J. B. OLDERSHAW

Fire-Place Heater.

No. 168,772. Patented Oct. 11, 1875.

Fig. 1.

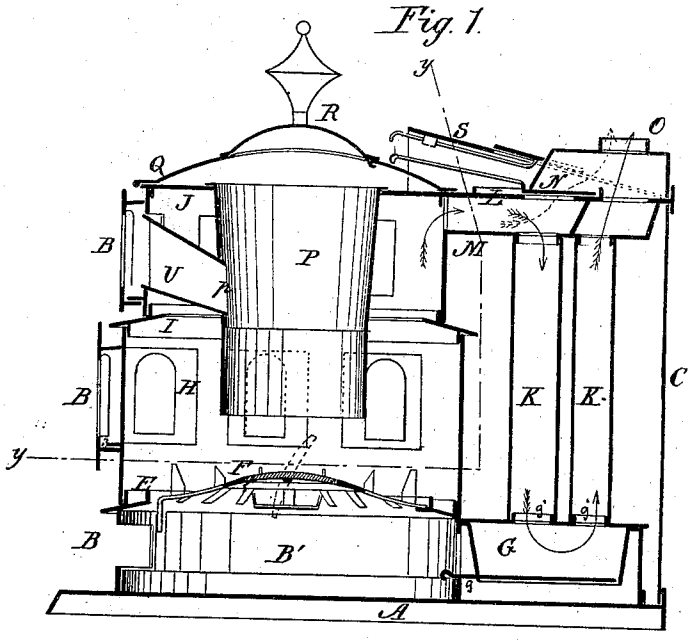
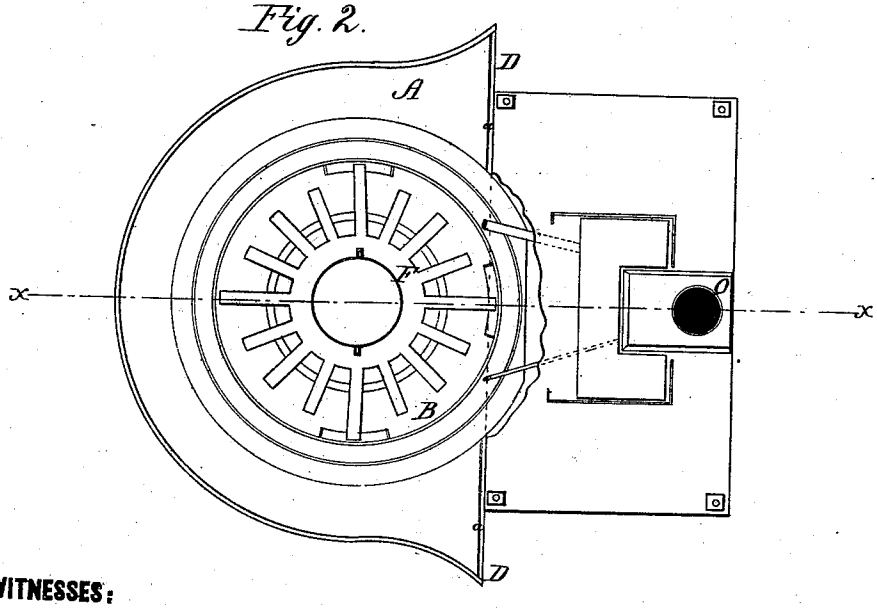


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN B. OLDERSHAW, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN FIRE-PLACE HEATERS.

Specification forming part of Letters Patent No. **168,772**, dated October 11, 1875; application filed August 5, 1875.

To all whom it may concern:

Be it known that I, JOHN B. OLDERSHAW, of Baltimore city, State of Maryland, have invented a new and Improved Fire-Place Heater; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a vertical section, and Fig. 2 a horizontal section.

The invention will be first described in connection with drawing, and then pointed out in claims.

