

(No Model.)

W. L. McDOWELL.

HOT AIR FURNACE.

No. 362,297.

Patented May 3, 1887.

Fig. 1.

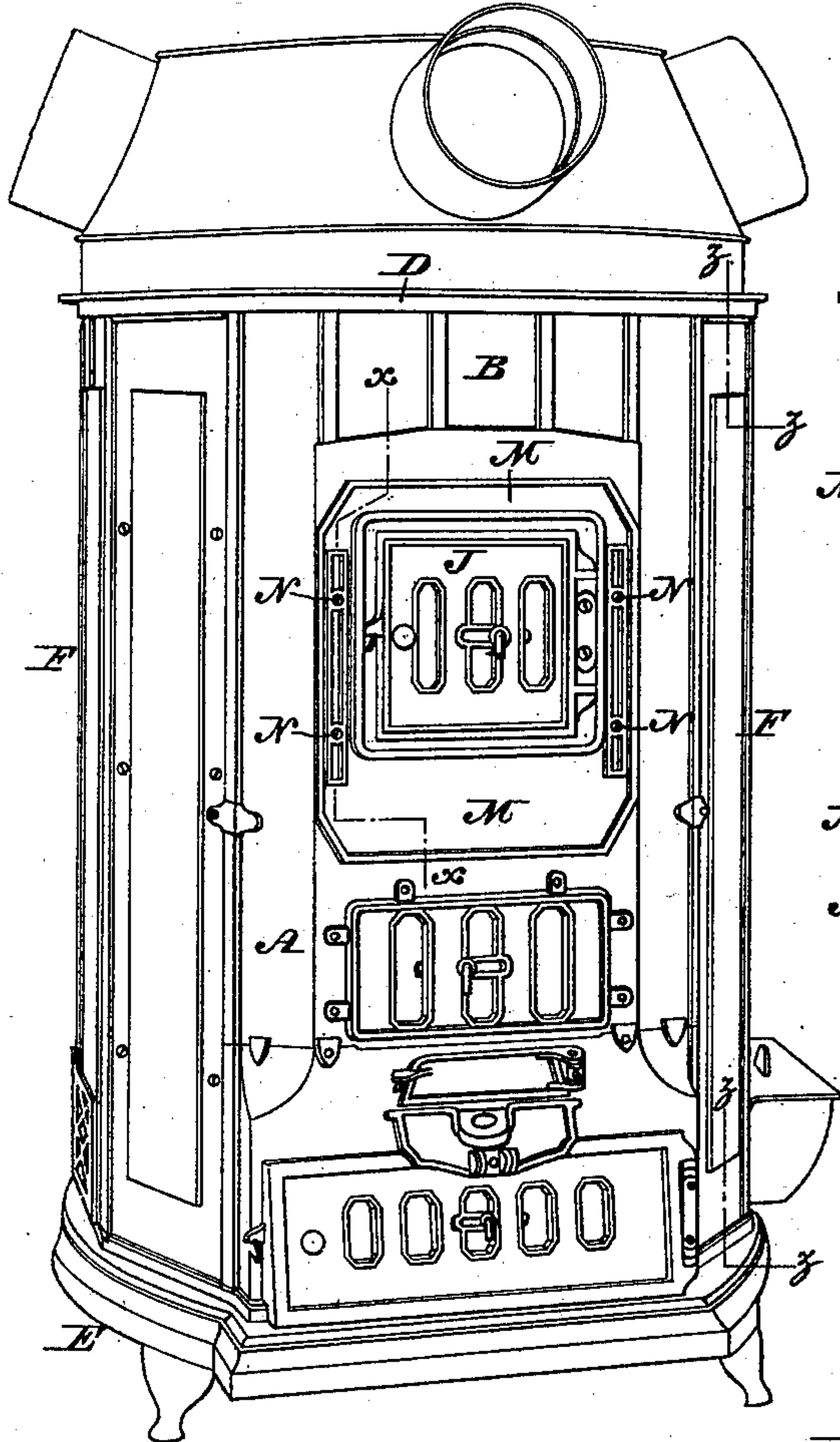


Fig. 2.

