

P. KLOTZ.
Fire-Place Base-Burners.

No. 146,688.

Patented Jan. 20, 1874.

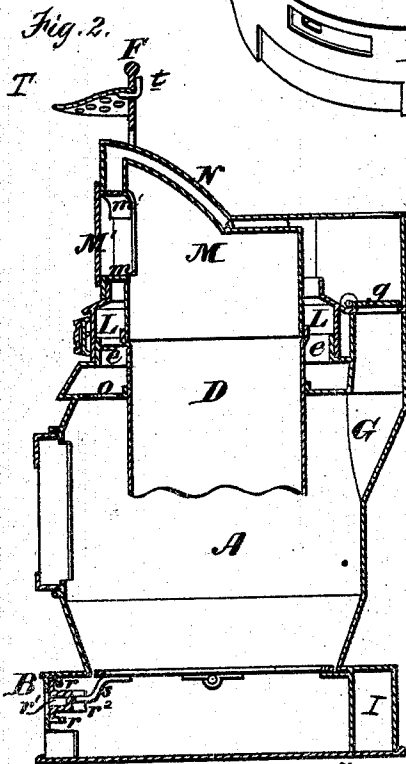
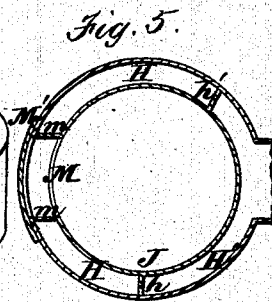
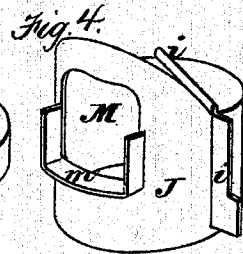
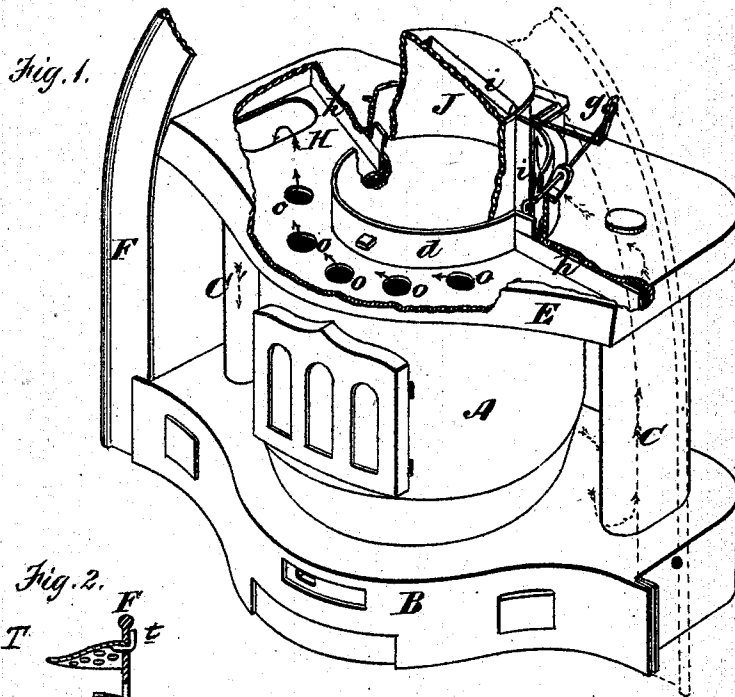


Fig. 3.

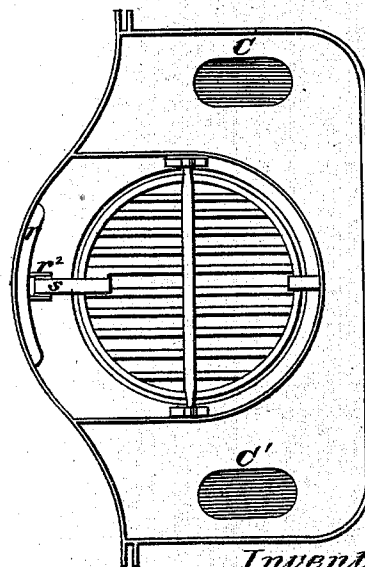
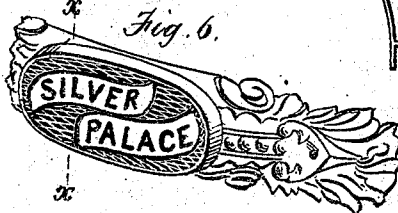


Fig. 7.



