(No Model.)

2 Sheets—Sheet 1.

E. BROWN.

OPEN GRATE STOVE.

No. 273,456. Patented Mar. 6, 1883.

FIG. 1

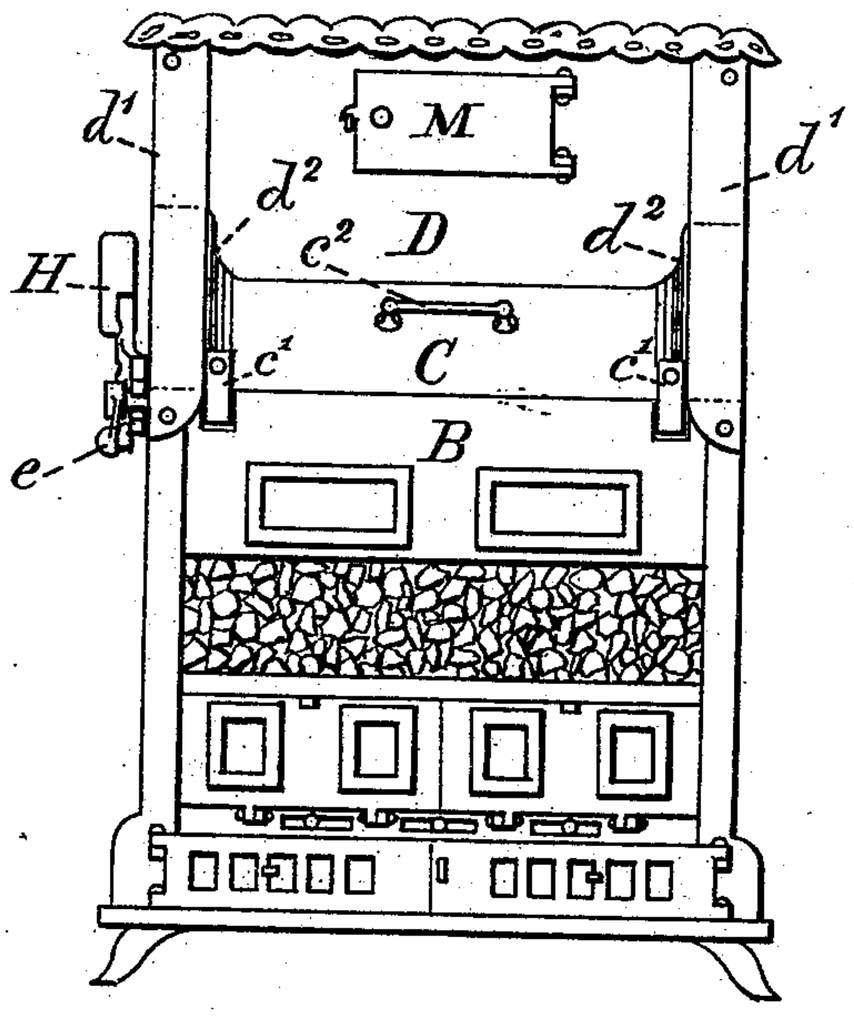


FIG. 2

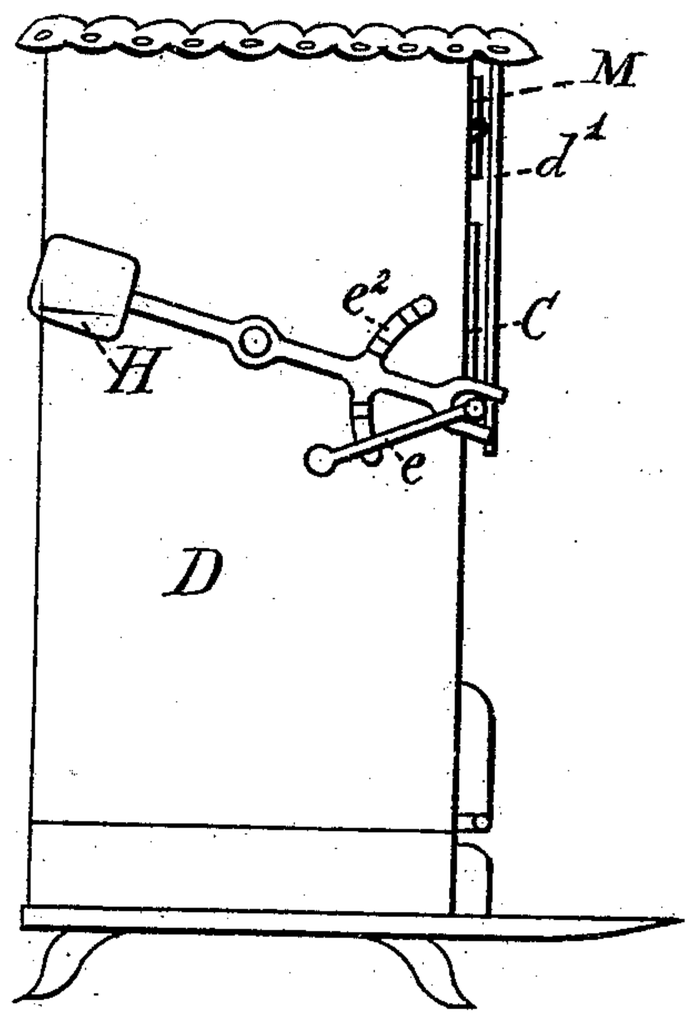


