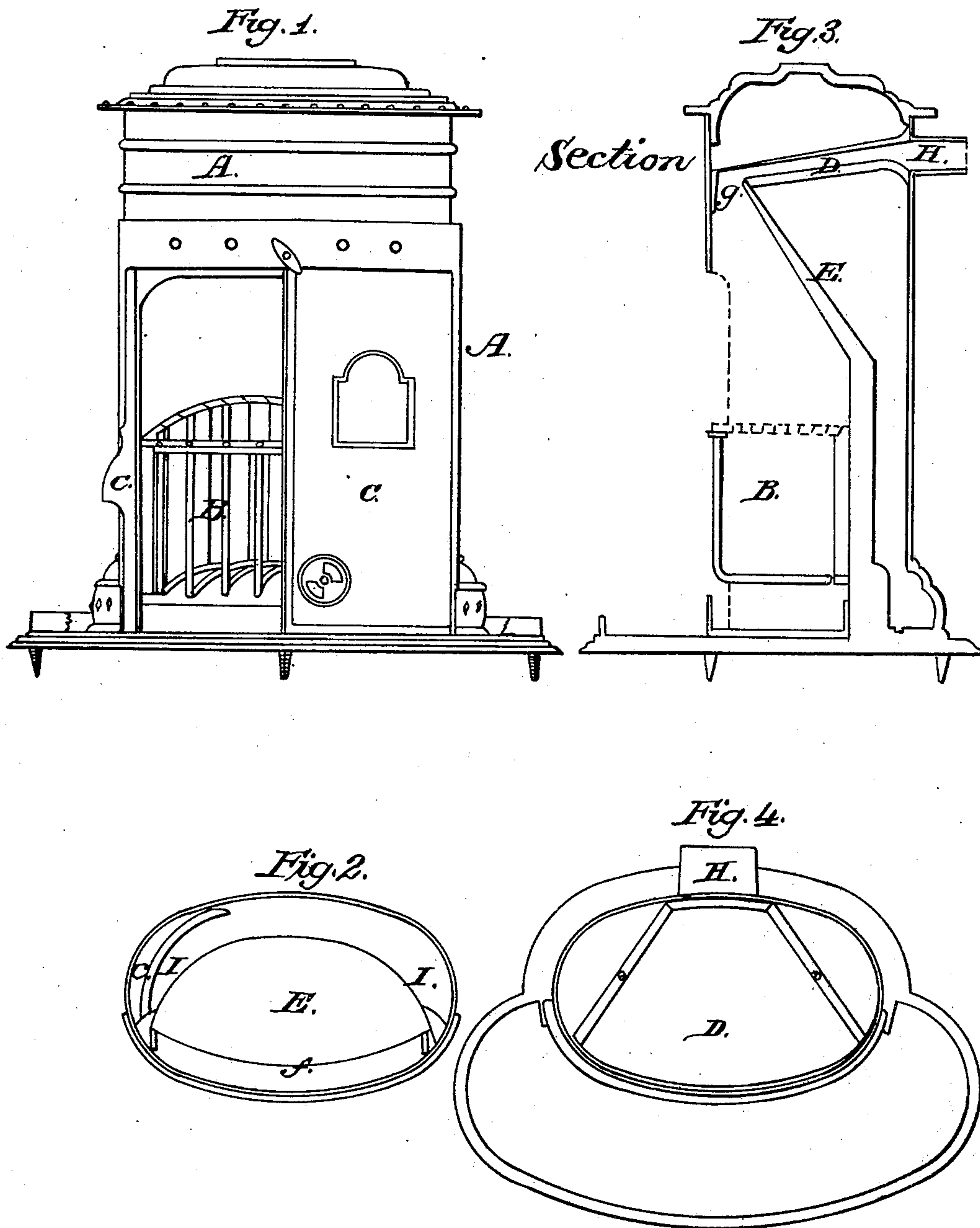


G. O. WOODCOCK.

Stove.

No. 81,053.

Patented Aug. 11, 1868.



Witnesses:
G. H. Read
J. J. Colby

Inventor:
Geo. O. Woodcock
By J. C. Colby
his Attorney.

United States Patent Office.

GEORGE O. WOODCOCK, OF CLAREMONT, NEW HAMPSHIRE.

Letters Patent No. 81,053, dated August 11, 1868.

IMPROVEMENT IN COAL-STOVES.

