

H. A. MEARS.  
Agricultural Boilers.

No. 145,517.

Patented Dec. 16, 1873.

Fig. 1.

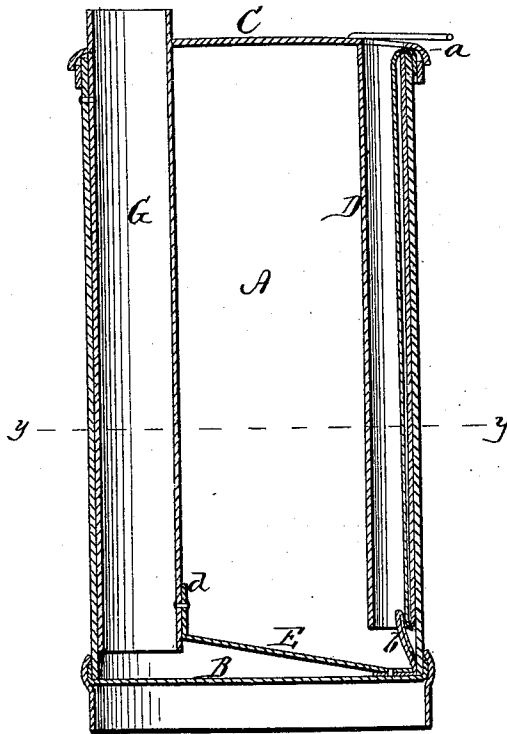
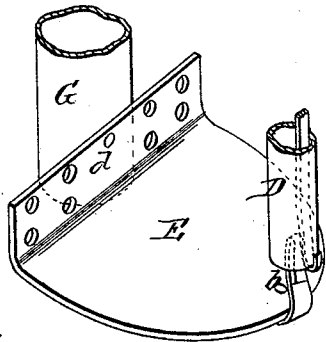


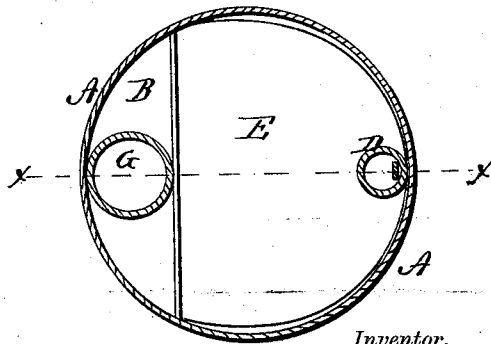
Fig. 2.



Witnesses:

Henry N. Miller  
C. L. Evert.

Fig. 3.



Inventor.

Horace A. Mears,  
per Alexander Watson

Attorneys.

# UNITED STATES PATENT OFFICE.

HORACE A. MEARS, OF ROCKFORD, ILLINOIS.

## IMPROVEMENT IN AGRICULTURAL BOILERS.

Specification forming part of Letters Patent No. **145,517**, dated December 16, 1873; application filed November 6, 1873.

*To all whom it may concern:*

Be it known that I, HORACE A. MEARS, of Rockford, in the county of Winnebago and in the State of Illinois, have invented certain new and useful Improvements in Agricultural Boilers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an agricultural boiler, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my boiler through the line *x x* of Fig. 3. Fig. 2 is a perspective view of the plate upon which the fuel is placed, with the lower ends of the draft-pipes. Fig. 3 is a horizontal section through the line *y y*, Fig. 1.

A represents a tubular cylinder, of any suitable dimensions, provided with a stationary bottom, B, and a removable cover, C, forming the fire-box or heater. D represents the flue for letting in air to the fire, said flue being suspended from the upper edge of the heater by a hook, *a*, and its lower end held by an arm or projection, *b*, from the plate E, upon which the fuel is placed. G represents the outlet-pipe for the smoke. Both of these pipes or flues, D and G, are made separate from the

heater, and cannot warp so as to detach from the sides. When these flues burn out they can easily be removed at little trouble and expense. The plate E, upon which the fuel rests, is raised above the lower end of the outlet draft-flue G, and is inclined downward toward and below the lower end of the inlet draft-flue D, which tends to keep the fuel before the draft; and, as the heater is generally emptied every time, the ashes never accumulate to obstruct it. At the upper edge of the plate E is an upward-projecting flange, *d*, to prevent the fuel from falling down below, and this flange is perforated to admit of the passage of the smoke through it.

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

1. The inclined plate E, provided with the perforated flange *d*, and arranged, in relation to the outlet draft-flue G and the inlet draft-flue D, substantially as and for the purposes herein set forth.

2. The combination of the cylinder A, with bottom B and removable cover C, the draft-flues D G, and inclined plate E, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of October, 1873.

HORACE A. MEARS.

Witnesses:

J. G. MANLOVE,  
J. F. AGARD.