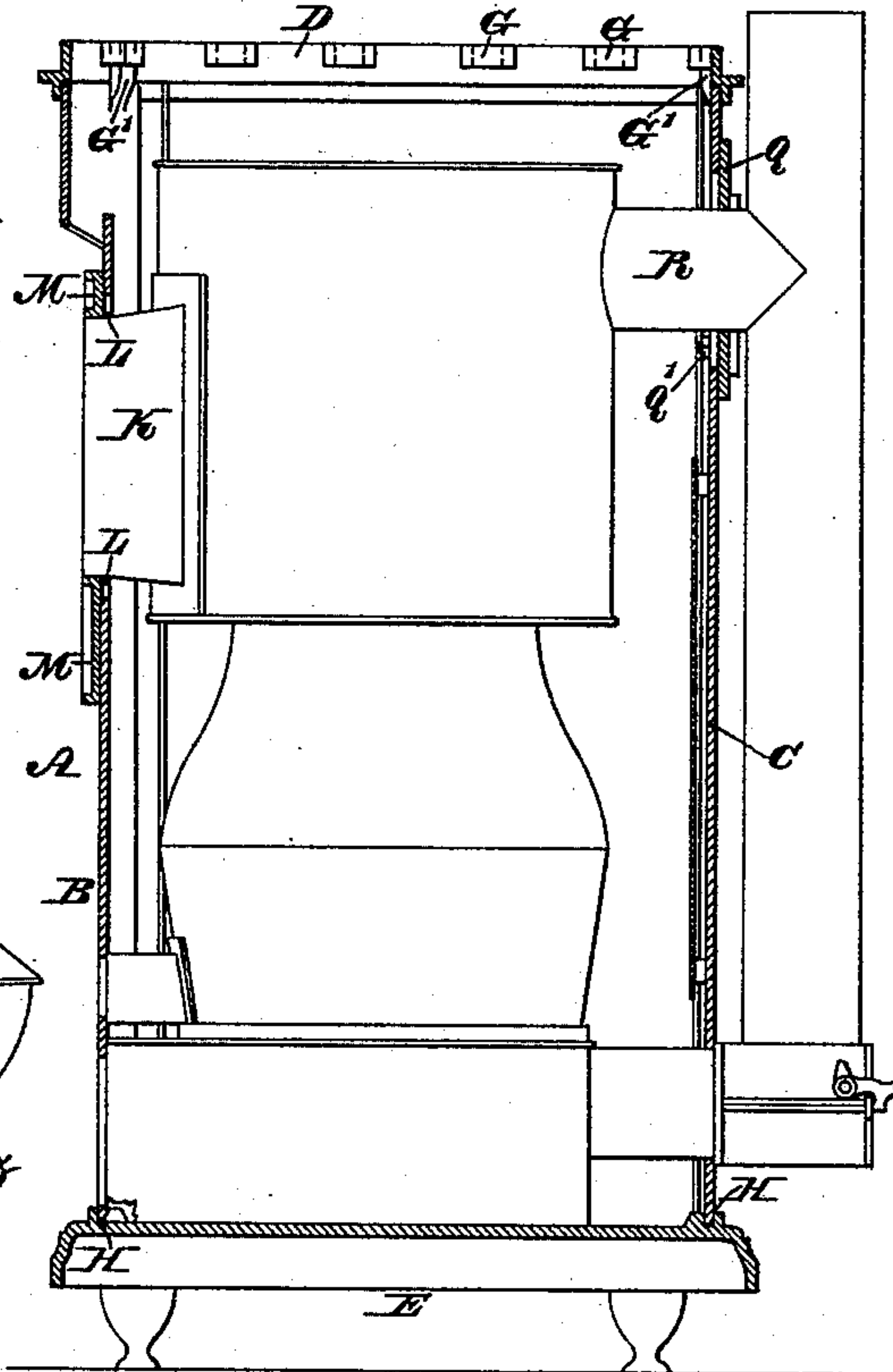


Fig. 3.

