C. & W. KRAMER.

STEAM FEED-COOKING APPARATUS.

No. 190,873. Patented May 15, 1877.

FIG. I

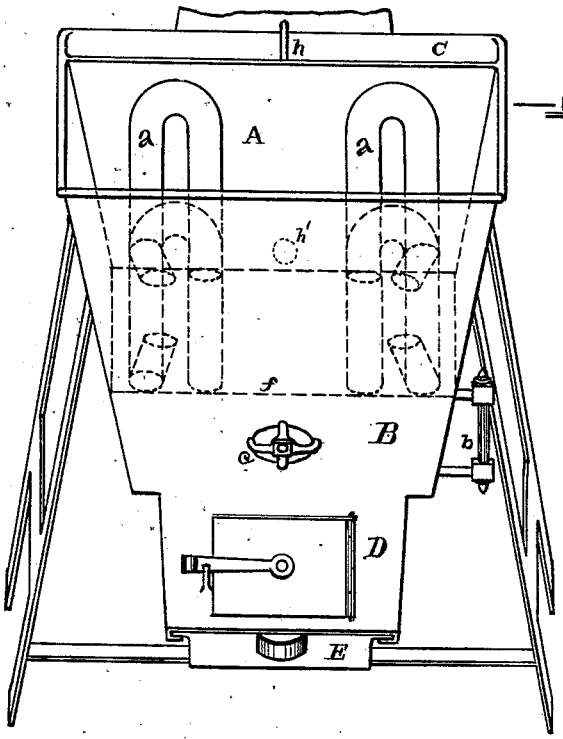
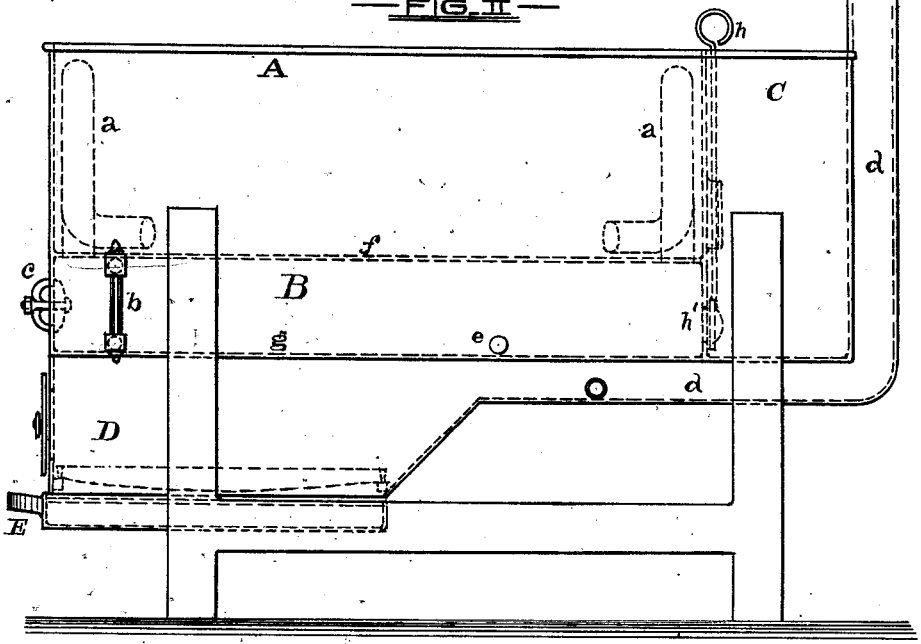


FIG. II



WITNESSES.

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CONRAD KRAMER AND WILLIAM KRAMER, OF UPSHUR, OHIO.

IMPROVEMENT IN STEAM FEED-COOKING APPARATUS.

Specification forming part of Letters Patent No. **190,873**, dated May 15, 1877; application filed April 24, 1877.

To all whom it may concern:

Be it known that we, CONRAD KRAMER and WM. KRAMER, of Upshur, in the county of Preble and State of Ohio, have invented a new and useful Improvement in Steam Feed-Cooking Apparatus, which is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a perspective view, and shows the front and top. Fig. 2 is a transverse side view.

