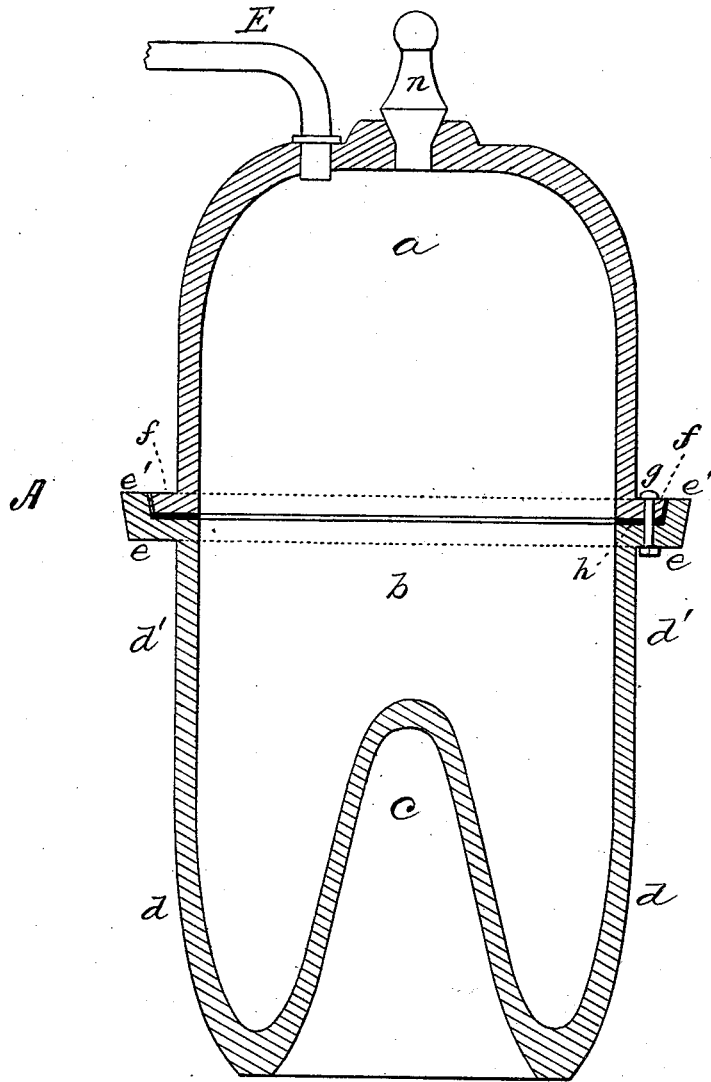


A. K. BROWN.

STEAMER FOR COOKING FEED.

No. 190,545.

Patented May 8, 1877.



WITNESSES

Walter C. Bellas.
A. J. Bellas

INVENTOR

Alvin K. Brown.
By E. W. Anderson,
ATTORNEY

UNITED STATES PATENT OFFICE.

ALVIA K. BROWN, OF NEWTON, IOWA.

IMPROVEMENT IN STEAMERS FOR COOKING FEED.

Specification forming part of Letters Patent No. 190,545, dated May 8, 1877; application filed March 24, 1877.

To all whom it may concern :

Be it known that I, ALVIA K. BROWN, of Newton, in the county of Jasper and State of Iowa, have invented a new and valuable Improvement in Steamers for Cooking Feed; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical central section of my invention.

This invention has relation to improvements in steam-generators for cooking food for cattle; and it consists in a sectional boiler, the parts of which are two in number connected together at or near the middle of the length of said boiler by means of suitable clamps.

It also consists in a lower metallic section having a horizontal projecting flange provided upon its outer edge with a vertical lip, inside of which a horizontal projecting flange on the upper section of the boiler snugly fits, whereby a means is provided for preventing the packing interposed between the said flanges from being forced out therefrom and causing leakage.

It also consists in providing the lower section of said boiler with outwardly-convex side walls and a concave or conical bottom, whereby in comparison with the capacity of the boiler I obtain a very large heating-surface, as will be hereinafter more fully set forth.

In the accompanying drawings, the letter A designates my improved generator, composed of two sections, *a b*, and presenting in its general appearance the form of a flattened oval. The lower section *b* has at its bottom an inwardly-projecting conical rise, *c*, which is directly exposed to the products of combustion, and its sides curve outward from said bottom, as shown at *d*, and gradually merge into a cylindrical portion, *d'*. This part has at its upper edge a projecting annular flange, *e*, at right angles to the longitudinal axis of the section that is provided at its outer edge with an annular lip, *e'*, at right angles to said flange. The upper section *a* is also of a half-

oval form, and has upon its lower edge an annular flange, *f*, projecting out therefrom at right angles to the length of the said section. This flange is of such dimensions that it fits snugly upon flange *e* inside of lip *e'*, which closely embraces its edges, and the sections aforesaid are connected together by the usual clamp-bolts *g*. In order to prevent leakage an ordinary packing-ring, *h*, is laid on flange *e*, inside of lip *e'*. The upper section is then put on with its flange bearing upon the ring, and the bolts *g* are then forcibly applied. This will compress the said ring and cause it to form a steam-tight joint between the sections; and the lip *e'*, aforesaid, will prevent the ring from being forced out of the space between the flanges on the sections by the pressure of the steam. By this means the requisite closeness of the joint between the sections is preserved as long as the materials employed last, and a slight defect in the packing is prevented from developing into a serious leak.

Fire will be applied to the boiler under its bottom in a suitable furnace, or jacket when the boiler is portable, and the products of combustion are in direct contact with the conical rise *c*, and with the curved walls *d* of the lower section, which combined present a very broad heating-surface to the flame, and, consequently, cause the water to be rapidly heated and steam to be quickly generated.

In practice, the upper section will have a suitable safety-valve, so that any dangerous steam-pressure will be obviated. It is also provided with a metallic steam-pipe, E, leading to a drum or other receptacle of a suitable description containing the food or feed to be cooked. This pipe may have a cut-off cock, by means of which steam may be accumulated in the boiler in sufficient quantity before being passed into the food-receptacle, and the water may be renewed through a cock, *n*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a steam-generator, the cast-metal sections *a b*, having flanges *e f*, and provided with the interposed packing and bolt *g*, adapted to be forcibly clamped together, substantially as specified.

2. The section *b*, having annular flange *e*, and lip *e'*, in combination with the section *a*, having flange *f*, adapted to be received inside of said lip on flange *e*, a packing-ring, and suitable clamps, substantially as specified.

3. The boiler, consisting of two sections having clamping-flanges, whereby they are secured together, and the lower section having a central conical rise, extending upward

nearly half-way to its clamping-flange, and cast in one piece, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALVIA K. BROWN.

Witnesses:

S. N. LINDLEY,
B. L. FAILOR.