

L. D. WATERHOUSE & F. M. JOHNSON.

Base-Burning Stoves.

No. 150,208.

Patented April 28, 1874.

Fig. 1.

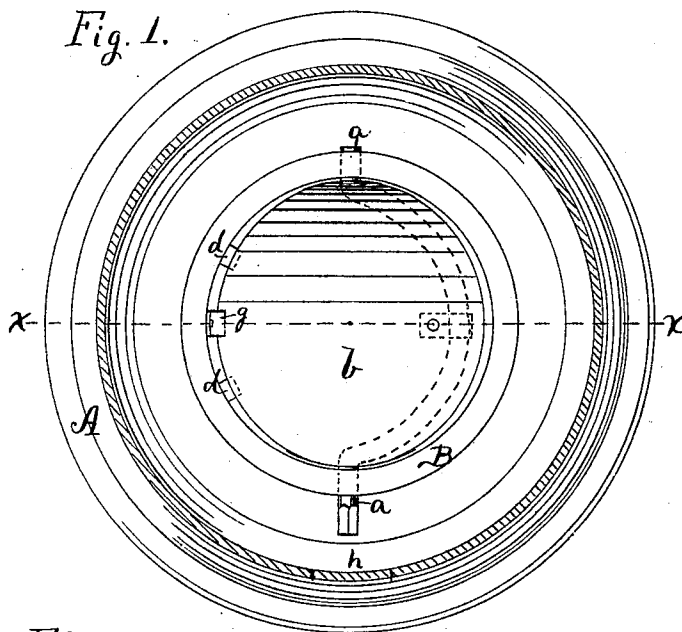
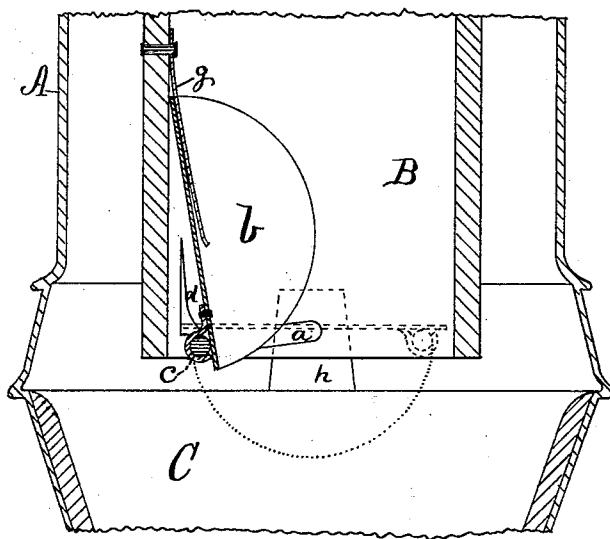


Fig. 2.



Witnesses.
Wm. G. Curtis.
Nettie Shepard.

Inventors
Lorenzo D. Waterhouse
Frank M. Johnson.
By James Shepard atty.

UNITED STATES PATENT OFFICE.

LORENZO D. WATERHOUSE AND FRANK M. JOHNSON, OF BRISTOL, CONN.

IMPROVEMENT IN BASE-BURNING STOVES.

Specification forming part of Letters Patent No. **150,208**, dated April 28, 1874; application filed October 14, 1873.

To all whom it may concern:

Be it known that we, LORENZO D. WATERHOUSE and FRANK M. JOHNSON, both of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Cut-Off Attachments for Base-Burning Stoves, of which the following is a specification:

In our improved cut-off there is a curved disk hung upon an eccentric shaft at the effluent end of the ordinary cylindrical reservoir of a base-burning stove, so that by turning the eccentric shaft the curved disk may be thrown either into a horizontal position to close the end of the reservoir or against the side of reservoir, so as to allow the free passage of coal through it, all as hereinafter described.

In the accompanying drawing, Figure 1 is a top view of our improved cut-off, the top of the stove being removed in order to better show the parts. Fig. 2 is a vertical section of the same on line *xx* of Fig. 1.

It is well known that in case the fire in a base-burning stove goes out when there is coal in the reservoir it will fall down as fast as the contents of the fire-box are removed, and must, therefore, all be taken out of the stove before a new fire can be properly kindled. The object of our invention is to provide a cut-off that can close effluent end of the reservoir, and hold its contents suspended above the fire-box, so that it may be cleaned out and a new fire kindled without removing the coal from the reservoir.

A designates the exterior shell of the stove, and B an ordinary straight cylindrical reservoir. At the lower end of this reservoir we make two holes, in which we hang the eccentric shaft *a*. The crank of this eccentric is of curved form, as indicated by broken lines in Fig. 1. *b* designates what we term the cut-off. It is a thin plate of metal, its contour being in nearly a circular form, and it is curved so that its edge in one direction (transversely to the axis of the shaft *a*) assumes the form of a semicircle, which fits the inside of the reservoir B. The cut-off is hung by means of any

suitable hinge, *c*, Fig. 2, to the eccentric shaft *a*. Two stops or projections, *d d*, are placed upon the inside of the reservoir B near the lower end, and a thin spring or catch, *g*, Fig. 2, is placed a little above them. The end of the shaft *a* may be squared to receive a key or crank wrench, which can be passed through one of the small doors, as at *h*, upon the sides of the stove.

When the eccentric of the shaft *a* is at the left, as shown in Fig. 2, the cut-off *b* is thrown up into the reservoir B, the upper edge passing under the spring or catch *g* when the cut-off is out of the way above the fire in the fire-box C, and also so close against the sides of the reservoir as to allow the free passage of coal through it. When the eccentric of the shaft *a* is thrown to the right, as shown in Fig. 1, and indicated by broken lines in Fig. 2, the cut-off *b* assumes a horizontal position, and closes the effluent end of the reservoir, one side of the cut-off being supported by the shaft *a* and the other side resting upon the stops *d d*.

The fine broken or dotted lines in Fig. 2 designate the arc of the circle, which is described by the eccentric when the cut-off is operated.

If desired, a notched wheel may be placed upon the shaft *a*, and a pawl or hook made to engage therein, so as to hold the cut-off either open or closed, and thus insure it against being moved either way, except by design.

This device may be applied to a flaring reservoir as well as a straight one, and, as no special construction of the stove proper is necessary, it can be applied to the stoves now in common use.

What we claim as our invention, and desire to secure by Letters Patent, is—

In a base-burning stove, the cut-off *b* hung upon the eccentric shaft *a*, and operating in connection with the reservoir B, substantially as described, and for the purpose herein set forth.

LORENZO D. WATERHOUSE.
FRANK M. JOHNSON.

Witnesses:

E. A. ALPRESS,
JAMES SHEPARD.