

(No Model.)

A. E. DALLEY.

BOILER.

No. 294,448.

Patented Mar. 4, 1884.

Fig. 1.

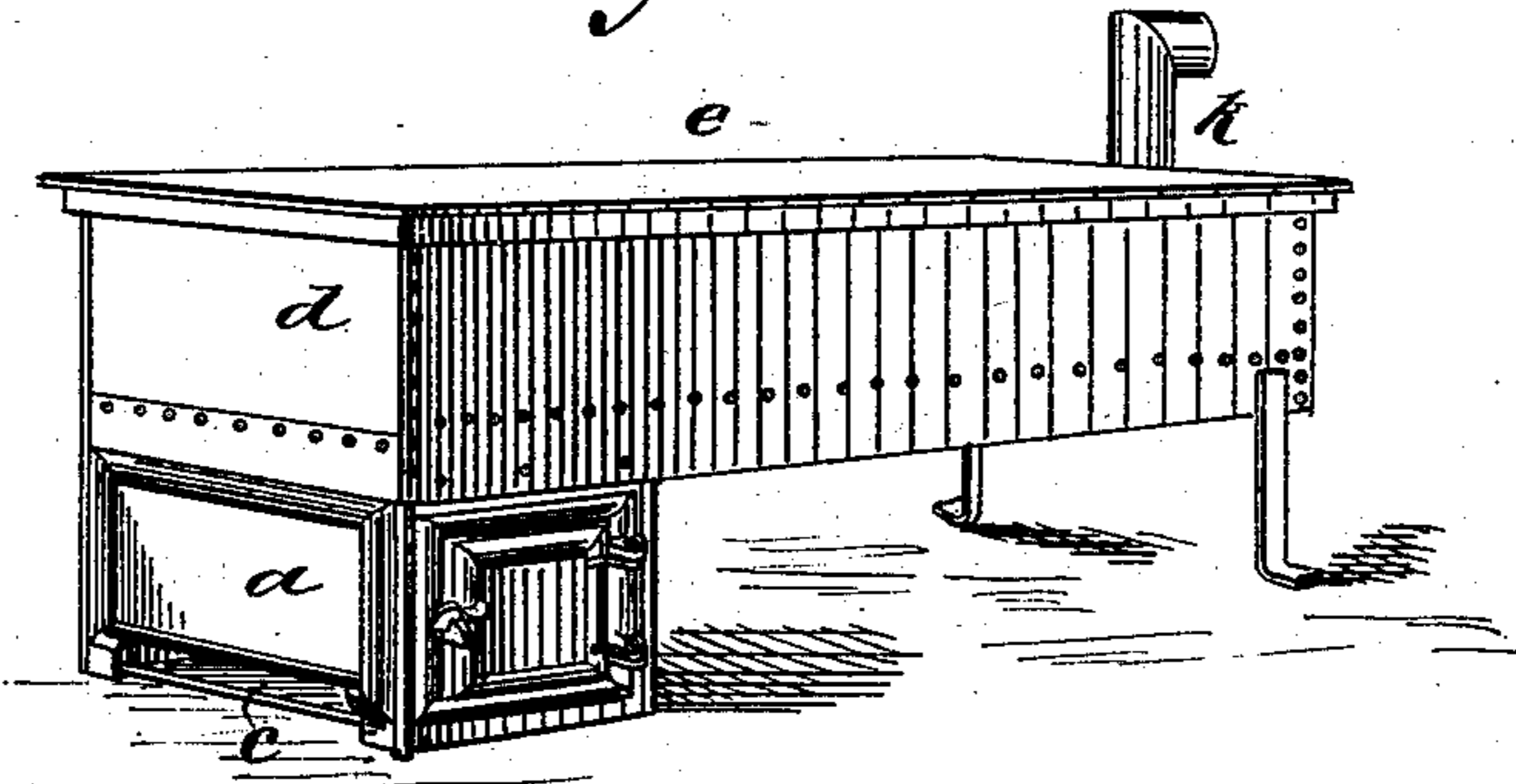


Fig. 2.

