E. BUSSEY & C. A. HAMLIN.

Improvement in Base-Burning Stoves.

No. 114,260. Patented May 2, 1871.

Fig. 1

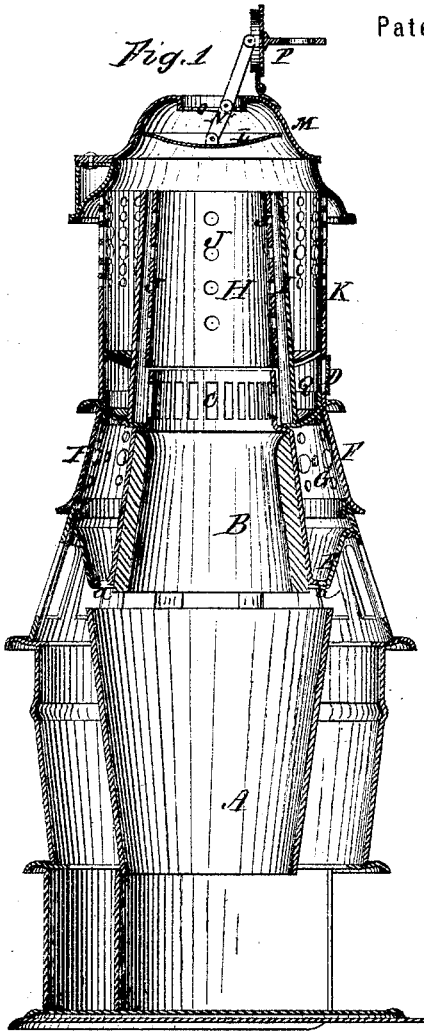


Fig. 5.

Fig. 2.

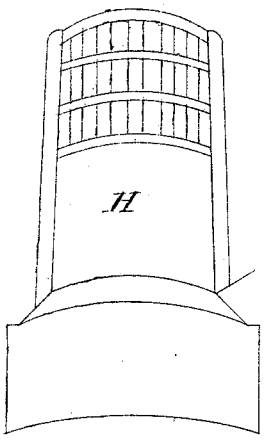


Fig. 3,

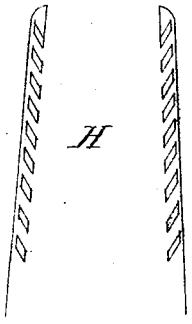
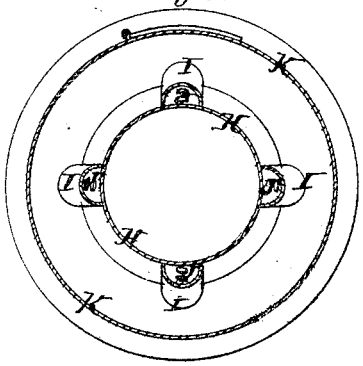


Fig. 4.



Witnesses
John A. Ellis
James E. White

Inventors
Esek Bussey and Chas A. Hamlin
by
T. H. Alexander
Atty

United States Patent Office.

ESEK BUSSEY AND CHARLES A. HAMLIN, OF TROY, NEW YORK, ASSIGNORS TO BUSSEY, McLEOD & CO., OF SAME PLACE.

Letters Patent No. 114,260, dated May 2, 1871.

IMPROVEMENT IN BASE-BURNING STOVES.

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

To all whom it may concern:

Be it known that we, ESEK BUSSEY and CHARLES A. HAMLIN, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Parlor-Stoves; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of our invention consists—

First, in the arrangement of a coking-chamber above and disconnected from the fire-pot, and connected with the fuel-reservoir by an open grate.

Second, in the fuel-reservoir, provided with perforations, covered on the outside with tubes to conduct the gases from the reservoir through the grate and into the coking-chamber.

Third, in the arrangement of the coking-chamber, grate, and reservoir, with its perforations and tubes, and an air-chamber and damper.

Fourth, in the arrangement of the top of the stove.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of our stove;

Figures 2 and 3 show variations in the construction of the fuel-reservoir; and

Figure 4 is a horizontal section through the fuel-reservoir.

Figure 5 shows a section of the reservoir with one row of perforations and covering tube on the outside.