FIG. 3

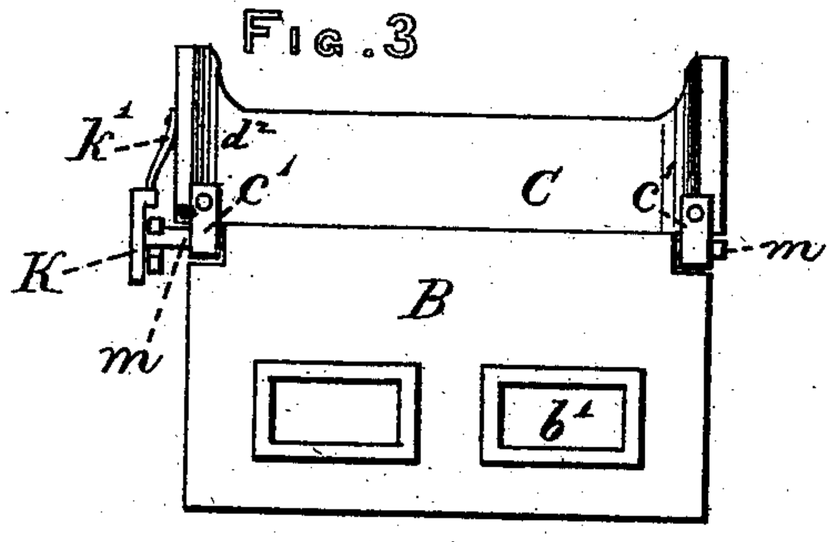
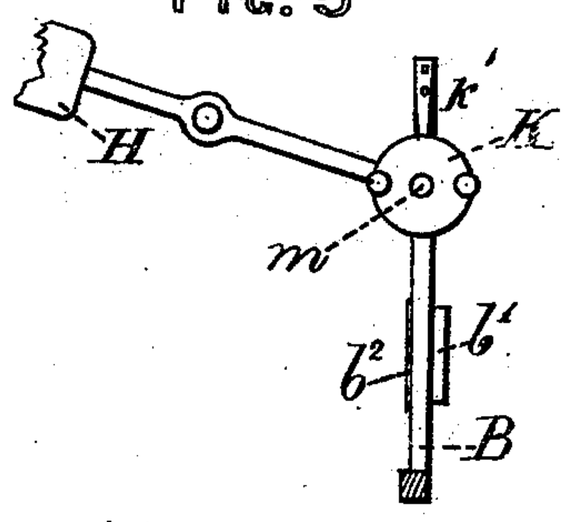


FIG. 5



Witnesses
John F. Grant
Robert J. Terry

Inventor.
Edw'd Brown.