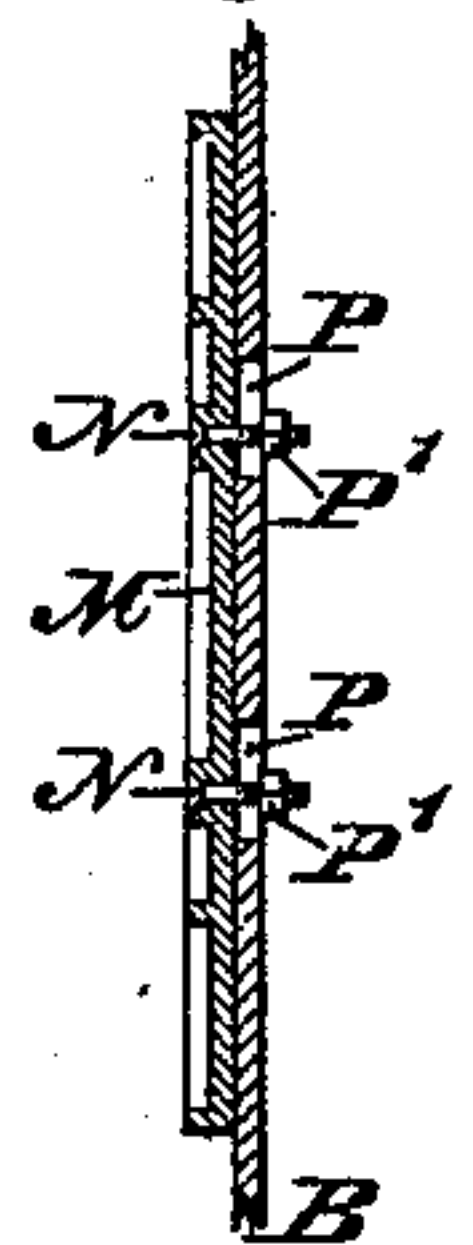


Fig. 4.

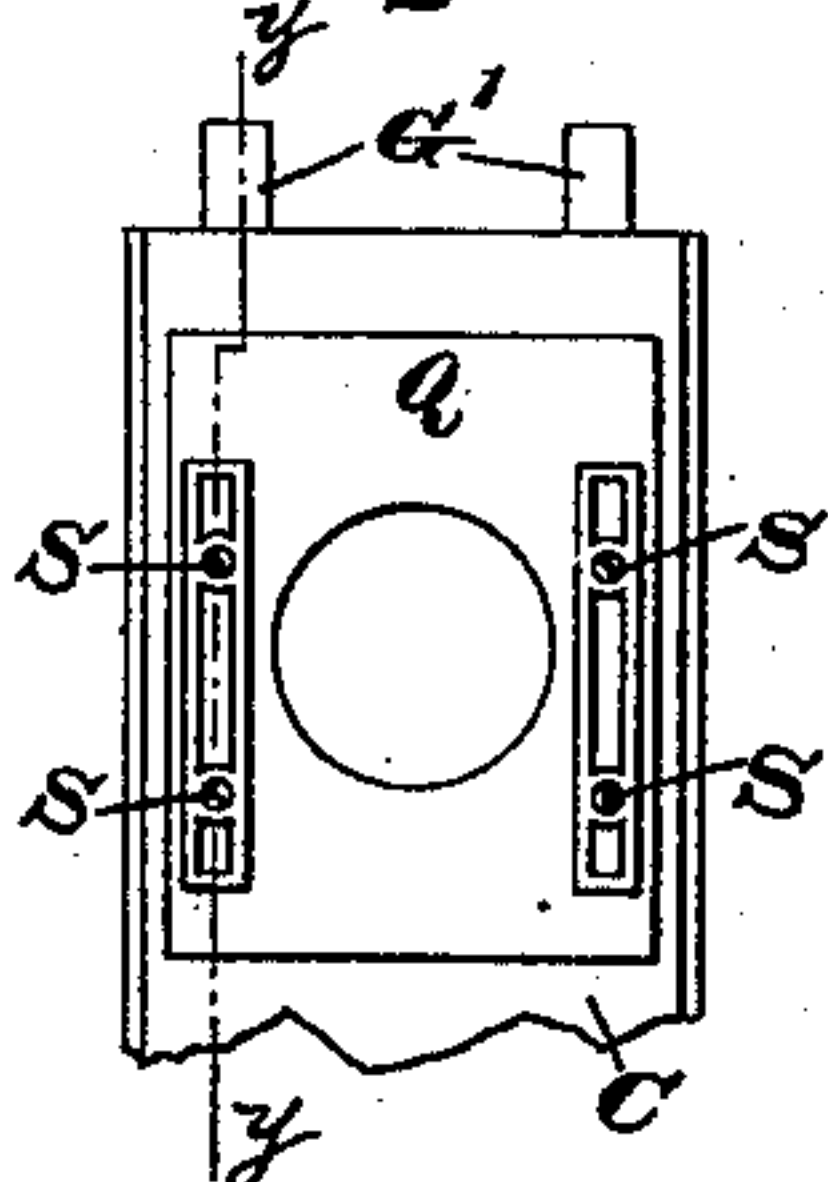
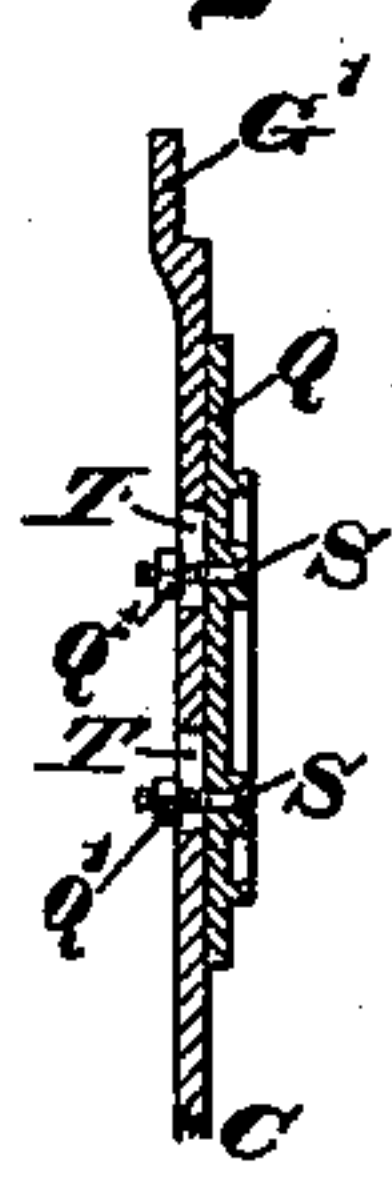


