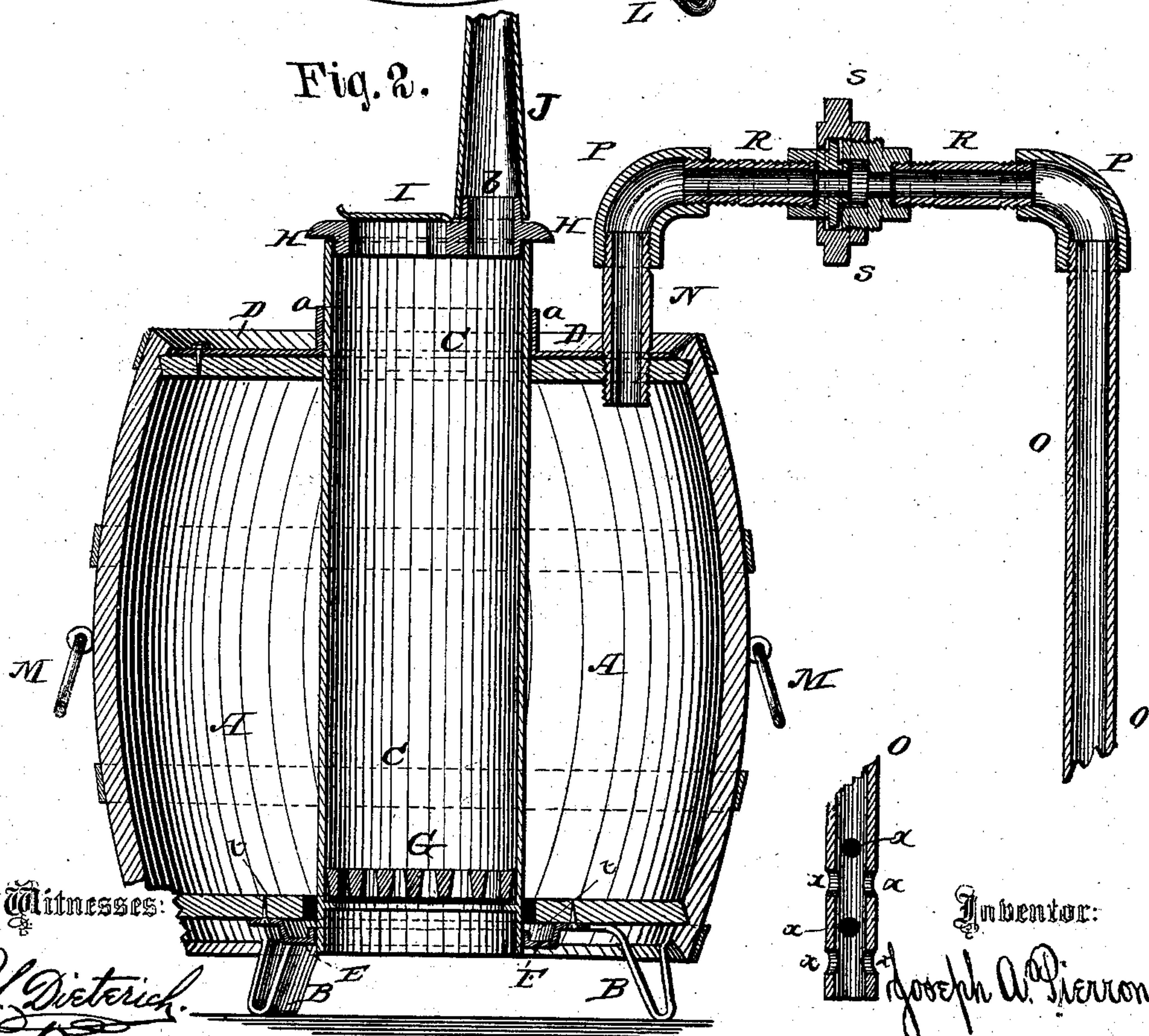
