

J. H. HAVILAND, G. W. CRONK & J. F. ANTISDEL.

Agricultural Boiler.

No. 133,097.

Patented Nov. 19, 1872.

Fig. 2.

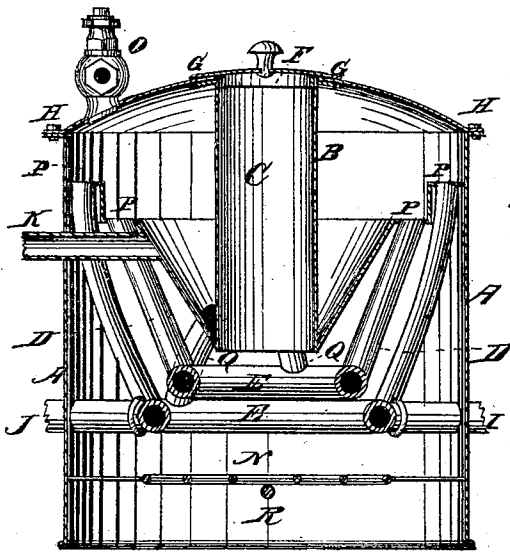


Fig. 1.

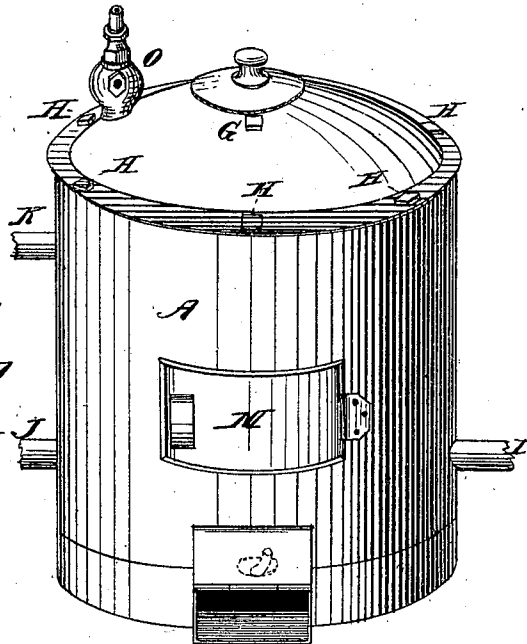


Fig. 4.

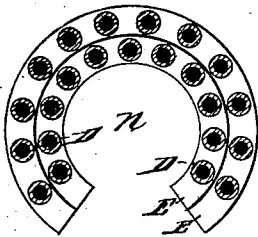
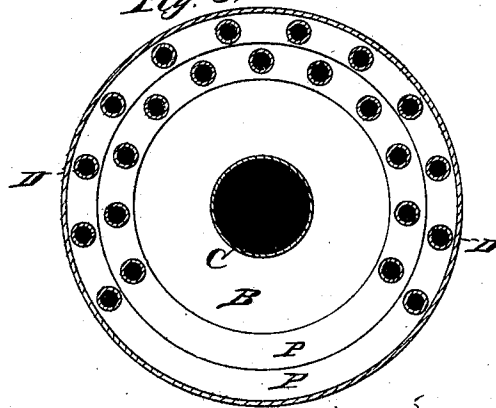


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. HAVILAND, GEORGE W. CRONK, AND JOSIAH F. ANTISDEL, OF
JANESVILLE, WISCONSIN.

IMPROVEMENT IN AGRICULTURAL BOILERS.

Specification forming part of Letters Patent No. 133,097, dated November 19, 1872.

To all whom it may concern:

Be it known that we, JOHN H. HAVILAND, GEORGE W. CRONK, and JOSIAH F. ANTISDEL, of Janesville, in the county of Rock and State of Wisconsin, have invented certain Improvements in Steam Cooking and Heating Apparatus, of which the following is a specification:

Our invention relates to the combination of a coal-reservoir with the pipes and boiler of the said apparatus in such a manner as to furnish a constant supply of fuel to the furnace below the said boiler, the said pipes being so arranged and coupled with the said boiler as to admit of a free circulation of steam and water from one to the other.

Figure 1 is a perspective view of the said apparatus. Fig. 2 is a vertical section of the same. Fig. 3 is a cross-section of the top of the said boiler. Fig. 4 is a cross-section of the said pipes.

A is the outside wall of the said apparatus. B is the said boiler. C is the said reservoir. D is the said pipes, which are a little inclined from a perpendicular line and inserted in the boiler at the angles P P P P and permanently fastened in. E E are horizontal pipes, into which the said pipes D are inserted and also permanently attached. Q Q are also pipes, coupled with both the boiler B (at or near the bottom thereof) and with the said horizontal pipes E E, as in Fig. 2 of the drawing. J is a blow-off pipe. I is a feeding pipe. K is a

pipe to try the height of the water in the boiler. O is a common safety-valve. H H are screws to fasten on the top of the said boiler. G G are also screws that fasten the said reservoir to the top of the said boiler B. F is the top or lid of the said reservoir. M is a door to the said furnace. N is the said furnace. L is a damper. R is a fire-grate.

The operation of this apparatus, as it relates to the water and the steam in and through the said pipes and boiler, is the same as others now in use; and we do not, therefore, claim any new device or combination in the arrangement of these parts. As it relates to the operation of the said reservoir C, in combination with the said boiler B, the coal is put in at the top thereof, and falls upon the grate R below, at the bottom of the said furnace N, and this arrangement renders the use of coal in the said apparatus practicable and of great value.

We claim as our invention—

The combination of the said reservoir C, boiler B, and pipes D, E, and Q, when constructed and arranged, substantially as described, and for the purpose specified.

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Witnesses:

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