Fig. 6.



Witnesses.
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Fig. 8.

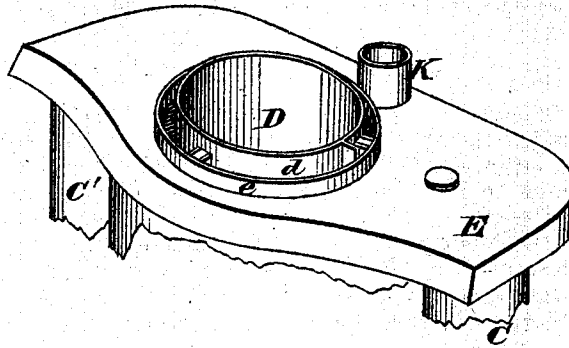


Fig. 9.

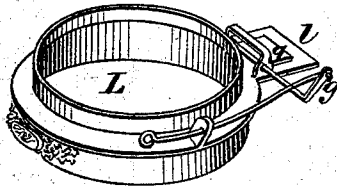
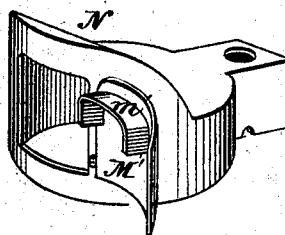


Fig. 10.



Witnesses.

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UNITED STATES PATENT OFFICE.

PHILIP KLOTZ, OF BALTIMORE, MARYLAND, ASSIGNOR TO BENTLEY C. BIBB,
OF SAME PLACE.

IMPROVEMENT IN FIRE-PLACE BASE-BURNERS.

Specification forming part of Letters Patent No. **146,688**, dated January 20, 1874; application filed
June 13, 1873.

To all whom it may concern:

Be it known that I, PHILIP KLOTZ, of the city and county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Fire-Place Heaters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view, a portion of the upper part of the stove having been broken away to reveal the construction more plainly. Fig. 2 is a vertical transverse section; Fig. 3, a bottom-plan view of the stove. Fig. 4 is a perspective view of the inner cover or hood which incloses the upper part of the magazine; Fig. 5, a horizontal section of the same, showing the outer cover also in place, and the dividing partitions that keep the products of combustion in front. Fig. 6 is a perspective view of the detachable plate for the name or the proprietor's trade-mark. Fig. 7 is a section through line *x x* of Fig. 6, representing the manner in which the name-plate is secured to the stove. Fig. 8 is a perspective view of the upper surface of the entablature, the two covers and the ring and damper having been removed. Fig. 9 is a perspective view of the ring and damper; and Fig. 10 is a perspective view of the outer cover or top of the stove, showing the door open.

Similar letters of reference in the accompanying drawings denote the same parts.

The object of this invention is to increase the front radiation of the stove, for the purpose of more thoroughly warming the lower apartments of the building in which it is placed. To these ends my invention consists in the several means employed for accomplishing the respective objects above stated, substantially as I will now proceed to describe.

And, first, the means for increasing the front radiation of the stove. These consist, essentially, in a novel and peculiar construction whereby the heated currents of air, gases, and other products of combustion from the fire-chamber are made to pass up in the front part of the stove, and thence around to the side pipes. The stove is constructed with the or-