The object of our invention is to combine, in one apparatus, all the requisites for economically and rapidly cooking food for stock without scorching the same.

In the drawing, A represents the cooking-tank, of rectangular form with inclined or flaring sides; B, the water-boiler; C, the water-reservoir or supply-tank; D, the furnace, under which is the ash-pan E.

The cooking-tank may be constructed entirely of metal, or the bottom *f* of metal, while the sides and ends may be of wood. When these parts are of metal, heavy galvanized iron is preferable. The surface-dimensions of the water-boiler are the same as the bottom of the cooking-tank, which also constitutes its top. The bottom of the boiler *g* is directly over the furnace and flue, and should be made of suitably heavy sheet-iron. The depth of the boiler may be about one-third the depth of the cooking-tank, and in practice is not designed to be, at any time, more than half full of water, thus leaving steam-space. The quantity of water contained in the boiler is indicated by the glass gage *b*. *c* represents a "hand-hole," affording access to the boiler, and *e* a cock by which the water may be drawn off.

Located at the rear end of the cooking-tank and boiler is the reservoir C, which rests on the flue *d*, the latter passing up behind the former, and having attached at the top the smoke-pipe. The heat of the flue serves to keep the water in the reservoir hot, and the same is supplied to the boiler, when needed, by the rod *h* operating the valve *h'*. The bottom of the tank A, in which the food to be cooked is placed, is heated by the steam in the boiler below. At each corner of the tank is a pipe, *a*, connecting directly with the steam-boiler, and rising to a level with the top of the tank, and with a U-shaped bend returning again to near the bottom, where an elbow attaches, causing the escaping steam to discharge in a horizontal direction into the mass of food. By providing these pipes with a movable joint the discharge-nozzle may be variously adjusted; they may be so directed that the force of the escaping steam will keep the mass in motion, thus facilitating the process of cooking the entire mass rapidly and uniformly.

By our construction of the steam-discharging pipes *a*, and arranging them to rise as high as the sides of the tank, and then with a bend returning to near the bottom before discharging, the food is prevented from getting into the water-boiler through the pipe, as it would be sure to do if the discharge-pipe came direct from the boiler, or if arranged as a mere stand-pipe without returning to near the bottom before discharging, or if raised only a short distance and then returned to near the bottom.

An incidental advantage of our double stand-pipe in cooking food in a tank is the direct application of heat which they afford by the hot steam circulating through them.

When constructed as above described our improved feed-cooker is portable, the furnace, flue, and ash-pan being made of heavy stack-iron, and the whole apparatus set on a suitable frame. If desired, the water-boiler, cooking-tank, and water-reservoir may be set on a furnace of brick or stone.

Our steam-cooking apparatus utilizes the greatest possible proportion of heat, cooks uniformly and without scorching, does not require the constant care of an attendant, and is in no danger of exploding, while it is useful for a variety of other purposes besides cooking food for stock.

We do not limit ourselves to the use of four steam-discharging pipes, nor to any particular form for the construction of cooking-tank, as it is manifest more or less than four pipes might serve the purpose.

Having described our invention, we claim and desire to secure by Letters Patent—

1. The improved steaming and cooking apparatus, consisting of the water-boiler B, upon which rests the cooking-tank A, having

steam-discharging pipes connecting directly with the boiler, and rising to a level with the top of tank, and with a U-shaped bend returning again to near the bottom and there discharging into the mass of food, substantially as shown and described.

2. In an apparatus for cooking feed by steam, the water-boiler B, directly over the furnace and flue, and the cooking-tank A, resting on the boiler, and having steam-discharging pipes, and the water-reservoir C, at the rear end of boiler and tank, and resting on the flue, which also passes up behind the reservoir, with the valve *h'* and the rod, all arranged as shown and described, and for the purpose specified.

CONRAD KRAMER.
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Witnesses:
WM. L. MITCHELL,
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