Fig. 5.

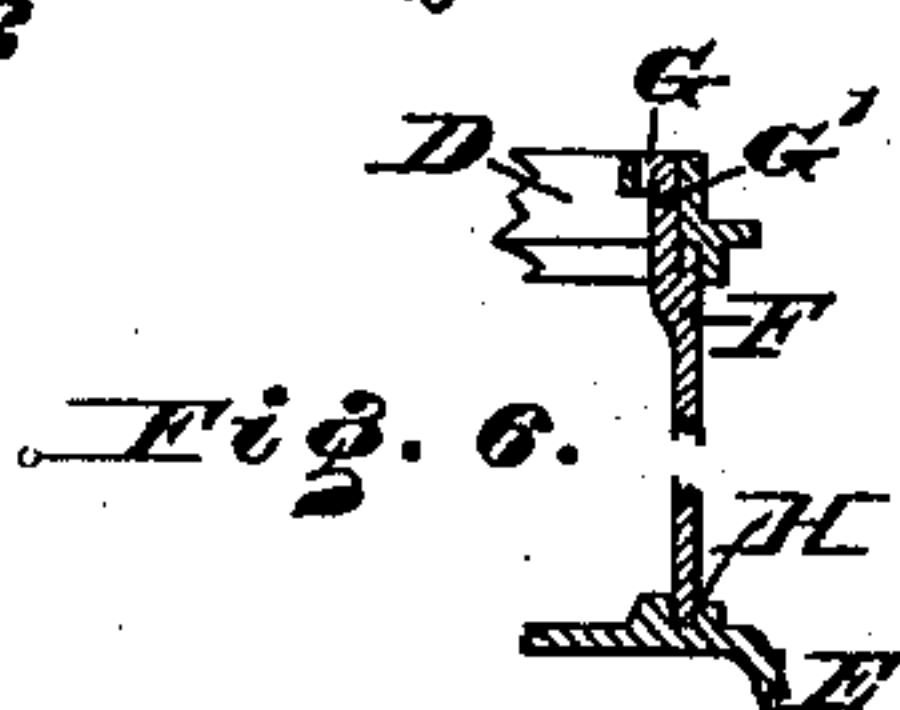


WITNESSES:

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Fig. 6.