dinary base B, fire-chamber A, entablature E, side flues C C', magazine D, face-plate F, and direct-draft flue G, capable of being closed by a damper, *g*, with a handle extending to the front. The draft-chamber within the entablature is directed into a front compartment, H, and a rear compartment, H', by means of two septa or vertical partitions, *h h'*, one in front of the flue C, and the other behind the flue C'. When the direct-draft damper *g* is closed, the smoke and other volatile products of combustion pass directly up into the front draft-chamber, and thence to the flue C'. Diving into this flue, they pass to the base B, where they proceed around the rear side of the ash-box in the horizontal passage I, and rise, through the flue C, into the rear compartment H', and thence escape to the smoke-flue and the chimney. The top of the magazine is covered by a cover or hood, J, (represented in Fig. 4,) which is fitted upon or into the projecting upper end *d* of the magazine. (Shown in Fig. 8.) This cover is provided with an oblique flange, *i i*, adapted to come in line with the partitions *h h'*, and connect them together, said partitions and flange forming a dividing-plate, which separates the front from the rear draft-space. Upon a collar or flange, *e*, projecting upward from the upper plate of the entablature, around the upper end of the magazine, I fit a ring, L, the construction of which is clearly shown in Fig. 9. The ring is of greater diameter at its lower than at its upper edge. The lower edge fits upon the collar *e*, while the upper edge rests firmly against the flange *m* around the lower edge of the opening M, and against the side flanges *i i*, above described. The upper edge of the ring comes on a line with the horizontal part of the door-flange *m*, and inside of the ring the flanges *i i* are enlarged, so as to completely fill the space between the enlarged part of the ring and the wall of the cap J, and thereby prevent the smoke, &c., from passing through the ring from the front space H to the rear space H'. A collar, K, cast upon the upper plate of the entablature, forms a portion of the direct-draft flue, and the height of this collar is so adjusted in the manufacture that it will be covered by a projecting horizontal flange, *l*, formed on the rear

edge of the ring L, as shown in Fig. 1, and more clearly in Fig. 9. The damper *g* is arranged upon the flange *l*, being properly pivoted or hinged thereto, and the handle of the damper may be held and guided by a lug on the side of the ring, as clearly shown in said Fig. 9. The cap J having been placed upon the top of the magazine, and the ring L secured in position around it, with the damper *g* resting on the collar K, I next place around the projecting upper end of the cap J an outside cap or cover, N, the shape and construction of which are clearly shown in Fig. 10. The lower edge of this outer cover or stove-top fits closely upon the upper edge of the ring L, and the cap or top fits tightly against the door-flange *m*, and against the side and top flange *i i*. A door, M, is attached to the outer cover or stove-top, and closes tightly upon the flange *m*. The door is itself provided with a top flange, *m'*, which, when the door is closed, supplements the flange *m*, and prevents any upward draft through the magazine. The rear side of the top N projects over, so as to cover and inclose, the damper *g*, and is provided with an opening, upon which the smoke-pipe can be properly fitted.

By the construction above described, it will be observed that the draft-space H is continued from the chamber within the entablature, up inside of the ring L, and the outer cap N, around all that portion of the inner cap J which lies in front of the flange *i*, so that, when the direct-draft damper is closed, the volatile products and residuums of combustion pass through the holes *o o*, directly up into said space, and circulate over and around the whole front portion of the stove-top, where a large amount of heat is given off by them before they enter the diving-flue C'. The heat thus given off, being on the front side of the stove, is radiated directly into the lower compartments of the house, where it is most

needed. The products of combustion, after passing around through the flues C I C', emerge into the rear draft-space H', and thence into the space around and over the rear side of the part J, where nearly all their remaining heat is radiated through the thin sheet metal into the hot air-space around the rear side of the stove, whence it passes either to the lower or upper compartments of the house, according to the condition of the hot-air registers and dampers.

Having thus described my invention, what I claim is—

1. A fire-place base-burning stove in which the products of combustion circulate freely around the front portion only of the stove before they enter the diving-flue C', substantially as described, for the purpose specified.

2. A fire-place base-burning stove having an entablature and side flues, and a cylindrical top projecting above the entablature, said top being constructed with an outer and inner wall, and having the space between said walls divided into a front and rear compartment, and being arranged, with relation to the other parts of the stove, so that the volatile products of combustion circulate freely through the front compartment, around and over the front part of the inner wall, before entering the diving-flue, and freely through the rear compartment, around and over the back part of the inner wall, after they complete the circuit of the indirect draft, substantially as described, for the purpose specified.

3. In a fire-place base-burning stove, the combination of the inner cap or top J, the ring L, and the jacket or outer top N, substantially as described, for the purpose set forth.

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Witnesses:

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