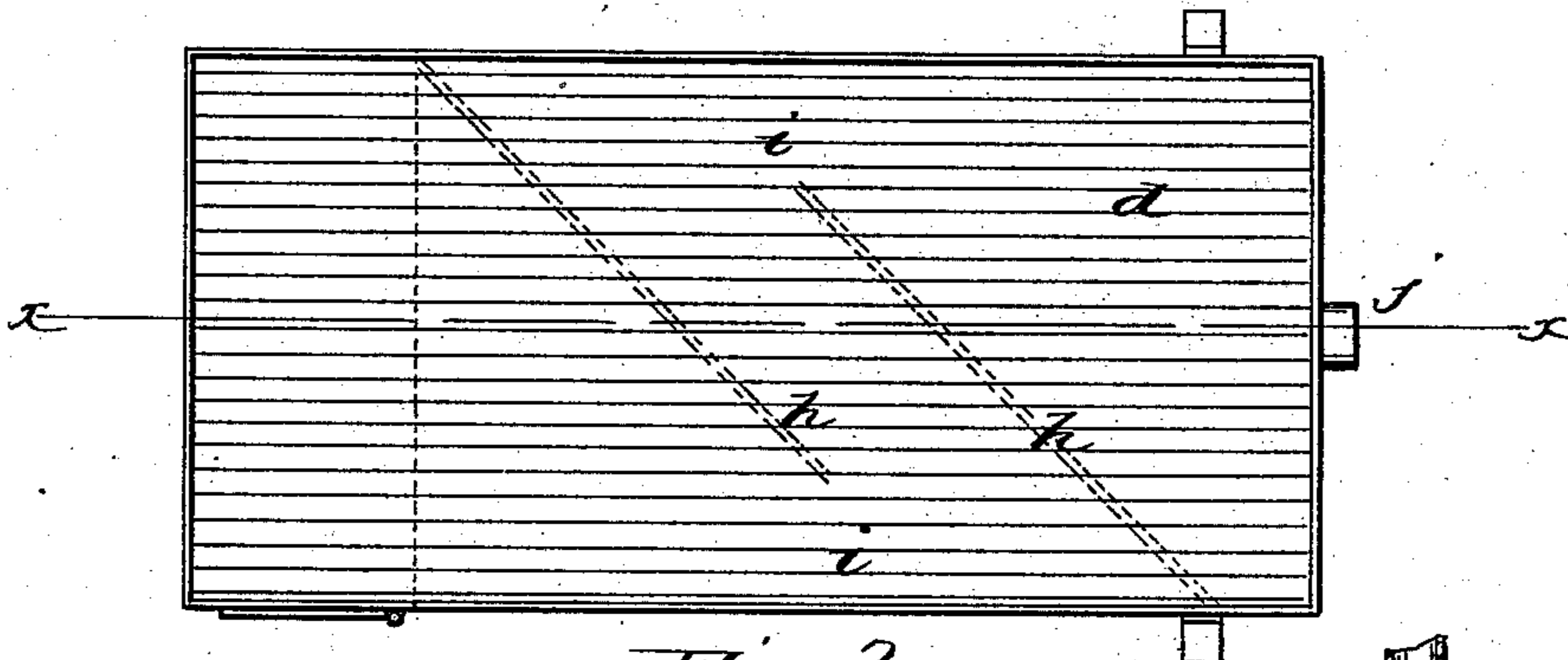
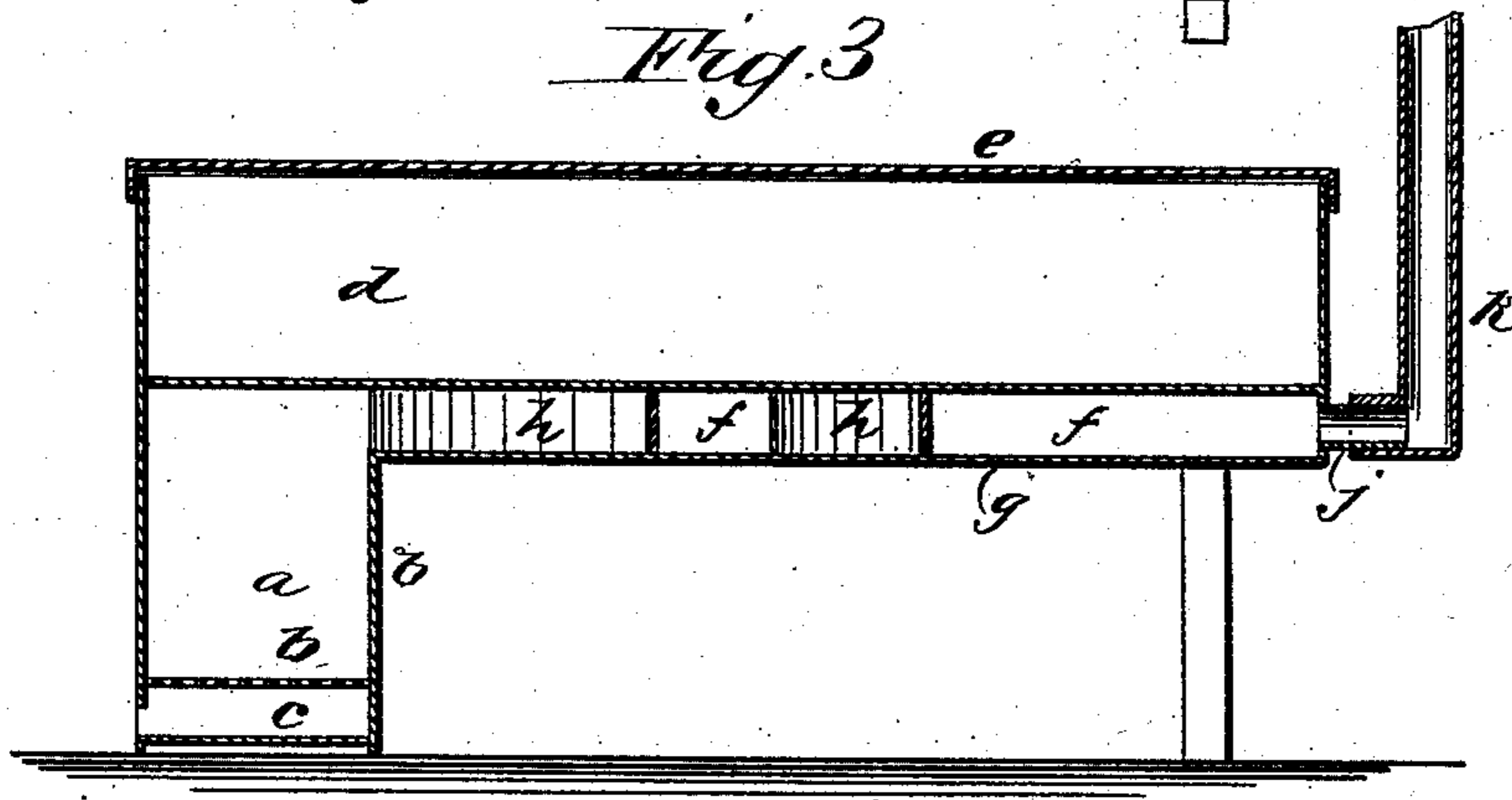


