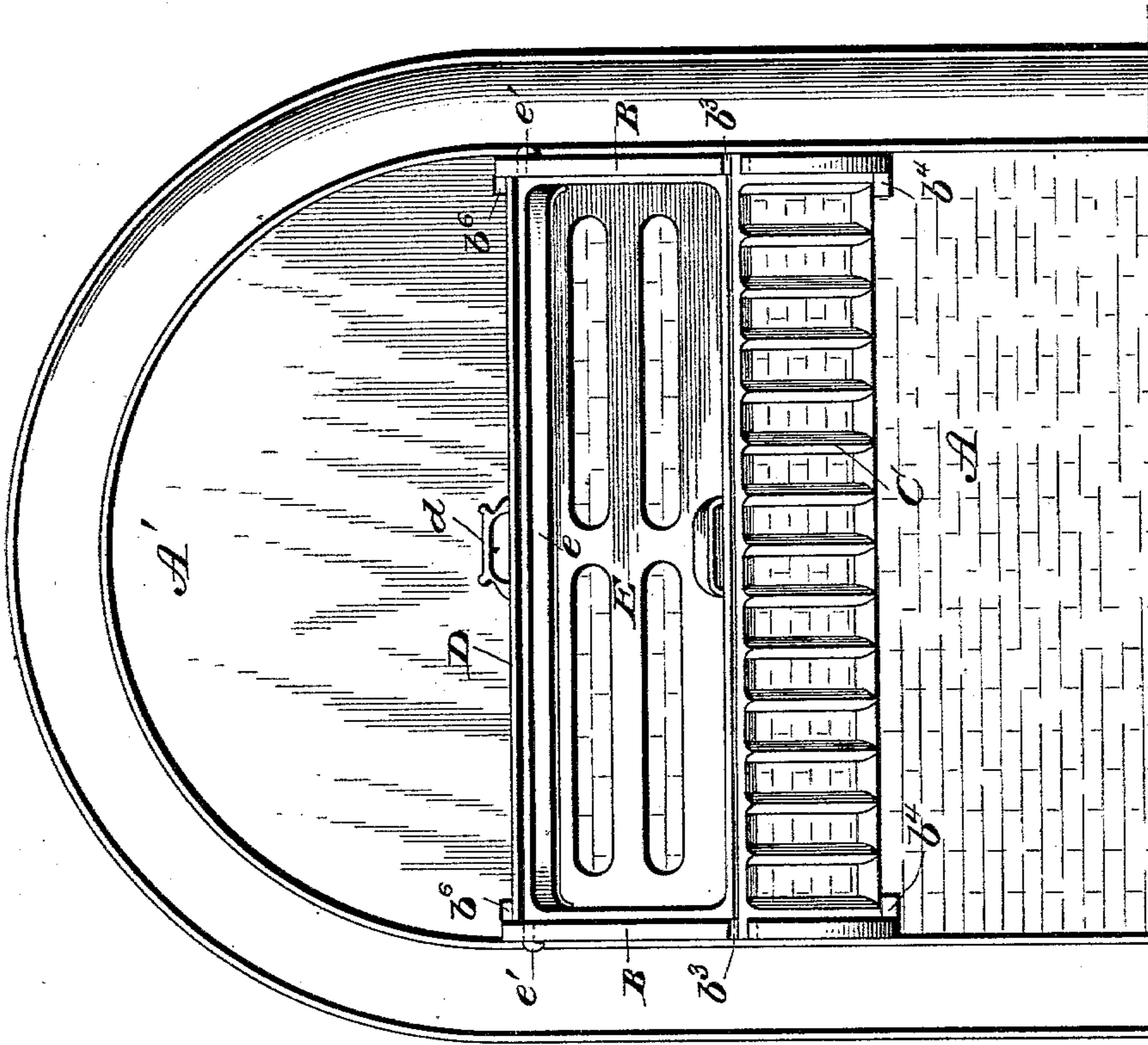
