C. GORTON.
Feed-Cooker.

No. 205,262. Patented June 25, 1878.

Fig. 1.

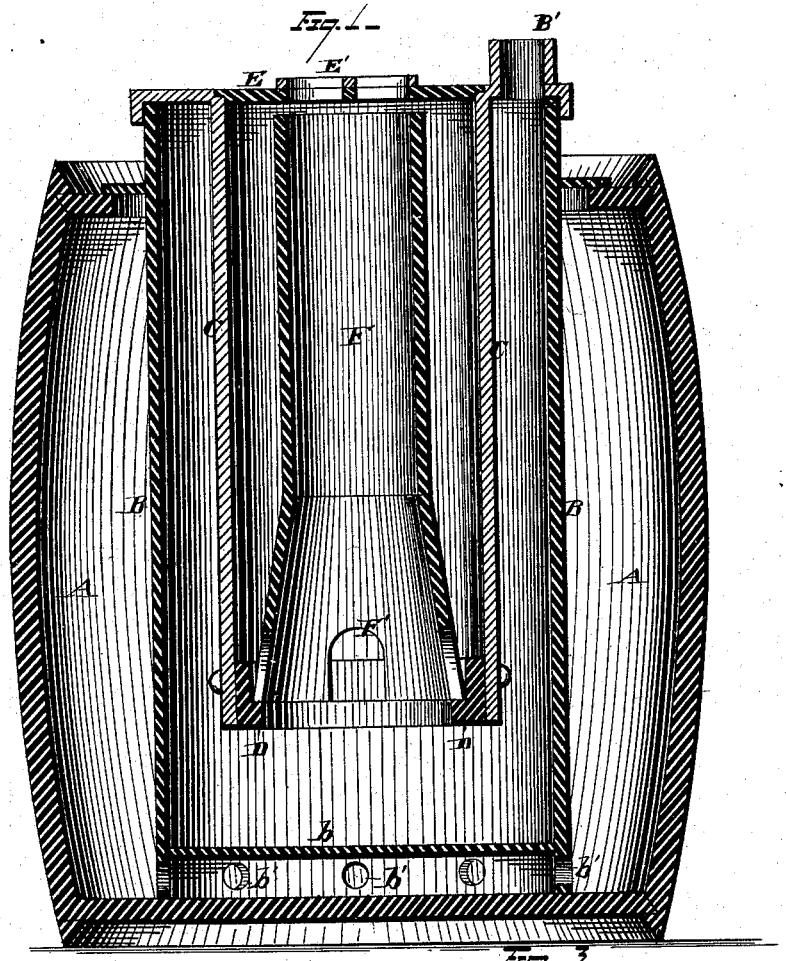


Fig. 2.

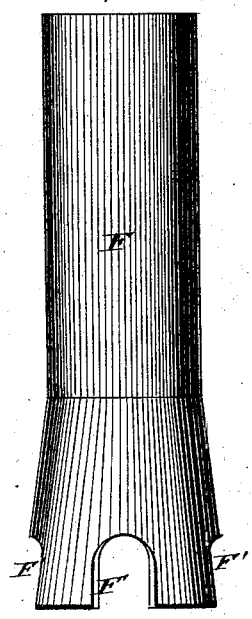
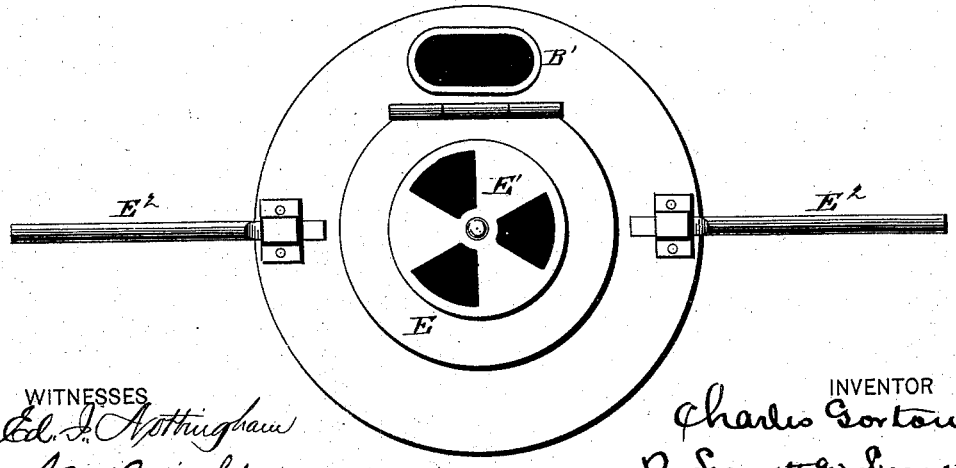


Fig. 3.



WITNESSES
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UNITED STATES PATENT OFFICE.

CHARLES GORTON, OF SALEM, OHIO.

IMPROVEMENT IN FEED-COOKERS.

Specification forming part of Letters Patent No. **205,262**, dated June 25, 1878; application filed April 17, 1878.

