(No Model.) 2 Sheets—Sheet 1.

M. & W. N. RUMELY.

STEAM BOILER.

No. 347,384. Patented Aug. 17, 1886.

Fig. 1.

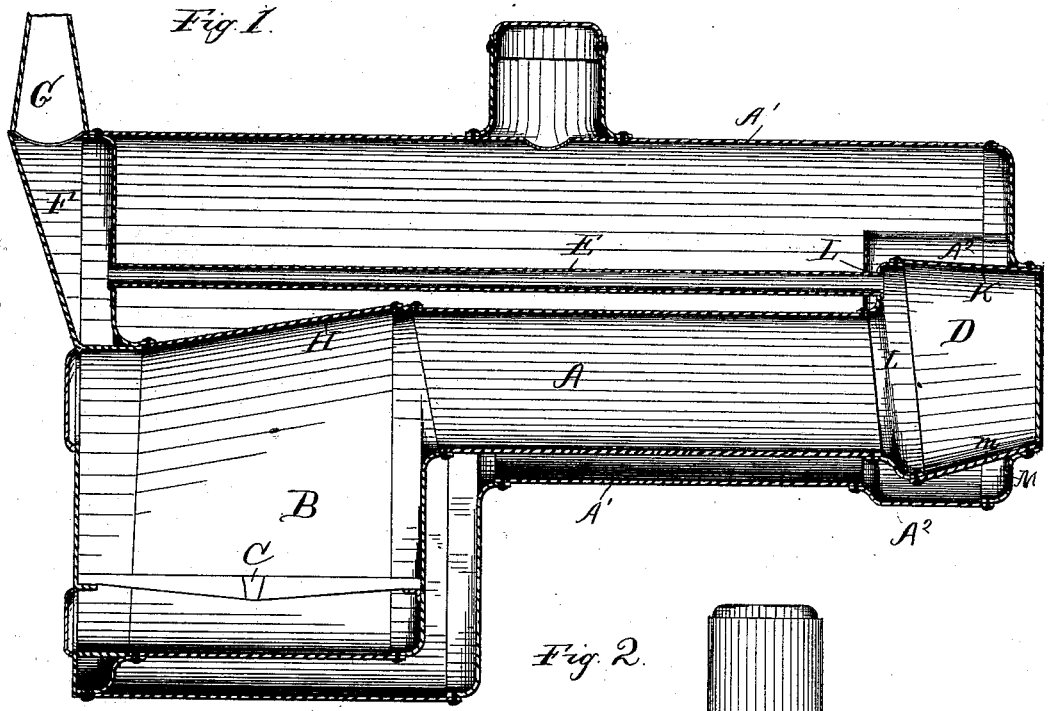


Fig. 2.

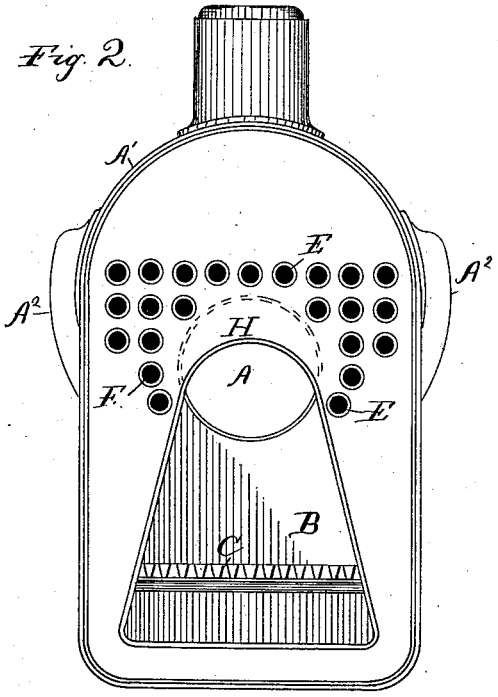
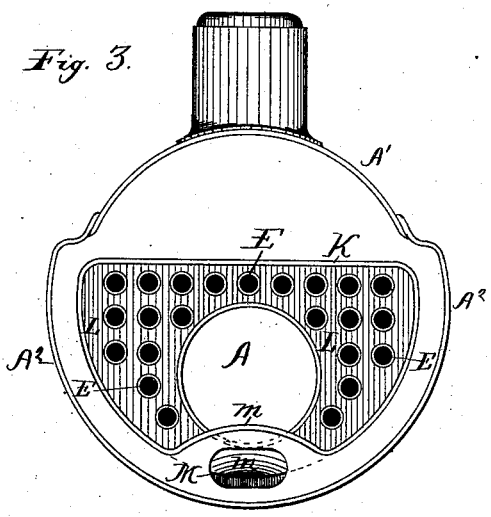


Fig. 3.