Fig. 3.



WITNESSES:

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ALFRED E. DALLEY, OF QUINCY, MICHIGAN.

BOILER.

SPECIFICATION forming part of Letters Patent No. 294,448, dated March 4, 1884.

Application filed June 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALFRED E. DALLEY, of Quincy, in the county of Branch and State of Michigan, have invented a new and Improved Boiler, of which the following is a full, clear, and exact description.

My invention consists of an improvement in the construction of the combined furnace and boiler device of common use among farmers and others for cooking food for cattle and hogs, boiling sirup, making soap, and the like, whereby it is designed to provide a simpler and more efficient and economical device than any now in use, the said improvement being an arrangement of the flue through which the heat products from the furnace pass, by which the heat will act more effectually on the bottom of the boiler than as commonly arranged, as hereinafter fully described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved boiler. Fig. 2 is a plan view with the cover removed, and Fig. 3 is a longitudinal sectional elevation on the line *x x* of Fig. 2.

I make a furnace, *a*, of suitable size and dimensions, preferably of cast-iron side and end walls, with fire-grate *b* and ash-pan *c*, which I locate under one end of a long pan-shaped boiler, *d*, of sheet-iron, properly riveted together, and provided with a close-fitting cover, *e*, of similar material; and from the top of the furnace *a*, along under the boiler, and extending to the outer end of said boiler, I arrange a flue, *f*, for the heat products from the furnace, by inclosing a space of suitable depth under the bottom of the boiler and extending its whole breadth with a plate, *g*, said plate being fitted between the sides and back end of

the boiler, extended below the bottom of the boiler for the purpose; or said plate may have side flanges and an end flange turned upward to join with and be attached to the bottom of the boiler in any approved way. In this flue I arrange two or more diagonal partitions, *h*, connected at one end to the side of the flue, so as to prevent any passage of the heat products thereat, but terminating short of the other side for allowing a passage at *i*; and I arrange the passages *i* alternately on opposite sides of the flue, to cause the heat products to traverse the bottom of the pan crosswise and backward to some extent, which confines the heat and equalizes the application of the same upon the whole surface of the bottom of the boiler very effectually. From the rear end of the boiler the heat escapes by a pipe-connection, *j*, into a smoke-pipe, *k*, to be discharged into a chimney or into the air, as preferred.

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

1. The improved boiler consisting of a furnace, *a*, pan *d*, and cover *e*, the said pan having a flue, *f*, under the bottom, through which the heat products from the furnace pass, and in which two or more oblique partitions, *h*, are arranged, to cause the heat to traverse the bottom of the pan crosswise and backward, substantially as described.

2. The furnace *a*, arranged under one end of the pan, and the flue *f*, extending from said furnace along under the pan to the other end, and having two or more diagonal partitions, *h*, arranged in said flue, substantially as described.

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Witnesses:

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