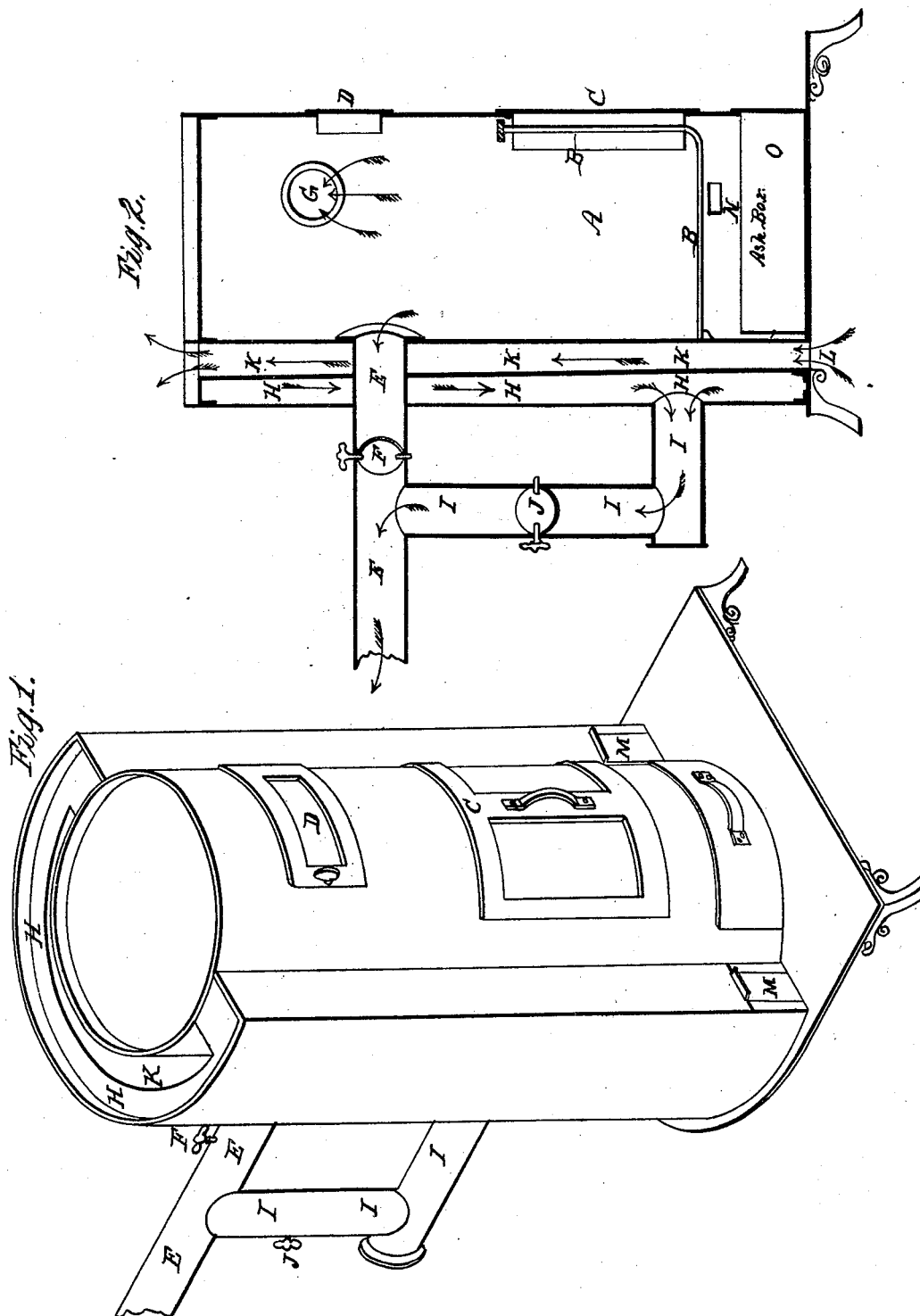


G. C. HOWE.
STOVE.

No. 1,677.

Patented July 10, 1840.



UNITED STATES PATENT OFFICE.

GEO. C. HOWE, OF NEW YORK, N. Y.

CONSTRUCTION OF STOVES FOR HEATING THE AIR OF APARTMENTS.

Specification of Letters Patent No. 1,677, dated July 10, 1840.

To all whom it may concern:

Be it known that I, GEORGE C. HOWE, of the city, county, and State of New York, have invented a new and useful Improvement in Stoves, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is an isometrical elevation of the stove. Fig. 2 is a sectional elevation.

Similar letters refer to similar parts in the figures.

This stove consists of a cylinder body A in which the combustion is produced, having five openings in it, one for the igniting pipe E; one in each side of the cylinder, near the top, as represented at G, to admit the heat to pass around and inside a segment drum H hereafter to be described; and two small openings immediately under the grate as seen at N for the purpose of receiving the dust arising from the ashes into the lower part of the drum from whence it is removed through two doors M in the front plate of the drum. The drum or chamber H before mentioned is formed of two distinct pieces of sheet iron and riveted to the cylinder A being bent in the form of a half circle and so arranged around the rear part of the cylinder as to form an opening K between the cylinder, or body of the stove and the drum or chamber H for the purpose of obtaining a greater area of surface for the transmission of heat, the said heat being conducted off by a current of cold air admitted through an opening L in the lower or hearth plate which opening is a continuation of the opening K. The bottom of said chamber H is closed by the hearth plate and the top by a semi-circular plate both of which have beads or grooves on them to prevent the escape of smoke or gas at the joints. The cylinder and drum being set up in their proper positions on the hearth plate and the semi-circular top of the drum placed on the top edges of the two plates forming the drum. Screw rods are inserted through apertures in said top plate and in the hearth plate and secured by nuts or in any convenient manner. The igniting flue E extends horizontally from the chamber of combustion through the open space and drum to the chimney or other place in which flue on the under side is made an opening to admit another flue I leading from the lower part of the drum for conducting off the smoke and gas from the

drum to said igniting flue; both of which flues are furnished with valves F and J for changing the draft between said flues E and I.

The two small openings M M before mentioned are at the bottom of the drum immediately in front near the hearth for the purpose of cleaning out the ashes that may accumulate. The grate B for supporting the fuel rests on ledges in the lower part of the cylinder. The door D for the introduction of the fuel is in the front part of the cylinder above the grate. The door C for the transmission of light is glazed with mica and is hung on hinges immediately in front of the grate. The ash box o is arranged in the usual manner under the grate.

Operation: The fire is made in the chamber of combustion A in the usual manner, the valve J being closed and the valve F being open for increasing the draft until the fire is completely lighted. The valve F is then closed and the valve J is opened which causes the heat and smoke to pass through the openings G into the drum H in which it circulates; it then passes through the flue I into the igniting flue E and then into the chimney. The air which is heated in the space M between the cylinder and drum is driven upward by the current of cold air which enters said space at L. The dust that passes through the openings N into the bottom of the drum is discharged through the openings M in front.

What I claim as my invention and desire to secure by Letters Patent consists in—

1. The manner in which I have combined the cylindrical stove and drum, by making the drum surround the back part of the cylinder and leave an open space between it and the latter for a current of air to circulate through as described.

2. Also the mode of conducting or changing the draft by means of the flues E and I and the valves F and J in combination with the foregoing arrangement of the drum and cylinder as described which causes the draft to pass directly from the fire chamber to the chimney by closing the valve J and opening the valve F or to circulate through the semi-circular drum before passing to the chimney by closing the valve F and opening valve I as herein set forth.

GEORGE C. HOWE.

Witnesses:

N. A. FREEMAN,
G. H. JACKSON,