(No Model.)

G. PATTON.

AGRICULTURAL BOILER.

No. 299,003. Patented May 20, 1884.

Fig. 1.

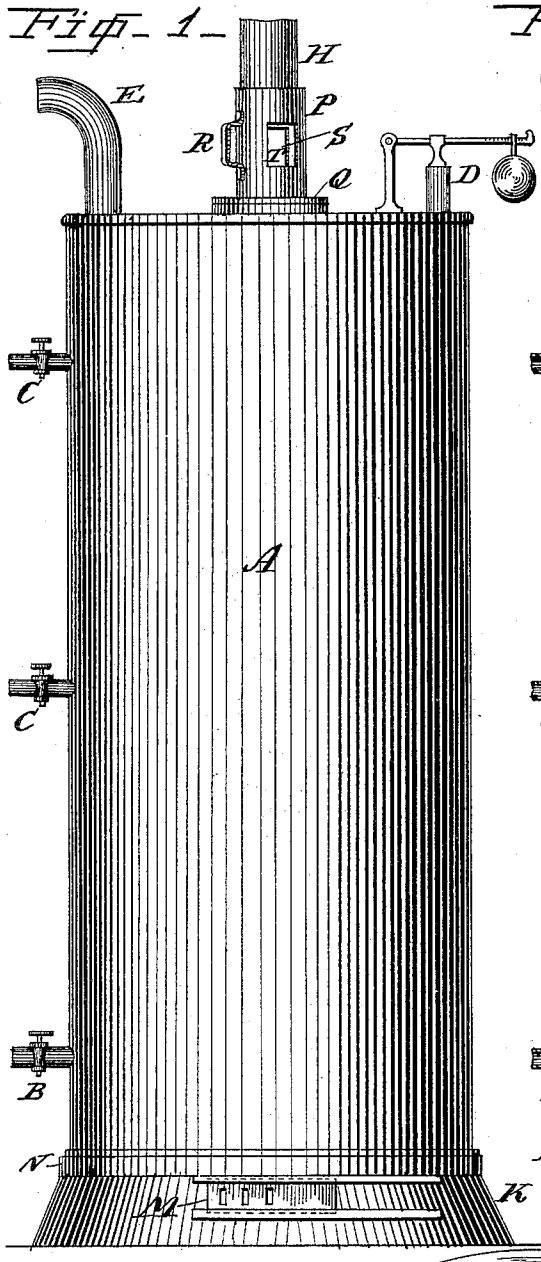


Fig. 2.

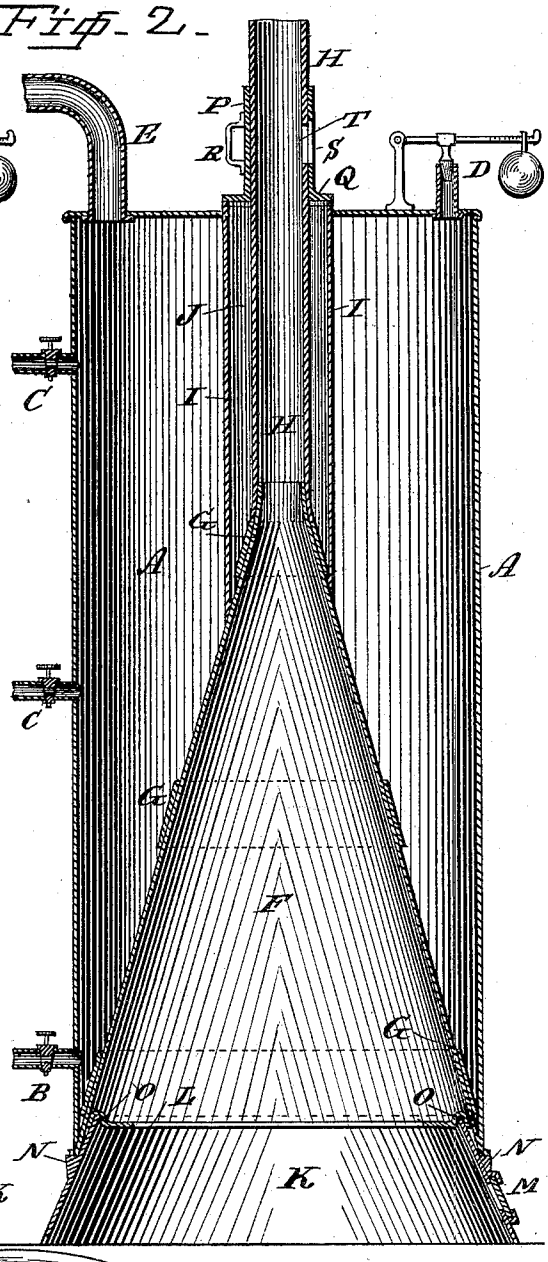
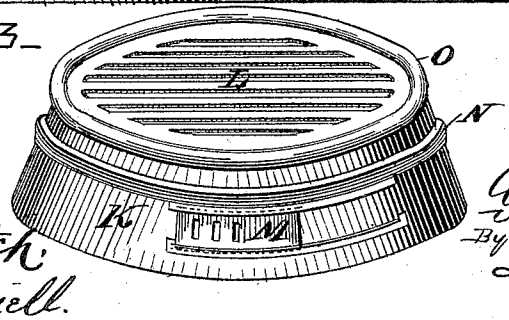


