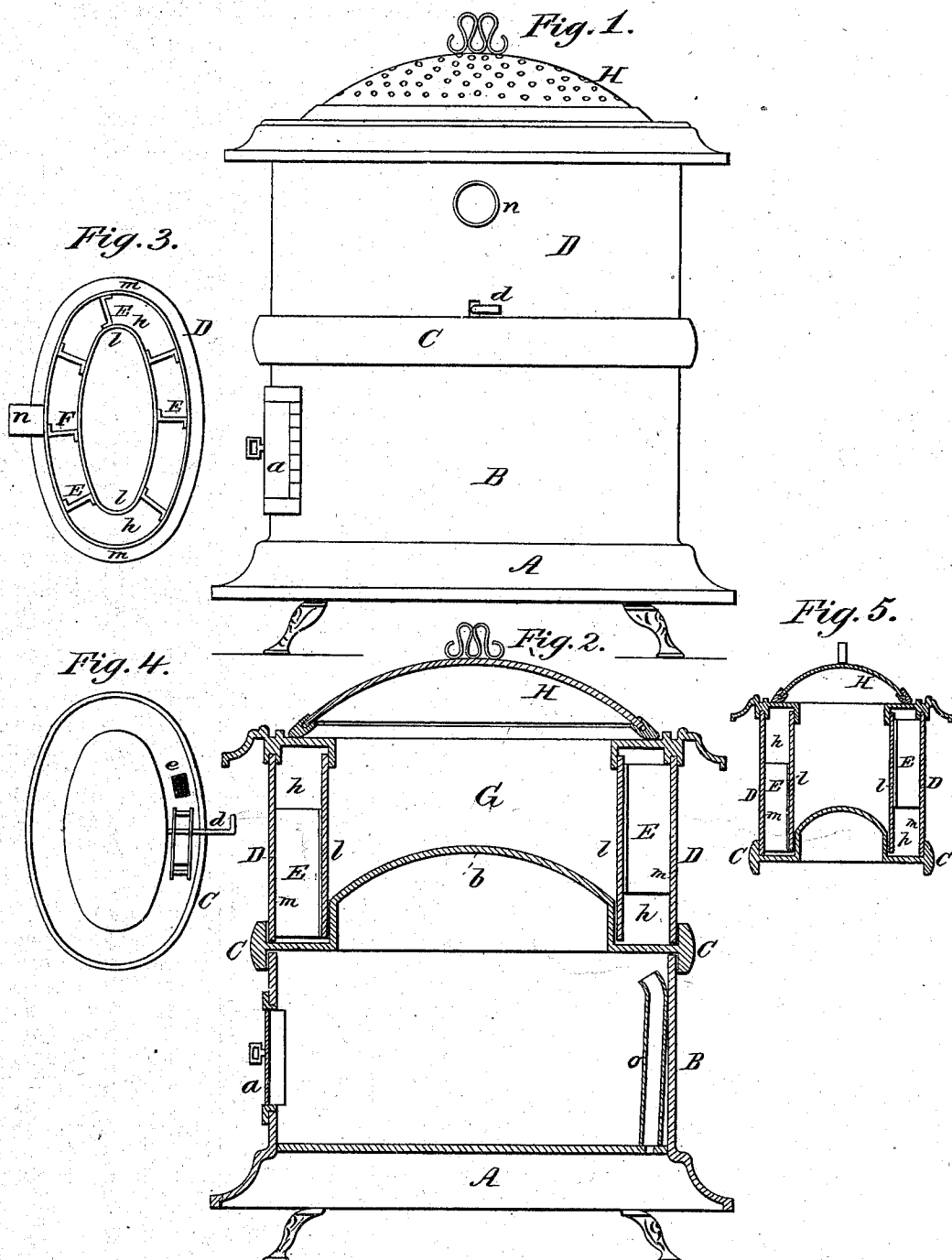


A. BRIGHTMAN.
Improvement in Heating-Stoves.

No. 131,734.

Patented Oct. 1, 1872.



WITNESSES,

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UNITED STATES PATENT OFFICE.

ALBERT BRIGHTMAN, OF NEW BEDFORD, MASSACHUSETTS.

IMPROVEMENT IN HEATING-STOVES.

Specification forming part of Letters Patent No. 131,734, dated October 1, 1872.

To all whom it may concern:

Be it known that I, ALBERT BRIGHTMAN, of New Bedford, county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Heating-Stoves, of which the following is a specification:

My invention consists of certain improvements in heating-stoves whereby the products of combustion are greatly utilized and an extended radiating surface obtained, all of which will be fully set forth hereinafter.

In the drawing, Figure 1 is a side elevation of my improved heating-stove; Fig. 2, a central sectional view of Fig. 1; and Figs. 3, 4, and 5, detached views of parts of the stove.

A represents the lower portion or base of the stove, and B the combustion-chamber supported upon suitable legs. Upon the base B of the stove is placed a plate, C, which is provided at its center with a dome, *b*. Between the outer edge of this plate C and the dome *b* is placed the upper section D of the stove, which consists of an outer casing, *m*, and an inner casing, *l*, forming an intermediate space or chamber, *h*. Between these two casings, and at intervals entirely around the chamber *h*, are a series of deflectors, E, every other one extending from the top of the section D to near the bottom of the same, and the remaining or intermediate ones extending from the bottom of the section D to near the top of the same. In this chamber *h* is arranged a partition, F, which extends entirely from the top to the bottom of the section D, for a purpose explained hereafter. The plate or section C is provided with an ordinary damper, *d*, and with an opening, between which opening and damper the partition F will be arranged when the top section is placed in position, and the stove-pipe hole *n* and damper being upon the same side of the partition, the products of combustion, when necessary, can be caused to pass immediately out the chimney.

When the fire has been started the products of combustion pass up to the dome *b* and circulate around the same and out through the opening *e* (when the damper is closed) into the

chamber *h*, and will then circulate around the deflectors E, first under and over each alternate one until the partition F is reached, when the smoke, &c., passes out into the chimney. By this peculiar arrangement of deflectors within the chamber *h*, in connection with the dome *b*, a large and extended radiating surface is obtained and the products of combustion greatly utilized.

In Fig. 2, *o* represents a tube extending from the base of the stove to the interior of the fire-chamber for the purpose of ventilating that portion of the room beneath the stove, and, at the same time, carrying off the gas and smoke and prevent the fire being smothered by the same when the draft in front is closed.

If cinders, &c., should accumulate in the chamber *h*, the section D can be easily removed and cleansed, as the parts B, C, and D are, or may be, connected together by bolts and nuts, or otherwise.

I am aware that it is not new to arrange vertical partitions in radiating attachments for stoves and furnaces, extending alternately nearly to the top or bottom, so that a circuitous route for the products of combustion is secured; and such, broadly, I do not claim; but

What I claim as my invention is—

The plate C, provided with the dome *b*, opening *e*, and damper *d*, and arranged upon the combustion-chamber B, as shown, in combination with the partition F and the series of deflectors E, which are arranged within the smoke-circulating chamber *h* and between the outside and inside casings *m* and *l*, the whole constructed and arranged and operating in combination with the base B, provided with air tube or pipe *o*, substantially as herein shown and described.

To the above I have signed my name this 9th day of September, A. D. 1871.

ALBERT BRIGHTMAN.

Witnesses:

ISAAC C. SHERMAN,
HENRY M. MOSHER.