Witnesses.
Lew. C. Curtis
H. M. Munday.

Inventor:
Meinrad Rumely
William N. Rumely
By Munday, Evarts & Adcock
his Attorneys.

(No Model.) 2 Sheets—Sheet 2.

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STEAM BOILER.

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Fig. 4

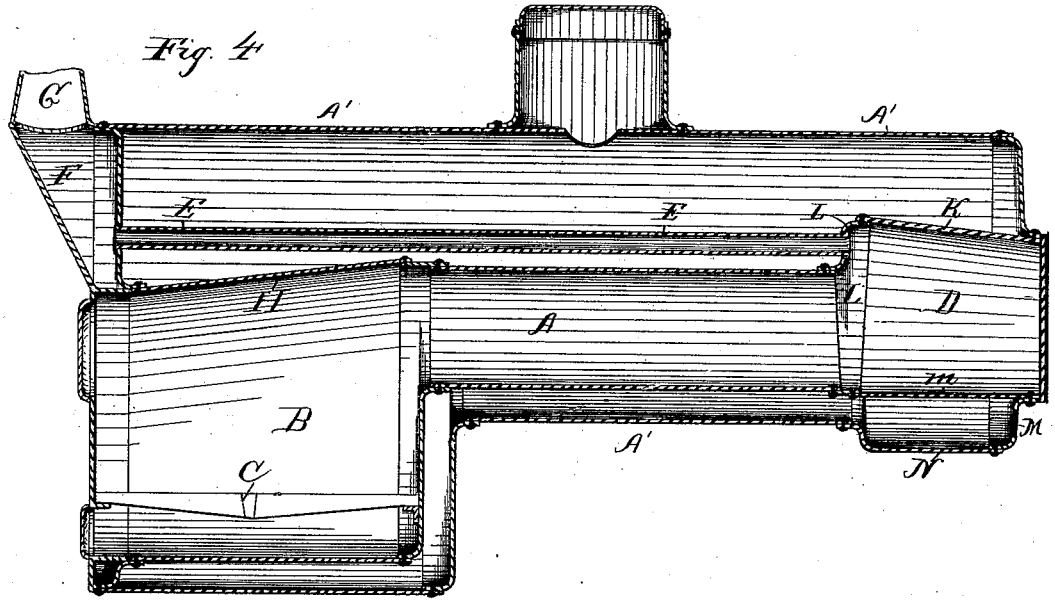


Fig. 5.

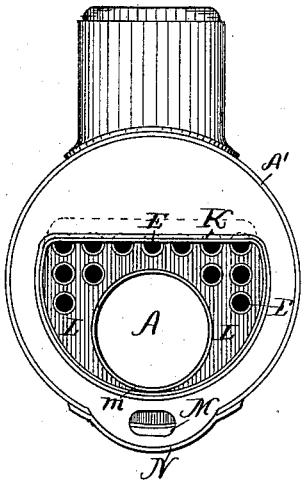
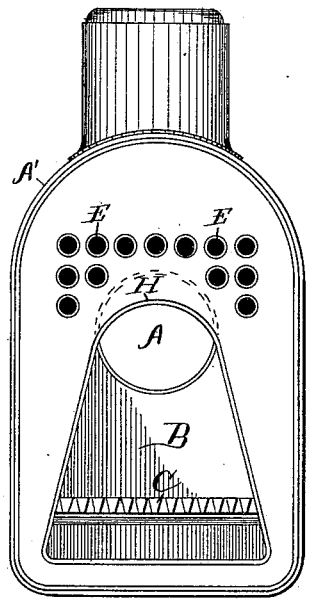


Fig. 6



Witnesses:
Lew. C. Curtis
F. W. Munday.

Inventors:
Meinrad Rumely
William N. Rumely
By Munday, Evarts and Adcock
his Attor. zys:

UNITED STATES PATENT OFFICE.

MEINRAD RUMELY AND WILLIAM N. RUMELY, OF LA PORTE, INDIANA.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 347,384, dated August 17, 1886.