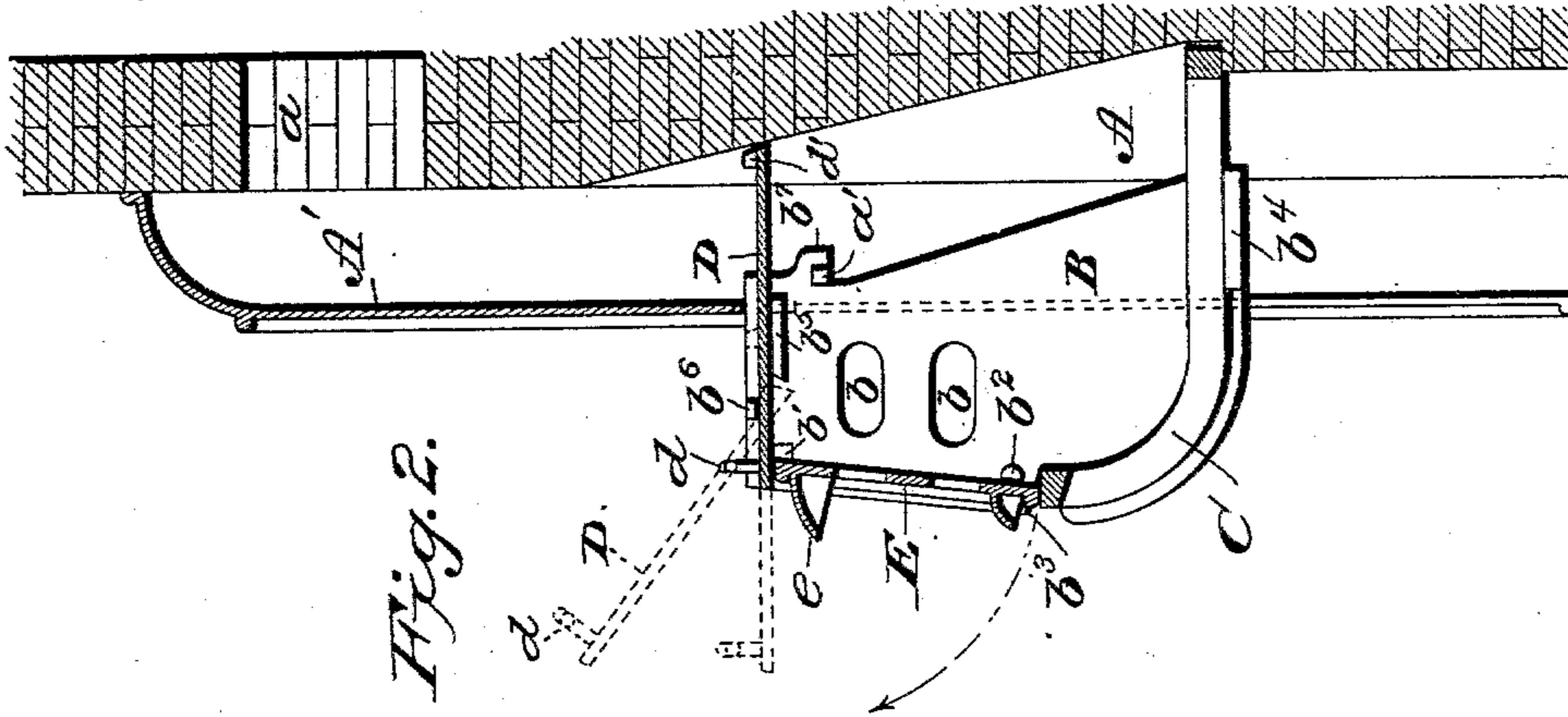