A represents the ordinary fire-pot or receiving-chamber to receive the coke made in the coking-chamber B.

This coking-chamber B is suspended above and a suitable distance from the fire-pot A, and above said coking-chamber B is a grate, C, to supply the same with draught, said grate extending close up to the fuel-reservoir or magazine H.

The shell of the stove around the upper portion of the coking-chamber B is perforated as shown at F, leaving an air-chamber, G, between them, thus supplying air to protect the coking-chamber and also to admit the air to a gas-ring or plate, E, formed around the lower portion of the coking-chamber, said gas-ring or plate being provided with a series of small perforations, *a a*. This is for the purpose of supplving the gases with air as they pass through the chamber B and over the ignited fuel in the fire-pot A and through the flues of the stove.

D is a draught-door or damper of the stove, leading into air-chamber Q around the grate C.

In the fuel-reservoir or magazine H are made openings J J, which lead into and are covered by pipes or tubes I I, formed on the outside of the reservoir for the purpose of carrying off the waste gases which form in the reservoir and prevent them from escaping into the room through the upper portion K of the stove, said portion being made perforated, as shown, or otherwise of open work, to prevent the reservoir from becoming heated and the coal from coking in the same.

The gases carried off from the reservoir by the tubes I pass through the grate C into the coking-chamber B, the tubes for this purpose extending down near to the lower edge of the grate, and their inner sides left open, as shown in fig. 5.

The fuel-reservoir H may be made all open work, with a casing around it, as shown in fig. 2, or it may be made of rings and outside casing, as shown in fig. 3.

L is an air-tight cover to close the top of the fuel-reservoir.

M is the outer cover, hinged or pivoted on one side, so that it can be thrown open when fuel is to be supplied to the stove.

In the top of the cover M is an opening, O, covered by a hinged cap, P, which may be made in the shape of an urn.

This cap is connected with the cover L by a strip, N, as shown.

The method of operating the stove is as follows:

Fire is kindled in the ordinary manner in the fire-pot A, and draught is admitted below the grate, as is generally done, the reservoir H, coking-chamber B, and fire-pot A being all filled with fuel.

After the fuel in the fire-pot A becomes well ignited the draught below the grate is closed. Then the draught is taken in from the door or damper at D through the grate C and coking-chamber B, thence in the flue of the stove. The object of this is to keep up combustion in the coking-chamber B and pass the gases from the fresh fuel in the reservoir H through the burning coke in the chamber B and over the burning coke in the pot A, thus becoming highly heated before meeting the current of air admitted through the openings in the gas-ring E.

At the grate C, as crust will form from the fresh fuel as it is coking and a small quantity of gas or smoke arise to the top of the magazine, and for the purpose of carrying off this waste gas, we make the openings J and cover them by pipes I, and carry the same to the burning fuel in the chamber B, and thence into the flues of the stove.

When the cap P is in position over the opening O the cover L closes the top of the reservoir H, preventing the escape of gases from the coal coming into the room.

When necessary to add fresh fuel to the reservoir H the cap P is turned over, which raises the cover L and makes a downward draught, carrying off the waste gases in the reservoir through the perforations J and tubes I, into the chamber B. The outer cover M can now be swung open, carrying with it the cap P and cover L, and the fuel may be put into the reservoir.

Having thus fully described my invention,

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

1. The coking-chamber B, placed above and disconnected from the fire-pot A, and connected with the lower end of the fuel reservoir by means of the open grate C, substantially as and for the purposes herein set forth.

2. The fuel-reservoir H, provided with perforations J, which are covered on the outside by the tubes I, for the purpose of conducting the gases from said reservoir through the grate C and into the coking-chamber B, substantially as herein set forth.

3. The arrangement of the coking-chamber B, grate C, reservoir H with its perforations J and tubes I, chamber Q, and draught-door D, all substantially as shown and described.

4. The combination of the hinged or pivoted cover M with opening O, cap P, connecting-strip N, and cover L, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ESEK BUSSEY.
C. A. HAMLIN.

Witnesses:
C. A. McLEOD,
CHAS. M. AUSTIN.