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

TO WHOM IT MAY CONCERN:

Be it known that I, GEORGE O. WOODCOCK, of Claremont, Sullivan county, State of New Hampshire, have invented new and useful Improvements in Stoves; and I do hereby declare the following to be a full and exact description of the same, reference being had to the drawings that accompany and form a part of this specification, in which—

Figure 1 is a front elevation.

Figure 2, horizontal section on line 1 2.

Figure 3, vertical section on line 3 4.

Figure 4, plan view, the top being removed.

Letter A represents the body or outer casing of the stove.

Letter B, fireplace or box for the fuel and fire.

Letter C, the doors, arranged to be either opened or closed.

Letter D, improved flue, taking its commencement in a mouth, *g*, much expanded laterally, and situated over the very front of the fire-box for reasons hereinafter more fully explained.

Letter E, back of the fireplace or grate, extending upwards and forwards, its upper edge, *f*, corresponding to the inner edge of the mouth or opening *g*.

Letter H, common exit-funnel, taking the draught from the flue D.

Letter I, space between outer casing A and the walls of the fire-box B on each side.

Letter J, air-chamber, in the upper part of the stove, through which the flue D passes

One object of my invention is to convert the ordinary upright close stove into an open stove, if desired, with doors, C C, that may not only be either open or closed, but so arranged to be, when open, enclosed within the general body of the stove, thus giving an air of great neatness, and a whole contour comely in appearance as much when they are open as when closed.

A further object is to secure a better draught when used as an open stove, and thus more perfect relief from smoke, the annoyance of which has made most open stoves undesirable.

As the doors C slide back into the spaces for them, as on the left of fig. 1, and may at any time be brought forward, or partly to, if wished, the same stove may be used as open or closed at pleasure.

The drawings will sufficiently illustrate my devices and their appliance. I will, however, describe more fully the structure and operation of the plate E and flue D.

The plate E extends almost to the front of the walls of the body of the stove, is slightly convex frontwards, and terminates just above the top of the fireplace or door-openings, and directly over the grate or burning fuel, and in the form of a curve, the outer edges the lowest as in fig. 3.

The effect produced by this form and arrangement is to spread the column of vapor and smoke laterally, and thus distribute more heat, while the opening *g* above invites not only the rising heated air and vapor from the burning fuel below, but also impels a current, steady and constant, under the line *a* rearwards and upwards, as at *m* in fig. 3, and of sufficient force to prevent the blowing of smoke into the room by operating or shutting of doors or other like influences.

The mouth of the flue D is made wide laterally, so there may be established a regular and constant draught upwards over the whole width of the fire-box B, thus keeping all the currents of air in the fireplace nearly parallel, that is, not disturbed by too great tendency to converge or diverge until they have entered the mouth *g* of the flue D, where the draught is much increased, not only by the form of this flue, but by the great heat given it on account of its position directly over the fire.

The flue D is not formed in any part by the walls, or linings, or any other part of the stove, but is of piece or pieces by itself, and may be readily removed by raising it out the top of the stove when the top plate is off, as in fig. 4.

This is a new arrangement, and is of great importance when it is desired to clean the interior of the flue or the air-chambers of the stove, as also a means of making it lighter to handle when being moved from place.

The arrangement of this flue is such that the air in the chamber J, in the upper part of the stove, which has been let in near the bottom, may be in contact with all sides of the outer surface thereof, and become rapidly heated and passed off through suitable openings at or near the top of the stove, thus quickening the circulation of the atmosphere of the room—one of the most economical auxiliaries in heating quickly.

These openings, or the inletting of air at or near the bottom, or the openings or the egress of the heated air at or near the top of the stove, is no part of my invention.

These peculiar structures and arrangement are of great practical importance, and are applicable as well to fireplaces set in a chimney or brick wall as to different kinds of stoves.

What I do claim as of my invention, and desire to secure by Letters Patent, is—

1. The flue D, when constructed and made detachable, and arranged within the chamber J, and combined with the back plate E, substantially as and for the purposes specified and set forth.
2. The back, E, when made convex frontwards, as and for the purposes specified.
3. The combination and arrangement of the air-chamber J, the spaces I I, the convex back E, and the flue D, substantially as described and set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE O. WOODCOCK.

Witnesses:

ANDREW W. BROWN,
IRA COLBY, Jr.