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## HOT-AIR FURNACE.

SPECIFICATION forming part of Letters Patent No. 362,297, dated May 3, 1887

Application filed July 7, 1886. Serial No. 207,318. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM L. McDOWELL, a citizen of the United States, formerly residing in the city and county of Philadelphia, State of Pennsylvania, but now a resident of Lower Merion, Montgomery county, Pennsylvania, have invented a new and useful Improvement in Heaters, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a perspective view of a heater embodying my invention. Fig. 2 represents a vertical section thereof. Fig. 3 represents a vertical section of a portion in line  $x x$ , Fig. 1. Fig. 4 represents a front elevation of the pipe-opening portion of the casing. Fig. 5 represents a vertical section in line  $y y$ , Fig. 4. Fig. 6 represents a vertical section of upper and lower portions of the casing in lines  $z z$ , Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to improvements in heaters; and it consists in a casing having its sides formed of removable panels, as hereinafter set forth and claimed, whereby the inner portion of the heater is readily accessible when desired for repairs or other purposes without disturbing the hot-air pipes.

Referring to the drawings, A represents the casing of a heater, the same being formed of cast metal, avoiding brick or masonry work and sheet-iron as a casing, and producing a durable article.

The casing may be lined with tin or galvanized iron for preventing direct radiation of heat in the cellar or apartment containing the furnace. The casing has a front wall, B, a rear wall, C, a top rim, D, and a base, E, the said rim D resting on the upper ends of the said front and rear walls, as shown in Fig. 2. The sides of the casing consist of removable panels or plates F, which are of greater length than the distance between the rim D and base E, so that their upper and lower ends stand behind or within said rim and base.

Within the rim D are ears G, which are cast therewith, the spaces within the said ears and rim forming grooves to receive the upper

ends of the panels F of the sides of the casing, said ends having tongues G', which enter said grooves or ears G. On the upper face of the base is a groove, H, which receives the lower ends of said panels, both grooves being plainly shown in Fig. 6.

When the parts are in the position shown in Fig. 1, a panel may be removed by raising the same until its lower end is above the walls of the groove H. The panel is then drawn outwardly at the bottom, and the top end clears the walls of the ear or groove G, the panel thus being displaced and permitting access to the heater or interior of the casing for purposes requiring the same.

In order to return or restore the panel, its upper end is placed behind the rim D and the panel raised, said end entering the ear or groove G. The lower end of the panel is then pushed back and the panel permitted to descend, whereby said lower end enters the groove H, and the panel is thus nicely retained in position.

J represents the feed-door, the frame K of which is connected with the heater in usual manner and passes freely through an enlarged opening, L, in the front wall, B, of the casing. Fitted to the flange or rim M of the outer end of the frame K, at opposite sides, are bolts N, which pass freely through the slots P in the front wall of the casing, and are provided with tightening-nuts P' on the back of said wall. By this provision when the heater expands the frame K moves freely in the opening in the front wall, thus preventing strain on said wall and cracking or breaking of the same.

Q represents the plate which supports the smoke pipe or flue R, the same being separate from the rear wall of the casing and connected therewith by means of bolts S, which pass freely through slots T in the rear wall, it being noticed that the opening in said wall for the passage of the smoke-pipe is larger than that in the plate Q, and that the bolts are provided with tightening-nuts Q' on their inner ends. By this provision when the heater expands the plate Q moves freely on the rear wall, thus preventing strain on said wall and cracking or breaking of the same.

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

1. A heater having a top removable rim with inner ears, G, forming grooves, front and back walls supporting said rim, and side plates having upper end tongues, G', and a base with groove H, all substantially as and for the purpose set forth.
2. A heater having the rim D, with inner

ears, G, forming grooves, the front wall, B, and back wall, C, supporting said rim, the plates F, having tongues G', and a base-plate with groove H, the said plates F having their lower ends in said grooves H, all substantially as described.

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Witnesses:

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