(No Model.)

2 Sheets—Sheet 2.

E. BROWN.

OPEN GRATE STOVE.

No. 273,456. Patented Mar. 6, 1883.

Fig. 4

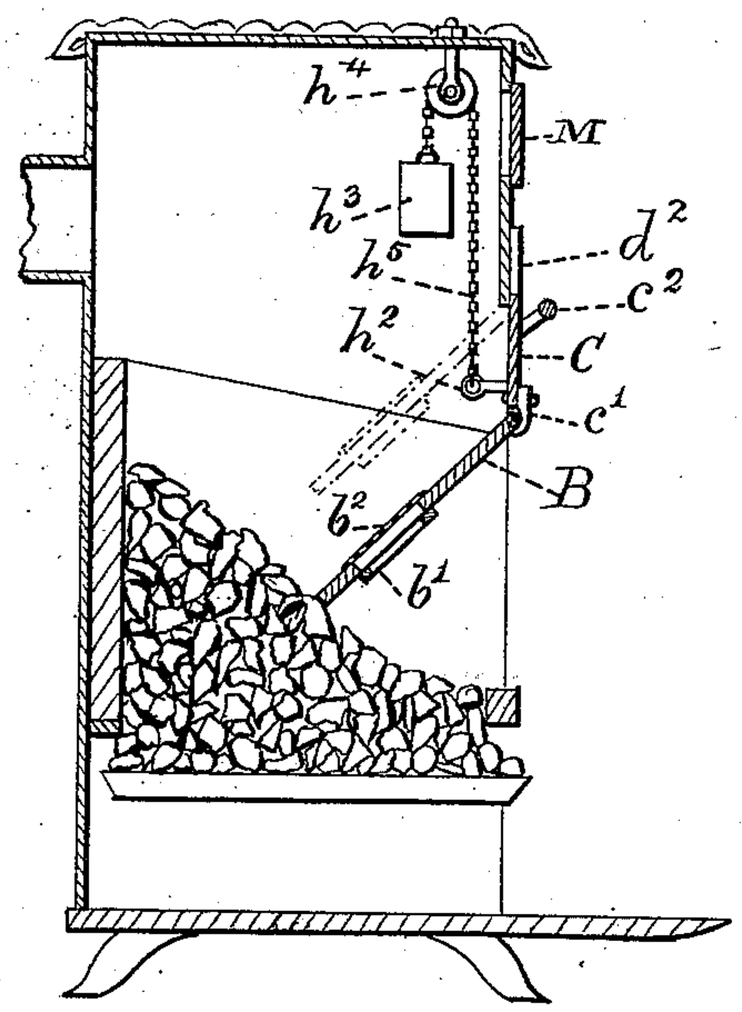
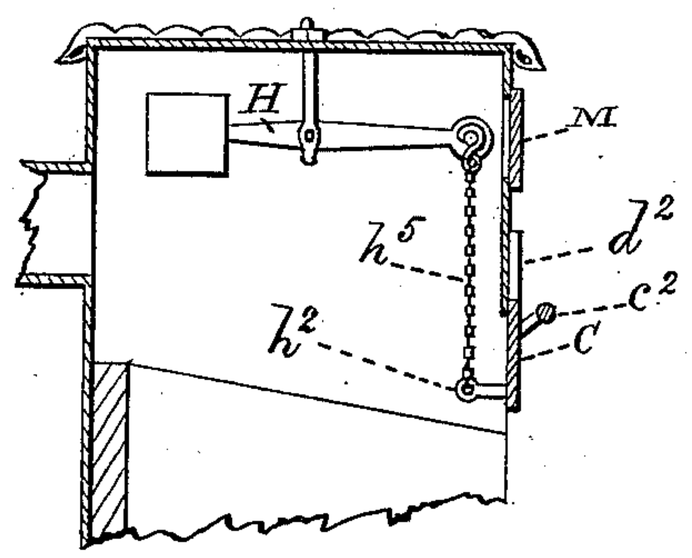


Fig. 6



Witnesses.
Robert J. Terry.
John F. Grant.