(No Model.)

J. A. BILBRO.
OPEN GRATE AND ATTACHMENT THEREFOR.

No. 566,649.

Patented Aug. 25, 1896.



WITNESSES
L. S. Elliott.
W. Johnson

Fig. 1.

James A. Bilbro
INVENTOR

by  Attorney

UNITED STATES PATENT OFFICE.

JAMES A. BILBRO, OF GADSDEN, ALABAMA.

OPEN GRATE AND ATTACHMENT THEREFOR.

SPECIFICATION forming part of Letters Patent No. 566,649, dated August 25, 1896.

Application filed February 6, 1896. Serial No. 578,215. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. BILBRO, a citizen of the United States of America, residing at Gadsden, in the county of Etowah and State of Alabama, have invented certain new and useful Improvements in Open Grates and Attachments Therefor; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a stove attachment of improved construction which will distribute a greater quantity of heat than an ordinary grate of the same capacity with the use of much less fuel, and one that may be used for cooking upon and is adapted to burn different kinds of fuel, as coal, coke, or wood.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation showing a grate and attachments therefor constructed in accordance with my invention, and Fig. 2 is a vertical sectional view.

A designates the fireplace, which is provided with a hood A', extending from a point above the chimney-opening *a* to a point on a line with the upper edges of the side pieces of the grate hereinafter described, and said fireplace is provided with inwardly-projecting lugs *a'*, which serve as means for supporting the grate.

B B designate the side pieces of the stove, which are provided with apertures or openings *b b*, and near their upper ends with an opening *b'*. At a suitable distance below the openings *b'* the side pieces are each provided with an inwardly-projecting lug *b²*, and adjacent to said lugs the forward edges of said side pieces have inclined recesses *b³*, which receive the projecting ends of the upper cross-bar of the grate proper, (designated by the letter C.) The lower ends of the side pieces are provided with inwardly-projecting ledges *b⁴*, upon which the grate C rests when in position. The upper ends of the side pieces B are provided with inwardly-projecting ledges *b⁵*, the forward ends of which are beveled,

and these ledges serve as a support for a lid or cover D, which slides between said ledges and inwardly-projecting lugs *b⁶*, formed on the side pieces B. The rear upper ends of the side pieces are provided with hooks *b⁷*, which engage the studs *a'* on the fireplace.

The lid or cover D consists of a plate of metal, having at its forward end an operating-handle *d* and at its rear end upwardly-projecting lugs *d'*, the lugs limiting the forward movement of the lid by striking against the lugs *b⁶*, and by locating the ledges *b⁵* and lugs *b⁶* as shown the lid or cover can be readily removed by tilting the forward end of the same up when said lid or cover has reached the limit of its forward movement, as shown in dotted lines, Fig. 2. This lid or cover in use provides a surface upon which cooking utensils can be placed, and according to the distance it is projected into the fireplace will also regulate the draft to the chimney *a*. Therefore the lid or cover serves the purposes of a blower, a damper, and a surface for cooking utensils.

E designates the front of the grate, which is made with suitable openings therein and is provided with a transverse hood *e*, which is curved, as shown, to deflect the heat downwardly. This front is preferably hinged to the side pieces B by means of headed pins *e'*, and when swung down in position the lower end thereof rests upon the upper cross-bar of the grate C and bears against the lugs *b³*. By pivoting the front to the side piece B it can be readily raised to provide an opening through which fuel can be placed upon the grate.

When the cover or lid D is drawn out to give the full amount of draft to the chimney-opening *a*, any heat that passes out through the front E will strike against the under side of the said cover or lid and be deflected downward, the hood *e* on the front also serving the same purpose, as hereinbefore mentioned. By so deflecting the heat injury to the mantel is prevented, and by this arrangement I am enabled to employ a grate which extends outwardly to a greater extent than grates usually employed, thus economizing or utilizing all of the heat generated by the fuel. It will also be noted that by reason of the lid serving the purpose of a damper I may use

different kinds of fuel, as the size of the flue can be increased or diminished.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a fireplace having a hood A' forming with the chimney a flue, of a stove consisting of side pieces, front and bars supported in the fireplace so as to project beyond the hood, and a horizontally-sliding lid or cover supported by side pieces of the grate and adapted to be moved across the flue to serve as a cut-off or damper, substantially as shown and for the purpose set forth.
2. In combination with a fireplace con-

structed substantially as shown, and provided with a hood A', of side pieces B B carrying a front and bars, ledges b^5 and lugs b^6 at the upper ends of the side pieces, a horizontally-sliding lid or cover D guided between said ledges and lugs, and upwardly-projecting lugs d' formed at the rear end of the cover or lid, substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. BILBRO.

Witnesses:

BERNARD L. GREEN,
A. W. BURNS.