Application filed February 20, 1886. Serial No. 192,641. (No model.)

To all whom it may concern:

Be it known that we, MEINRAD RUMELY and WILLIAM N. RUMELY, citizens of the United States, residing in La Porte, in the county of La Porte and State of Indiana, have invented a new and useful Improvement in Steam-Boilers, of which the following is a specification.

This invention relates, particularly, to that class of steam-boilers which are designed for use upon road-engines employed for operating thrashing-machines and the like. Such boilers, when used for operating or driving the thrashing-machine, operate as stationary engines, and it is frequently desirable to supply them with straw as fuel. When the thrashing-machine is being moved from place to place upon the road, the crown-sheet at one end or other of the boiler is liable to be left dry or bare at one end or the other of the boiler in going up or down hill, and thus produce injury.

The object of our invention is to provide a practical and efficient boiler of light and cheap construction adapted for such uses. To prevent as much as possible the crown-sheet at either end of the boiler from being exposed, owing to the unevenness of the ground, we dip or incline the sheet at either end, leaving the highest portion of the boiler in the middle.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a central longitudinal section of a device embodying our invention; Fig. 2, a front end view; Fig. 3, a rear end view, and Figs. 4, 5, and 6 are views similar to Figs. 1, 2, and 3, showing a slight modification.

In said drawings, A represents the main flue; B, the fire-box; C, the grate; D, the combustion-chamber, and E the return-flues leading to the smoke-box F and stack G.

The crown-sheet or part H of the main flue over the fire-box B is inclined downward from the inner end of the fire-box toward its outer end, so that there will be less danger of said crown-sheet being exposed when this end of the boiler is elevated higher than the other.

K is a flat crown-sheet over the combustion-chamber D. This crown-sheet is also inclined from its inner end toward the front end of the boiler, as indicated in Figs. 1 and 4, so that when this end of the boiler is elevated the liability of the crown-sheet being exposed will be diminished. To give the requisite size to the flue-sheet L and space for the required number of return-flues without too much elevation of the crown-sheet K, we make the flue-sheet of about the same diameter as the main shell A′ of the boiler, and provide an enlarged shell part, A^2, surrounding the combustion-chamber D, and which forms the water-space between the combustion-chamber and the shell.

The lower part or wall, *m*, of the combustion-chamber may preferably be inclined upward toward its outer end, as shown in Fig. 1, to give space for a hand-hole, M, at the end of the boiler. To give additional space for this hand-hole, if required, we may extend the bottom sheet, *m*, about horizontally with the main flue, or provide a swell or enlargement, N, in the outer shell at this point, as shown at Figs. 4 and 5.

The grate C may rest upon flanges or angle-irons secured to the walls of the fire-box.

We hereby disclaim, as forming no part of our invention, the steam-boiler shown and described in Letters Patent of the United States No. 253,385 to Huber, dated February 7, 1882.

We claim—

1. The combination, in a boiler, of a main flue, A, fire-box B, having its upper wall or crown-sheet, H, inclined downwardly from the inner end of the fire-box toward its outer end, and combustion-chamber D, having its crown-sheet K inclined downwardly from its inner toward its outer end, substantially as specified.

2. The combination of main flue A, shell A′, fire-box B, combustion-chamber D, flue-sheet L, and crown-sheet K below the water-line of the boiler, said shell A′ having enlargement A^2 surrounding said combustion-chamber, substantially as specified.

3. In a boiler, the combination, with a fire-box, of a main flue, the combustion-chamber D, and return-flues, the outer shell of said boiler having an enlargement surrounding said combustion-chamber, and forming a water-space between said shell and the walls of said combustion-chamber, and the upper or crown sheet of said combustion-chamber being de-

pressed below the water-line of the boiler, substantially as specified.

4. The combination, with a main flue, of a fire-box and a combustion-chamber at the end of said main flue, said fire-box and combustion-chamber each having an upper or crown sheet inclined from its inner toward its outer end, substantially as specified.

5. The combination, with a fire-box, of the main flue, a combustion-chamber, D, the outer shell A′, having an enlargement, A^2, surrounding said combustion-chamber, the bottom wall, *m*, of said combustion-chamber being inclined upward toward its end, and a hand-hole, M, substantially as specified.

MEINRAD RUMELY.
WILLIAM N. RUMELY.

Witnesses:
JOHN HANNA,
THOMAS MACKEY.