No. 688,053. Patented Dec. 3, 1901.

J. H. ARRASMITH.

BOILER.

(Application filed Apr. 19, 1901.)

(No Model.)

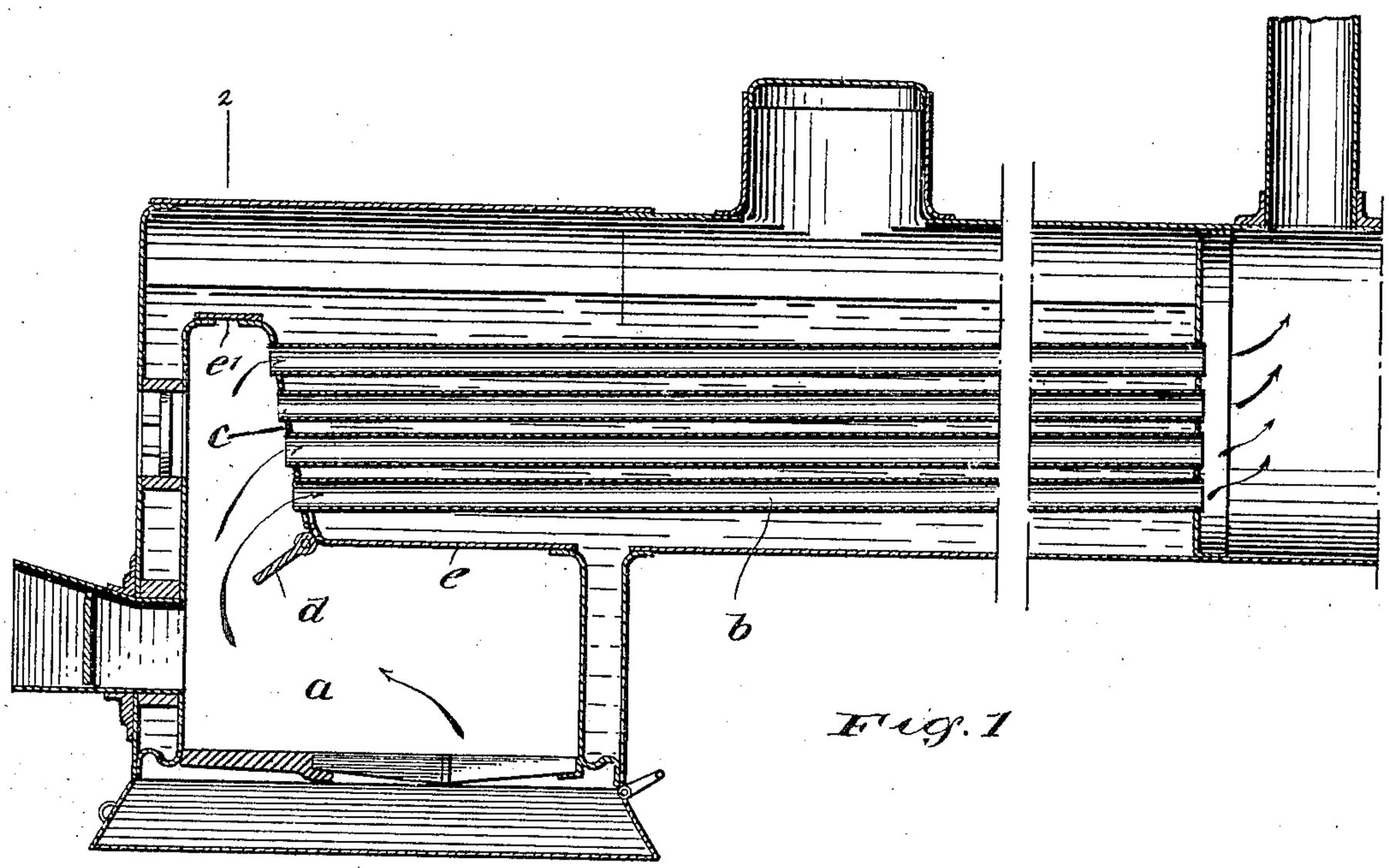

Fig. 1

Fig. 2

WITNESSES:

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JAMES HENRY ARRASMITH, OF COLFAX, WASHINGTON.

BOILER.

SPECIFICATION forming part of Letters Patent No. 688,053, dated December 3, 1901.

Application filed April 19, 1901. Serial No. 56,577. (No model.)

To all whom it may concern:

Be it known that I, JAMES HENRY ARRASMITH, a citizen of the United States, and a resident of Colfax, in the county of Whitman and State of Washington, have invented a new and Improved Boiler, of which the following is a full, clear, and exact description.

This invention relates to a direct-flue steam-boiler designed principally for use in connection with straw fuel. These boilers are usually employed for agricultural purposes, such as for supplying the engines which drive threshing-machines, straw being employed as fuel owing to its economy.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a sectional view of the invention on the line 1 1 of Fig. 2, and Fig. 2 is a section on the line 2 2 of Fig. 1.

a indicates the fire-box, and *b* indicates the fire-tubes. These tubes *b* are extended rearward over the fire-box and terminate adjacent to the rear wall thereof, the tube-sheet *c* lying in an inclined position, so as to facilitate the passage of the burning gases from the grate rearward and thence into the tubes.

d indicates a baffle-plate which is hingedly mounted just below the tubes and adjustable to regulate the passage of the draft.

e and *e'* indicate the crown-sheets, the part *e* of which is the major portion and lies below the fire-tubes. The part *e'* is the minor portion, and this arrangement reduces to the minimum the liability of burning out the crown-sheets. This construction enables the boiler to hold more water than others of the same exterior dimensions, and by the extension of the tubes more heating-surface is obtained. Further, the arrangement described insures an effective draft and thorough combustion.

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

1. A steam-boiler having a fire-box and fire-tubes, the fire-tubes being extended rearward over the fire-box to the rear portion thereof, the tube-sheet at the rear portion of the fire-box inclining upwardly and rearwardly, for the purpose specified.

2. A steam-boiler having a fire-box, fire-tubes extended rearward over the fire-box, a tube-sheet lying in an inclined position over the rear portion of the fire-box, crown-sheets in major and minor sections, the major of which is below the fire-tubes, and a baffle-plate hingedly mounted below the tubes, substantially as described.

3. A steam-boiler having a fire-box, fire-tubes extended rearward over the fire-box, a tube-sheet lying in an inclined position over the rear portion of the fire-box, and a baffle-plate hinged below the tubes for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES HENRY ARRASMITH.

Witnesses:

OSCAR JOEL COWE,

BENJAMIN F. NEWMAN.