Inventor
Edw'd Brown

UNITED STATES PATENT OFFICE.

EDWARD BROWN, OF PHILADELPHIA, PENNSYLVANIA.

OPEN-GRATE STOVE.

SPECIFICATION forming part of Letters Patent No. 273,456, dated March 6, 1883.

Application filed January 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BROWN, a citizen of the United States of America, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Open-Grate Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention (an improvement on my patent of March 5, 1872) relates to the construction of the doors of parlor-stoves, generally known as "open-grate" stoves, in which the features of the open-grate and heating stove are combined. In the aforesaid patent is described a horizontally-hinged door which can be used as a blower, or pushed inward toward the fire, giving unobstructed radiation into the room.

My invention consists in hinging this door to a vertically-sliding rod or door, whereby the swinging door may be raised or lowered, as may be necessary, when putting on coal, or to accommodate the varying height of the fire; also, in some of the details which assist in carrying out this general feature.

Referring to the drawings which make part of this specification, Figure 1 is a front elevation of the stove. Fig. 2 is a side view of the stove. Fig. 3 is a front view of the hinged door and sliding door. Fig. 4 is a side view of the door, with the stove-casing removed. Fig. 5 shows the balance-weight for the door and the side wheel or lever to operate the hinged door.

The horizontally-hinged and swinging door B, when pivoted in rigid sockets, is prevented from a free movement whenever the fire is deep enough to come in contact with it. Especially is this inconvenience experienced when putting on fresh coals, as may be seen by reference to Fig. 4. To obviate this, instead of hinging the door B to rigid sockets on the stove, I hinge it to a vertically-sliding bar or door, C, by pins m in sockets c'.

To the stove D two upright rods, d', are bolted, which serve as guides to the sliding bar C. The said bar is steadied in position by lugs d^2, cast thereon, and is raised or lowered by the handle c^2. One of the pins m projects far enough to have a spring-handle, e, fastened to it, by which the door may be turned into any position, either inward to obstruct the draft up the chimney and give free radiation from the coals, as in Fig. 4, or vertical to draw up the fire, or outward to prevent the heat from scorching the furniture. The door is held in any position, either by the friction of the hinges c' or by the rack e^2, into which the handle e engages.

The doors C and B are balanced by the weighted arm H, the forked end of which engages the pin m; or the said arm H may be placed inside the stove and connected to the eye h^2 in the middle of the door C by a short chain or link, as shown in Fig. 6; or a weight, h^3, pulley h^4, and chain h^5 may be used, as shown in Fig. 4, or other mechanical device at present in use; also, in place of the spring-handle e, I use a ribbed wheel, K, secured to the pin m. The indentations on the back of the said wheel bear against a spring, k', secured to the sliding door C.

In the swinging door B, I place mica lights b', through which the fire may be seen while it is being drawn up. Coals can be placed on the fire at the open front, if the slide C is raised by the handle c^2, as the door B will then take the position shown by the dotted lines in Fig. 4; or the coals may be put on by a door, M, above, in which case I protect the mica lights by perforated sheet metal b^2.

To increase the light and heat by radiation I nickel-plate the door B, or bolt thereon a loose reflector, which can be changed when tarnished.

I claim as my invention—

1. In open grates or stoves, the combination of the door B, hinged to swing inwardly toward the fire, and mechanism for raising the said door and hinges vertically, whereby the lower edge of the door may be adjusted to the varying level of the fire.

2. In grates or stoves, the combination of the inclined and adjustable door B with the balanced sliding bar C, attached thereto, as herein described.

3. In open grates or stoves, the combination of the inclined and adjustable door B, the balanced sliding bar C, and a radial ratchet and catch upon the said door and bar, whereby they may be raised and lowered in the same relative position to each other.

EDWARD BROWN.

Witnesses:
ROBERT J. TERRY,
JOHN F. GRANT.