

UNITED STATES PATENT OFFICE.

ROBERT SERVETUS MOORE, OF BRADSHAW, NEBRASKA.

STEAM FEED-COOKER.

SPECIFICATION forming part of Letters Patent No. 471,488, dated March 22, 1892.

Application filed August 31, 1891. Serial No. 404,297. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SERVETUS MOORE, a citizen of the United States, residing at Bradshaw, in the county of York and State of Nebraska, have invented a new and useful Steam Feed-Cooker, of which the following is a specification.

My invention relates to steam feed-cookers; and it has for its object to provide a device of this character which will be available for cooking feed for stock, &c., in large quantities and one which is particularly designed to allow for a continuous heating of the food without a loss of heat by providing ready means whereby the boiler in which the steam is generated may easily be supplied with hot water while the feed is being heated; and with these and other objects in view the invention consists in a steam generator or boiler provided with a supplemental hot-water reservoir and means by which the water in the reservoir can be injected within the boiler when required, the same being constructed and arranged in the novel manner hereinafter more fully described, illustrated in the accompanying drawings, and specifically pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of a feed-cooker constructed in accordance with my invention, the rear top end of the same being removed to expose the hot-water reservoir and the pump therein. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section of the same on the line xx of Fig. 2.

Referring to the drawings by letter, A represents the furnace of my improved cooker, which is constructed of the usual material and in an ordinary manner. The furnace is provided with the front fire-box a , having an ordinary grate a' and the ash-pan a^2 therebeneath, and is further provided with the rearwardly-extending flue a^3 , surrounding which and the fire-box is the encircling flange a^4 , upon which is seated the generator or boiler B. The boiler is of the horizontal cylindrical type and is provided with a surrounding flange b , that is intended to detachably engage the flange of the furnace, and thus provides means whereby the boiler may be located over any suitably-constructed furnace, and need not necessarily be constructed

with special reference to the style of furnace employed. Passing through the boiler longitudinally and near the bottom thereof is the heat and smoke return flue C, communicating at one end with the smoke-box c at the inner terminal of the main heat-flue a^3 , while its other end passes without the front end of the boiler and is connected with an ordinary elbow and escape-pipe c' , through which the returned products of combustion find escape. The boiler B is provided at a short distance from one end thereof with a transverse partition or diaphragm D, which separates the boiler proper from the hot-water tank or reservoir E, which is constantly supplied with heated water to furnish or supply the boiler therewith when the same has lost the water therein by boiling away. The return-flue C passes through the boiler proper and the hot-water reservoir at one end thereof a short distance from the bottom, and thus allows a free circulation of water therearound, thus providing supplemental interior heating means, besides the heat obtained from the furnace therebeneath. The said hot-water tank or reservoir E is always while the cooker is in operation kept partly filled with water, which under the action of the fire beneath the same and the flue passing therethrough is always kept in a heated condition, and may be supplied to the boiler proper when necessary without a loss of heat or steam or a discontinuing of the cooking of the feed. Projecting within the hot-water tank or reservoir is an ordinary hand-pump F, which is securely held in position within said tank by the bracket or clamp f , secured upon the outer edge of the boiler or generator. The said pump for convenience of operation projects at an angle within the reservoir and is provided with a lower curved end f' , encircling the return-flue passing through the tank, and reaches to near the bottom of said tank or reservoir, in order that all the water may be pumped therefrom, if desired, and is further provided with a right-angularly-disposed spout f^2 , which projects through a perforation f^3 , located in the dividing diaphragm or division-plate, and thus provides communication between the hot-water tank or reservoir and the boiler or generator proper, and thus allowing the water to be forced into the latter when desired. The said pump is of course provided

with the ordinary check-valves and operating-handle, with which simple pumps of this character are provided.

5 The front end of the boiler or steam-generator is provided with ordinary water-gage cocks G and a valve or cock H, whereby the boiler may be readily drained in cold weather or blown out to be cleansed from accumulations of dirt or other foreign matter. The top
10 of the boiler or generator is further provided with an opening or short tube I, to which may be connected an ordinary safety-valve, whereby any undue pressure may be relieved, and with the outlet vent or opening K, from which
15 projects a short tube or spout *k*, to which is coupled the hose or other conductor that conveys the steam to the receptacle, within which the feed to be cooked is placed.

20 The construction and operation of the herein-described feed-cooker are now thought to be apparent without further description.

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

25 1. In a steam-cooker, the combination, with a furnace, of a boiler or generator detachably located over said furnace and provided with a transverse partition plate or diaphragm near one end, which forms a supplemental
30 hot-water tank or reservoir separated from the generator proper, a return-flue passing entirely through the separated hot-water tank and generator proper near the bottom of the boiler, and means for injecting the water from
35 the tank or reservoir into the boiler, substantially as set forth.

2. In a steam feed-cooker, the combination,

with a furnace, of a horizontal circular boiler located over said furnace, a combustion return-flue passing through said boiler near the
40 bottom thereof, a plate or diaphragm secured transversely within said boiler and forming a generator and a hot-water tank or reservoir, and a pump located within said reservoir and communicating with said generator, substan-
45 tially as set forth.

3. In a steam feed-cooker, a horizontal circular boiler, a combustion return-flue passing through said boiler near the bottom thereof, a plate or diaphragm secured transversely
50 within said boiler and forming a generating-compartment and a hot-water tank or reservoir, a pump secured at an angle within said reservoir and provided with a lower curved end encircling said return-flue, and
55 a right-angularly-disposed spout projecting within said generating-compartment, substantially as set forth.

4. In a steam-cooker, the combination, with a furnace comprising a front fire-box and
60 a rearwardly-extending flue and having a flange encircling the upper edges of said flue and fire-box, of a horizontal circular boiler having a return-flue passing therethrough, and an encircling-flange adapted to detach-
65 ably engage the flange of said furnace, substantially as set forth.

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

ROBERT SERVETUS MOORE.

Witnesses:

FRANK C. WALROOD,
SAMUEL A. MORRISON.