J. ALLINGHAM.
Farm-Steamer.

No. 211,079. Patented Jan. 7, 1879.

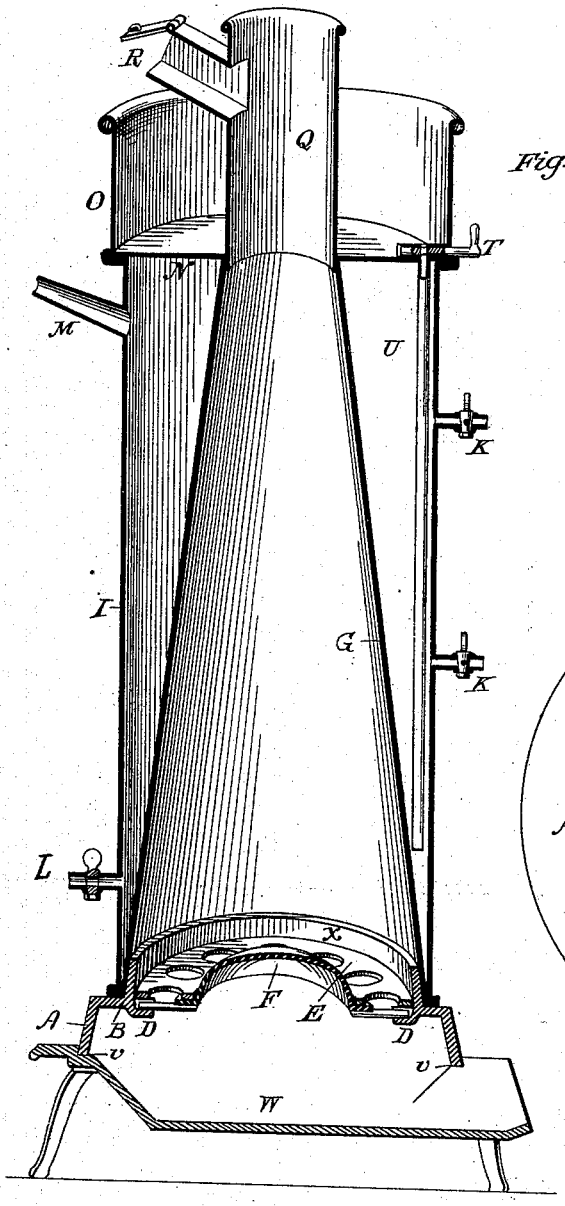
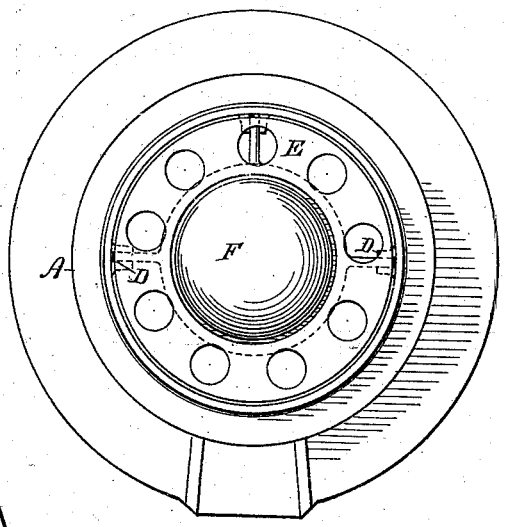


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES ALLINGHAM, OF NEVADA, IOWA, ASSIGNOR OF ONE-HALF HIS RIGHT TO T. E. ALDERMAN & SON.

IMPROVEMENT IN FARM-STEAMERS.

Specification forming part of Letters Patent No. **211,079**, dated January 7, 1879; application filed September 7, 1878.

To all whom it may concern:

Be it known that I, JAMES ALLINGHAM, of the town of Nevada, in the county of Story and State of Iowa, have invented certain Improvements in Steam Cooking Apparatus, of which the following is a specification:

My invention relates to apparatus for cooking food for cattle; and consists of a steam-generator, the special features in the construction of which, as claimed by me, are fully hereinafter set forth, and particularly specified in the claims.

In the drawings, Figure 1 represents a vertical central section of the whole apparatus; and Fig. 2 a horizontal section near the base.

The object of my invention is to provide an economical and convenient apparatus for generating steam, which steam is to be conveyed from said apparatus to the receptacle in which the food is to be placed for cooking.

In Fig. 1 of the drawings, the outer shell or case of the apparatus is represented at I. This is of cylindrical form and of sheet metal suited to the purpose. An inner shell or case is shown at G, of conical form, made of a diameter at the base adapting it to fit snugly against the inner surface of the inner shell, I. The lower edges of these two shells are firmly joined by flanges, as shown in the figure.

Over the upper end of the inner shell (which is in the form of a truncated cone) is placed a plate, N, fitting snugly thereon, which plate extends over the upper end of the outside cylindrical shell, and is joined to the latter by flanges in the same manner as the lower ends of the two shells. Resting upon this plate N is a tank or reservoir, O, which is secured to the plate in any suitable manner, preferably as shown in the drawing, so as to make a water-tight and secure joint.

A pipe to convey the smoke and admit the passage of fuel is fitted snugly over the upper end of the conical shell, and rises above the reservoir, as shown at Q. A chute, as shown at R, with a suitable cover, is provided for the convenient admission of the fuel.

The base of the apparatus is formed in two parts, as clearly represented in the figure. The upper part, A, has a downwardly-projecting flange, which rests upon the base, and within which is the ash-pit. A flange, *x*, annular in form, rises upward, over which the conical shell fits snugly. On the inner edge of this base are curved lugs D, which support the grate E. This grate is formed with a central dome, F, which throws the fuel, as it falls, outwardly toward the water-space.

The annular space between the inner and outer shell receives the water which is to be heated and converted into steam. A pipe (shown at L) is provided for the purpose of drawing off the water and sediment whenever occasion requires. At M is also represented an exhaust-pipe, which conducts the steam from the boiler to the chamber in which the food is to be cooked. The tank O, when the apparatus is in use, contains a supply of water kept hot by heat from the smoke-pipe Q, as well as by contact with the bottom N, and ready to supply the boiler below. For the purpose of conducting it to the boiler, a pipe, U, is provided, extending nearly to the bottom of said boiler. This pipe is furnished with a stop, as shown at T, the stem of which extends outside, so that it can be readily operated. Water gages K K are attached to the side of the boiler for the purpose of indicating the amount of water in the boiler.

The operation of my apparatus is manifest from the description of its construction. The fuel introduced through the chute, above described, falls through the smoke-passage upon the grate. The products of combustion fill the interior of the shell G and pass upward through the pipe Q, imparting heat in their passage to the water both in the boiler and in the tank.

I am aware that it is not new to surround the central fire and smoke flues within the annular water-space for the purpose of heating the water, and that heretofore pipes conveying the products of combustion have been made to pass through the water-tank, and I do not broadly claim such a construction.

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

1. A steam-generator consisting of the cylindrical shell I and tapering shell G, joined at their lower edges, in combination with the base A, having a flanged seat, upon which

the said united cylinder and cone rests, and a grate within the interior conical shell, all as set forth.

2. The combination of the grate, the conical and cylindrical shells, the tank O, and the pipe Q, with its chute R, all as set forth.

3. The combination of the cylindrical and conical shells resting upon the base, the tank O, fixed to the plate N, forming the top of the boiler, and the pipe U, with its stop T, all as set forth.

JAMES ALLINGHAM.

Witnesses:
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