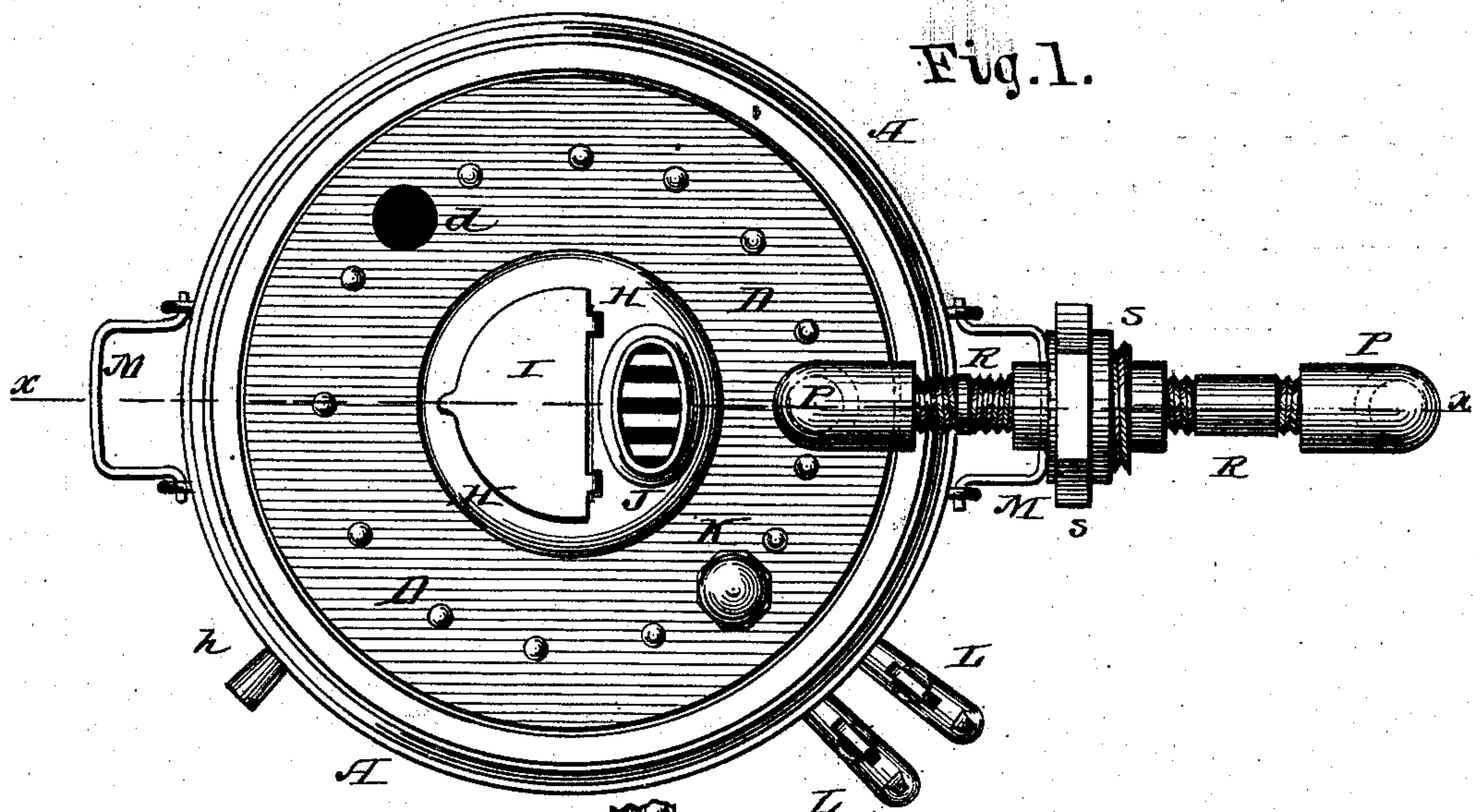