A represents a single-apertured base-plate, on which rests a sectional stove-cylinder, B, square back casing C, and wings D D. The plate A has an upward circular flange in front and square in back, over which passes cylinder B, upward flanges on side and back, between which fits casing C, and upward flanges *a a*, extending from side outward, between which fit the wings D D. B′ is the lower section of cylinder B, cut away in the back, and provided with square extension in rear, to receive metal box G, and for the purpose of working damper in same. E is a metal ring, with flanges extended above and below, to connect lower and middle sections of cylinder B with the flanges inside, on which the grate F revolves. F is a double grate, suspended from metal ring E, revolving horizontally as well as vertically, and raised in center to force the bulk of fuel near the cylinder B, with points extending upward from outer edge, to keep the fuel clear of ashes near cylinder B, and with solid or open vibrating center grate, for dumping center of fire or ashes without dumping whole grate. This grate I intend shall form the subject of future Letters Patent. The box G is provided with perforated top, and fits into lower section of cylinder B, extending downward to near the base-plate A, with sliding damper *g* at bottom for cleaning soot from back flues, and admitting cold air to check the draft, and with upward circular flanges *g′* on top, over which may pass one or more columns, K. H is the middle section of cylinder B, which fits over the flanges of metal rings E and I, having doors projecting forward, for the purpose of extending the line of mica farther from the fire, so as the better to prevent soiling or burning the same. It also has a door-frame extended at the bottom of opening, and fitting inside the door when closed, for the purpose of preventing the ashes which may accumulate thereon from falling when the door is opened. The metal ring I is provided with flanges to connect the middle and upper section of cylinder B. J is the upper section of cylinder B, cut away at the back, and provided with metal section or chute U, extending from front door through and into the magazine P, for the purpose of feeding the magazine with fuel. K K are columns, extending from metal box G to metal section L, for the purpose of producing a greater amount of radiating-surface by conducting the products of combustion, when damper N is closed, down front section of columns into metal box G, and up back of column or columns before passing into the outlet-pipe and out of the stove. R is a swinging cover with urn attached, which closes opening at top of cylinder B, and swings free of the metal front. S is a back top metal plate with damper attached, which is operated by a rod from outside, for the purpose of controlling the rarefied air, and fitting between the flanges of metal plate. The wings D D fit into base-plate A, metal plate M, and against casing C, with opening at bottom to allow cold air to pass from lower to upper rooms when rarefied, pockets to receive metal front, and projections in back to fasten the casing C.

The columns K K are separated from cylinder B in order to produce a greater radiating-surface, the cold air being admitted through the apertured base-plate from the cellar or outside of building, so as to circulate around columns K and back of cylinder B, thereby becoming more highly heated before it passes out of the stove than it could be if cylinder B formed part of back column or flue, and presented an unbroken surface on both sides. When the damper N is opened, and the products of combustion pass directly through outlet-pipe, I still obtain radiation from the whole surface of cylinder B.

The sliding damper may be drawn to cause the soot to fall into the extension of cylinder B, and then closed without interfering with the operation of the stove. The soot may thus

remain in the stove until it is convenient to remove the same.

I am aware that stoves have had a back portion of cylinder to form part of reversible flue; but in such cases the front portion of cylinder is wholly unavailable, the bottom cut away, and the reversible flues extended to base. Under this construction of stove the soot must be removed before the stove can properly perform its functions.

In my improved stove the products of combustion pass directly from the cylinder down one column and up the other, the back of cylinder being enveloped by the products of combustion until they pass into the outer flue.

The door-frame, extending into the door when closed, is a construction of great importance and utility. I know that there are stoves having the whole door-frame, the door fitted against it, and swinging so that the ashes bank up against it, and, when it is opened, fall out in front of stove. This is very objectionable; but with my lower section of frame extending into the door the whole difficulty is obviated. My extended door receives the ashes so that they can be cleaned without soiling the stove or causing annoyance.

Stoves have heretofore made with an opening in front of center of magazine, but none with a central top opening like mine. The advantage which I gain by combining a cylinder having a top central opening, and a magazine having a front opening, is, that many object to a top feed, because smoke will escape into the room while the stove is being fed, this feed being governed entirely by the draft of the chimney. With my front opening this objection is removed.

What I claim as new is—

1. The combination of cylinder-section B′, box G, columns K, and section L, as and for the purpose described.

2. The magazine P, open at top and at the side through chute U, in combination with a cylinder, B, having a top and side opening, as and for the purpose specified.

JOHN B. OLDERSHAW.

Witnesses:

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