To all whom it may concern:

Be it known that I, CHARLES GORTON, of Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Feed-Cookers or Steam-Generators; and I 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in that class of feed-cookers or steam-generators which are formed with upright fire-boxes, and consists in a construction as follows: A cylinder supported at the top is placed within the fire-box, and is adapted for burning wood, since it is large and made with straight sides. Within this first cylinder a second magazine is placed, which rests disconnectedly upon the annular shoulder of a ring-piece, which latter is secured to the lower inner side of said first or outer cylinder. This inner magazine is made with a flaring or conoidal base, having draft-openings in its side, and is adapted for burning coal. The disconnected engagement between the inner magazine and outer cylinder permits said inner or coal-burning magazine to be readily removed from its position within the fire-box, so as to leave the latter prepared for burning wood in the remaining cylinder.

In the drawings, Figure 1 is a vertical sectional view of my device. Fig. 2 is a sectional view of the coal-burning magazine, and Fig. 3 is a plan view of the top of the fire-box.

A is a barrel or other suitable receptacle for water or food. B is a metallic cylinder, preferably made of sheet metal, extending nearly to the bottom of the casing A. It is closed at the bottom, but has an outlet, B′, at the top for the passage of smoke and gas from the fire beneath. To this outlet B′ a stove-pipe may be attached, or other connection made to assist the draft.

The side of the cylindrical fire-box is provided with openings *b′*, formed therein below the raised bottom *b*, so as to permit the boiler-water to pass through the openings beneath said bottom. A sheet-metal cylinder, C, depends from the top of the fire-box, having straight sides, and adapted for burning wood. To its lower inner side a metal ring, D, preferably made of cast-iron, is secured, and an annular shoulder is formed in said ring, upon which the magazine F disconnectedly rests. This ring D also serves to strengthen and support the cylinder C, which, being made of sheet metal, is liable to warp and burn away unless strengthened in such manner.

The magazine F is made with a flaring or conoidal base, having draft-openings F′ formed therein. This magazine automatically feeds the fire as the fuel is consumed.

The upper end of the cylinder C is provided with a hinged door, E, that opens outwardly. This door is supplied with a damper, E¹. If wood is to be used, the inner magazine F should be withdrawn, and the wood supplied to the fire in the cylinder C in sticks of suitable length through the door. If coal is to be used, the magazine F should be placed in position by passing it through the door, resting its base upon the flange upon the inner side of the ring D.

Having thus described the construction of my device, its operation is as follows: A fire is built on the bottom of the cylinder B (the reservoir A having been previously sufficiently supplied with water) under the mouth of the cylinder C. If wood is used, the magazine F is withdrawn, and the fire receives enough air through the spaces between the sticks of wood. If coal is used, the magazine F is placed in position, and the fire then receives its air through the passage between the cylinder C and magazine F and perforations F′ at the bottom of the magazine F.

In the use of either wood or coal the smoke and gaseous matter from the fire rises in the space between the cylinders B and C, and passes out through the outlet B′. Steam-connection with the matter to be cooked may be made in any suitable manner or from any suitable part of the reservoir A.

E^2 E^2 are stationary or removable handles for shaking down the fuel, if necessary, and to facilitate the handling of the hot stove in placing it into or lifting it from the barrel. I

prefer that these handles shall be removable, as they may thus be kept cool and be only inserted when necessary for use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a feed-cooker or steam-generator, the combination, with an upright fire-box, of a cylinder adapted for burning wood, and an innermost magazine adapted, in the manner described, for burning coal, said magazine being disconnectedly supported within the wood-burning cylinder, substantially as set forth.

2. In a feed-cooker or steam-generator, the combination, with an upright fire-box, of a cylinder adapted for burning wood, and an innermost magazine adapted, as described, for burning coal, said magazine being disconnectedly supported upon a ring-piece, which is secured to the lower extremity of the wood-burning cylinder, substantially as set forth.

3. In a feed-cooker or steam-generator, the combination, with an upright fire-box, of a cylinder adapted for burning wood, and an innermost magazine adapted, as described, for burning coal, said magazine being disconnectedly seated in an annular shoulder formed on a ring-piece, which latter is secured to the lower extremity of the wood-burning cylinder, substantially as set forth.

4. In a feed-cooker or steam-generator, the combination, with an upright fire-box, of a cylinder adapted for burning wood, and an innermost magazine adapted, as set forth, for burning coal, said magazine being disconnectedly seated in an annular shoulder formed on a cast-iron ring, which latter is secured to the lower inner side of the wood-burning cylinder, substantially as set forth.

5. In a feed-cooker or steam-generator, the combination, with an upright fire-box, of a wood-burning cylinder and a coal-burning magazine, the latter made with a flaring or conoidal base and suitable draft-openings, and being disconnectedly supported within the wood-burning cylinder, substantially as set froth.

6. In a feed-cooker or steam-generator, the combination, with a suitable boiler or vessel, of a removable upright fire-box adapted to permit the boiler-water to pass beneath its bottom, said fire-box being also provided with a cylinder adapted for burning wood, and a magazine adapted for burning coal, said magazine formed with a flaring or conoidal base having draft-openings, and disconnectedly supported upon a shouldered ring, which latter is secured to the interior of the lower extremity of the first and outer cylinder, substantially as set forth.

7. In a feed-cooker or steam-generator, the combination, with an upright fire-box, of a wood-burning cylinder having parallel straight sides, and a coal-burning magazine, the latter made with a flaring or conoidal base, having draft-openings, and being supported disconnectedly within the wood-burning cylinder, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES GORTON.

Witnesses:
JNO. CROWELL, Jr.,
WILLIAM E. DONNELLY.