J. A. PIERRON.
Feed-Cooker.

No. 205,411.

Patented June 25, 1878.



Witnesses:

P. Dieterich.
Frank H. Duffly.

Inventor:

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Per C. H. Watson & Co. Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH A. PIERRON, OF LINCOLN, NEBRASKA.

IMPROVEMENT IN FEED-COOKERS.

Specification forming part of Letters Patent No. 205,411, dated June 25, 1878; application filed March 25, 1878.

To all whom it may concern:

Be it known that I, JOSEPH A. PIERRON, of Lincoln, in the county of Lancaster and State of Nebraska, have invented certain new and useful Improvements in Feed-Cookers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of this invention consists in the construction and arrangement of an agricultural steam-cooker, as will be hereinafter more fully set forth.

In the annexed drawing, which fully illustrates this invention, and to which reference is made, Figure 1 is a plan view of the improved agricultural boiler, and Fig. 2 is a vertical section of the same on the line *x x*, Fig. 1.

A represents the outside vessel, which may be an ordinary water-tight barrel set on end, and provided with legs B B, upon which it rests, so that the bottom of the vessel will be at a suitable elevation above the ground.

In the top and bottom of the vessel A are made central apertures for the passage of a cylinder, C, which forms the fire-box of the cooker. This fire-box is suspended by being riveted or otherwise attached to a flange, *a*, projecting upward around a central aperture in a metal plate, D, which is secured on top of the barrel or vessel A, so as to make the joint water-tight. The bottom joint is made water-tight by means of a collar, E, as shown, surrounding the lower end of the cylindrical fire-box, and fastened to the bottom of the vessel.

The collar E consists of an annular plate, fastened to the bottom head of the vessel A, and its inner edge turned downward, then inward, and finally upward, this latter portion or upward flange being united to the outer surface of the cylindrical fire-box C, the body of the collar forming, as it were, an annular water-chamber, *t*, below the bottom head of the vessel and around the fire-box, the opening in said head for the passage of the fire-box being made larger than the outside of the fire-box, so that the same will not touch the head, and

consequently there is no danger of said bottom head being burned out. This water-chamber also protects the fire-box below the grate. In the bottom of the fire-box C is the grate G, upon which the fire is made.

The top of the fire-box is provided with a cover, H, in which is a lid, I, to allow of the admission of the fuel, and said cover is also provided with a collar, *b*, for the attachment of the smoke-pipe J.

It will readily be seen that the draft is furnished from the bottom, and that the entire cylinder forms heating-surface for heating the water in the vessel A surrounding the fire-box, the smoke passing out at the top through the smoke-pipe.

d is an aperture in the top of the vessel, through which the water is admitted. K represents an ordinary safety-valve applied to the top of the vessel to prevent undue pressure of steam in said vessel. L L are high and low water gages, applied to the side of the vessel. M M are handles attached to the side of the vessel A, and by which it can be easily carried from place to place, as required.

To convey the steam from the vessel A into another vessel where the feed is to be cooked, the top of the vessel A is provided with a short steam-pipe, N. O is the pipe to be inserted in the second vessel. These two pipes N O are connected by two elbows, P P, two short tubes, R R, and a center union-coupling, S, as shown fully in Fig. 2.

By means of the coupling S the pipes can be easily connected and disconnected, as required. When connected the steam passes from the vessel A through said pipes and escapes into the second vessel at the bottom of the pipe O, as well as through numerous perforations *x* in the side of the same.

At the bottom of the vessel A is an outlet, *h*, (not shown,) for the water, when it is desired to draw off the same.

I am aware that feed-cookers consisting of an exterior vessel, with a central fire-cylinder extending vertically through said vessel, are not new; and I do, therefore, not claim such, broadly, as my invention.

In my invention the central fire-cylinder is entirely open at the lower end, and, by the top plate D and bottom collar E, as described,

perfect water-tight joints are made around the cylinder where it passes through the top and bottom of the outside vessel. The fire-grate, also being at about on a level with the bottom of the outside vessel, makes the whole fire-cylinder a heating-surface for the water surrounding the same.

Having thus fully described this invention, what is claimed as new, and desired to be secured by Letters Patent, is—

In a feed-cooker, the combination, with an exterior vessel, A, and a central vertical and cylindrical fire-box, C, entirely open at its lower end and provided with the grate G, of

the bottom collar E, constructed as described, to form a water-chamber, *t*, encircling the lower end of the fire-box below the grate, the metal top-plate D, with flange *a*, and the cover H, with lid I and smoke-exit *b*, all constructed substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH A. PIERRON.

Witnesses:

THRODORE F. BARNES,
JOHN GALBRETH.