M. MATHEWS & A. L. L. SCOVILLE.

Agricultural Boiler.

No. 206,744. Patented Aug. 6, 1878.

Fig. 1.

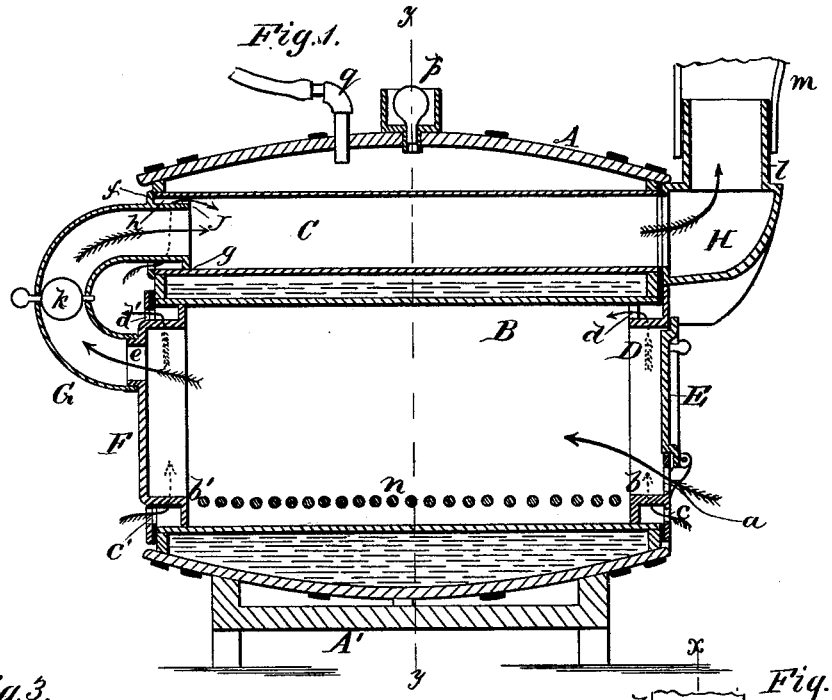


Fig. 3.

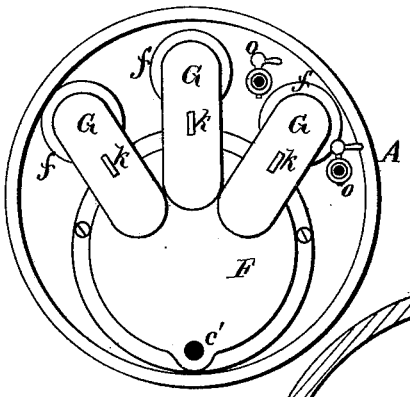


Fig. 2.

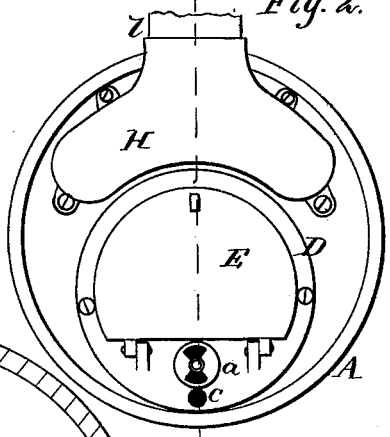
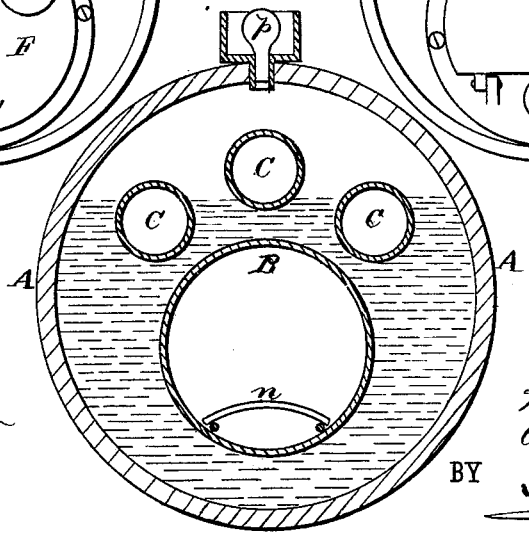


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MORTIMER MATHEWS AND ALBERTUS L. L. SCOVILLE, OF SENECA, KANSAS.

IMPROVEMENT IN AGRICULTURAL BOILERS.

Specification forming part of Letters Patent No. **206,744**, dated August 6, 1878; application filed June 17, 1878.

To all whom it may concern:

Be it known that we, MORTIMER MATHEWS and ALBERTUS L. L. SCOVILLE, of Seneca, in the county of Nemaha and State of Kansas, have invented a new and Improved Agricultural Boiler, of which the following is a specification:

Figure 1 is a vertical section taken on line *x x* in Fig. 2. Fig. 2 is a front elevation. Fig. 3 is a rear elevation. Fig. 4 is a vertical transverse section taken on line *y y* in Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

Referring to the drawing, A is an ordinary wooden barrel of stout construction, which is mounted upon a frame, A′, that supports it a small distance from the earth or floor. The heads of the barrel are apertured to receive the ends of the fire-place cylinder B, and also the flues C. The cylinder B and flues C are made of sheet metal, (preferably of galvanized iron,) and are secured in the barrel-heads by means of nails or screws, or in any other convenient and substantial manner.

A casting, D, having a fire-door, E, and draft-aperture *a*, and provided with a circumferentially-grooved flange, *b*, is fitted to the cylinder B and projects into the said cylinder sufficiently to protect the barrel-head. Below the draft-aperture *a* there is an aperture, *c*, in the casting D for receiving cool air, which passes through the circumferential groove around the flange *b*, and is discharged through the opening *d* into the cylinder B.

To the rear end of the cylinder B is fitted a casting, F, having a grooved flange, *b′*, which is similar to the flange *b*, and is designed for the same purpose. It is supplied with air through an aperture, *c′*, which is discharged outwardly through an opening, *d′*.

The casting F closes the rear end of the cylinder, and has flanged openings *e*, which communicate with the flues C through elbows or return-bends G, which are fitted over the flanges of the openings *e* and enter the flues C. The elbows are smaller in diameter than the flues, and are each provided with two collars, *f g*. The collars *g* fit the flues, and the collars *f* cap over the rear ends of the flues, leaving an annular air-space, *h*, around each elbow, which receives air through an aperture, *i*, in the lower part of the collar *f*, and discharges it through an aperture, *j*, into the flue. Each elbow is provided with a damper, *k*.

A smoke-box, H, which covers the forward ends of all of the flues C, is secured to the barrel-head, and is provided with a collar, *l*, for receiving the smoke-pipe *m*.

The cylinder B is provided with a convex grate, *n*, which supports the fuel above the ashes.

The rear end of the boiler is provided with try-cocks *o*, and at the top there is a safety-valve, *p*, and a steam-discharge pipe, *q*.

The advantages claimed for our improved boiler are its cheapness, its efficiency, and economy in the consumption of fuel.

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

1. The elbows G, having the collars *f g*, in combination with the cylinder B and flues C, as herein shown and described.

2. The combination, in an agricultural boiler, of the barrel A, sheet-metal cylinder B, cast-iron heads D F, elbows G, flues C, and smoke-box H, as herein shown and described.

MORTIMER MATHEWS.
ALBERTUS L. L. SCOVILLE.

Witnesses:
JAMES H. HATCH,
JOHN P. CONE.