

P. KLOTZ.

Base Burning Fire Place Heater.

No. 94,320.

Patented Aug. 31, 1869.

Fig. 1.

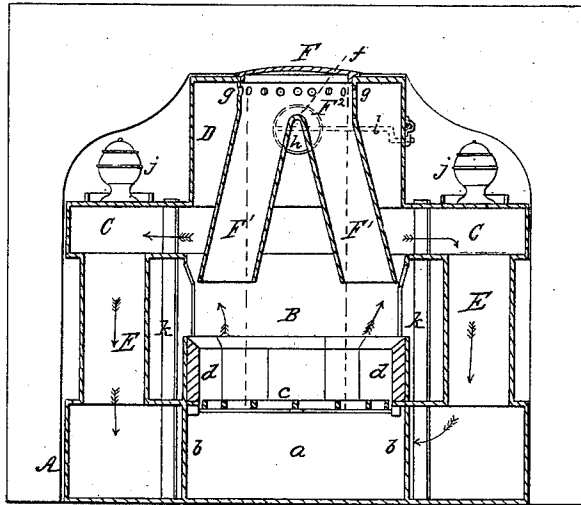


Fig. 2.

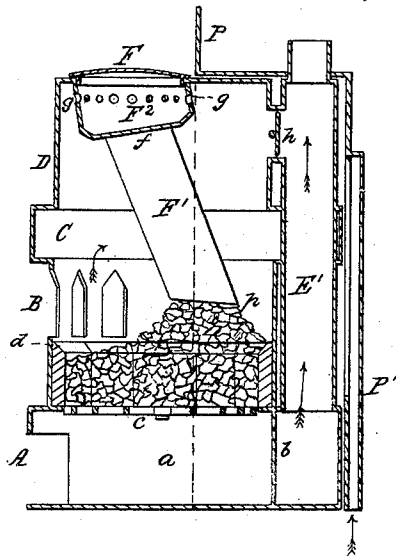
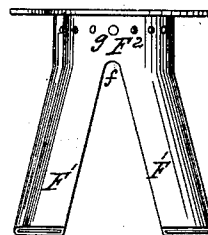


Fig. 3.



Witnesses:

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

Letters Patent No. 94,320, dated August 31, 1869.

BASE-BURNING FIRE-PLACE HEATER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, PHILIP KLOTZ, of the city and county of Baltimore, in the State of Maryland, have invented certain novel Improvements in Fire-Place Heaters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the following specification, in which—

Figure 1 is a vertical section, taken through the heater in front of the fire-board, exposing to view the interior of the heater.

Figure 2 is a vertical section, taken centrally through the heater from front to rear.

Figure 3 is a side view of the double-legged feeder. Similar letters of reference indicate corresponding parts in the several figures.

This invention relates particularly to certain improvements on fuel-magazine fire-place heaters, but is applicable, in part, to other varieties of heaters or stoves.

The nature of my invention consists—

First, in a magazine or feeder, having two fuel-supply branches or legs, inclining, from a chamber at the top of the heater, backward, so as to deliver the fuel at points in rear of the centre of the fire-pot, thereby exposing a much larger area of fire-surface, in a given space, than is done in heaters or stoves having the fuel-magazine arranged centrally over the fire-pots, and, at the same time, insuring a free supply of fuel, as will be hereinafter explained.

Second, in providing, between the fire-chamber and the uppermost section of the heater, a horizontal or laterally-enlarged chamber for the escape and circulation of the products of combustion into descending-flue columns, when the direct-draught damper is shut; said intermediate chambered section also serving as a shelf upon which to arrange evaporators, as will be hereinafter explained.

I am aware that in the schedule annexed to the Letters Patent granted to S. W. Gibbs, on the 7th day of July, 1868, a stove is described with a single inclined feeder, which is designed to deliver the fuel into the fire-pot, in rear of the centre thereof, and therefore I do not claim as my invention the broad idea of employing a single inclined feeder, such as is shown in Gibbs's patent.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the annexed drawings—

A represents the base-section of a fire-place heater, which is divided by a partition, *b*, so as to form a central ash-chamber, *a*, which is enclosed on three sides by a flue-space that leads from the vertical-flue columns *E E* to a vertical-escape flue, *E'*, at the back of the heater.

Directly above the ash-chamber *a* is the fire-chamber *B*, which is lined at *d* with fire-bricks, and provided, if desirable, with mica windows, for exposing to view the light of the fire in the chamber *B*.

The grate *c* is arranged at the base of the fire-chamber, and may be constructed in any well-known manner.

The fire-chamber *B* and the vertical-flue columns *E E* terminate at their upper ends in a chamber which is formed by the horizontal section *C*, which extends laterally from the chamber *B* all around the same, and affords a large area of heat-radiating surface, as well as a support for the evaporating-vessels *j j*, on opposite sides of an upper section, *D*, which latter is superimposed upon, and is in communication with the section *C*, as shown in figs. 1 and 2.

The top section, *D*, of the heater, is arranged centrally over the fire-chamber section *B*, and through the top plate of this section *D* an opening is made, leading into a chamber, *F²*, from which the feed-reservoirs *F¹ F¹* are carried downward and backward, as shown in the drawings.

The feed-passage is provided with a cover, *F*, and is preferably made nearer the front of the section *D* than the back, as shown in fig. 2.

The chamber *F²* may be perforated at *g g*, for allowing the escape from it, into the chamber *D*, of any gas which might rise from the coal in the reservoirs or legs *F¹*.

The reservoirs not only incline backward, but they are also inclined laterally from a ridge or central dividing angle *f*; and these reservoirs or legs are sustained upon ledges *p*, fastened to the section *B*, above the fire-brick lining *d*.

An opening is made through the back part of the section *D*, which communicates, by means of a short horizontal pipe, with the vertical-exit flue *E*, and by means of the damper *h*, which can be worked by a crank-rod, *l*, from the front of the heater, a direct draught from the fire-chamber *B* into exit-flue *E'* can be obtained, or, when desired, said opening can be shut, and all the products of combustion caused to circulate through the intermediate chamber *C*, down the flue-columns *E*, thence through the flue-chambers in base-section, and, finally, through the exit-flue *E'*.

The vertical air-flue *P* and the vertical tubes *k k* supply air from the base of the stove, to be heated and conducted whithersoever it may be required.

In fire-place heaters, whether they have the improved double feeders *F¹ F¹* or the well-known single feeders, I consider the intermediate laterally-extended flue-section *C* a great improvement, as it allows the highly-heated products to pass freely out of the fire-chamber, and thence into the bottom section of the heater, and it affords a very large amount of heat-radiating surface.

Said section *C* also enables me to form a direct com-

munication between the upper section D and the fire-chamber at all times, so that by the accumulation of highly-heated products in the section D, when damper *h* is shut a large amount of heat will be radiated from this section.

The two-legged feeder, constructed and arranged substantially as described, will allow nearly the entire area of fire-bed to be exposed, and will supply fuel to the fire-pot at two points instead of one, as heretofore.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A double-legged fuel-feed, substantially as described.

2. The chamber *F*², at the upper termini of the two feed-legs *F*¹ *F*¹, substantially as described.

3. The fuel-feeders *F*¹, inclined backward and laterally, and supported wholly or in part at points above the fire-brick lining, substantially as described.

4. The horizontal flue-section *C*, in a fire-place heater, which is organized substantially as described.

Witnesses:

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