Fig. 3.



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GEORGE PATTON, OF ST. CHARLES, IOWA.

AGRICULTURAL BOILER.

SPECIFICATION forming part of Letters Patent No. 299,003, dated May 20, 1884.

Application filed December 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE PATTON, a citizen of the United States, and a resident of St. Charles, in the county of Madison and State of Iowa, have invented certain new and useful Improvements in Agricultural Boilers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved boiler. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a perspective view of the base with the boiler removed.

My invention has relation to agricultural or domestic boilers; and it consists in the improved construction of an upright boiler of that class, as hereinafter more fully described and claimed.

In the accompanying drawings, A denotes the cylindrical body of the boiler, which is provided with gage-cocks C and a cock, B, near its lower end, for drawing off the water.

The boiler is provided with a safety-valve, D, of any desired construction, and outlet-pipe E.

F is the fire-chamber, which is of a conical shape and strengthened by iron bands G, for the purpose of preventing the walls of the conical chamber from springing with the heat, said bands or hoops being riveted to the cone proper distances apart. The top of the cone opens up into and is attached to the lower end of the smoke-stack H, which is provided with a cylindrical jacket or casing, I, whereby an annular air-chamber, J, is formed around the central flue or smoke-stack, H.

K is the base upon which the boiler rests, and which also supports the removable circular grate L. This base, which is of circular shape, is provided with a sliding door, M, for regulating the draft and for the removal of the ashes. The base is provided with a circular flange, N, which supports the lower end of the boiler, as shown in Fig. 2, and the top of the base forms another flange, O, some distance above the flange or annular shoulder N, upon which the grate is supported, the circular rim of the latter being shaped so as to fit over the upper flange, O, and prevent it from becoming displaced.

Upon the top of the smoke-pipe or chimney H is placed a sleeve, P, having a circular collar, Q, adapted to fit over and close the top of the annular air-chamber J. This sleeve has a handle, R, for turning it, and an opening, S, adapted to register with a corresponding opening, T, in the top of the chimney, so that when the collar is turned by its handle R into such a position that the openings S and T will register fuel may be fed through said openings and through the chimney to the fire upon the grate in the conical fire-box.

From the foregoing description, taken in connection with the drawings, it will be seen that the lower rim of the boiler, where the conical fire-chamber connects with the cylinder forming the sides of the boiler, is protected from contact with the fire by the raised flange O, which supports the grate some distance above the flange or annular shoulder N, which supports the boiler. The jacket or air-chamber J, which surrounds the chimney prevents the fire and products of combustion from direct contact with the inner wall, I, of the upper part of the boiler, which forms the steam-dome, so that the boiler will not be injuriously affected by the heat, even if the water should sink below the apex of the cone. By properly adjusting the door M and flue-collar P Q the draft may readily be regulated, as desired, and as there is no door in the boiler proper for feeding fuel to the fire-box the lower part of the boiler will be much stronger than in boilers of that class as ordinarily constructed.

This boiler is adapted for heating water, cooking feed, furnishing steam for motive powers, and for all other purposes to which this class of boilers is adapted.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of the cylindrical boiler provided with the conical fire-box, the smoke-

flue, and the flue-jacket, constructed and arranged as described, and the movable collar fitting the flue upon the top of the boiler, and provided with a bottom flange fitting over the air-chamber formed by the flue-jacket, and with an aperture adapted to register with a corresponding aperture in the flue, substantially as and for the purpose set forth.

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

GEORGE PATTON.

Witnesses:
ABRAHAM D. BARGOR,
SIMEON B. HOFF.