

J. D. OGLE.
GRATE-BACKS.

No. 182,033.

Patented Sept. 12, 1876.

Fig. 2

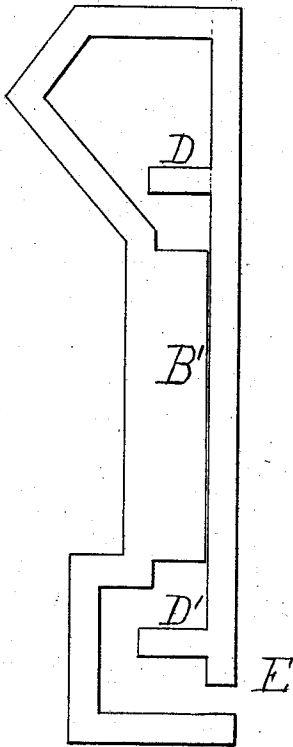
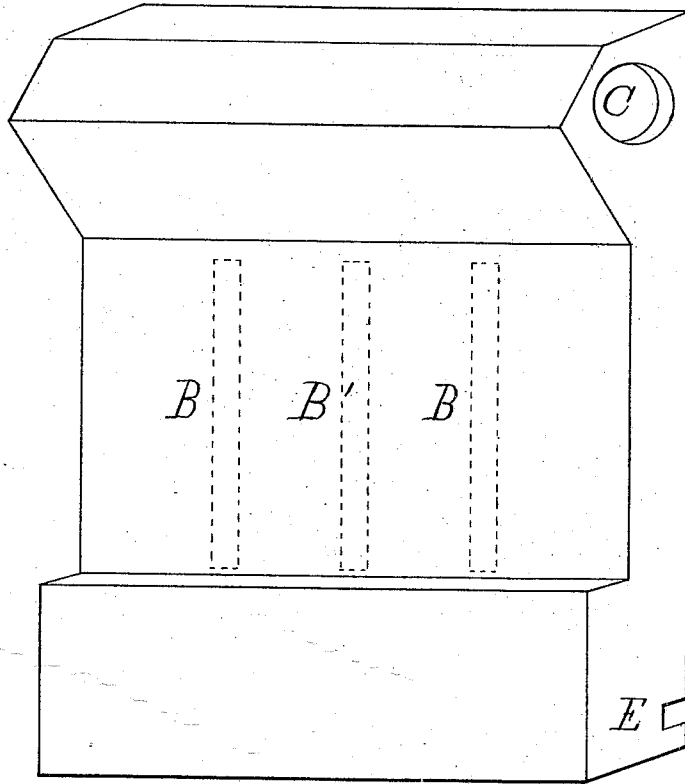


Fig. 1



Witnesses
John H. Bond.
John Elam

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His Attorney

UNITED STATES PATENT OFFICE.

JOSEPH D. OGLE, OF RICHMONDALE, OHIO.

IMPROVEMENT IN GRATE-BACKS.

Specification forming part of Letters Patent No. **182,033**, dated September 12, 1876; application filed August 5, 1876.

To all whom it may concern:

Be it known that I, JOSEPH D. OGLE, of Richmondale, Ross county, State of Ohio, have invented an Improved Grate-Back, of which the following is a specification:

My invention consists in constructing a hollow grate-back of cast-iron, so partitioned that one or more upper rooms may be heated from the air which passes through the same, there being suitable inlet and outlet orifices.

The accompanying drawings are made a part of my specification, in which like letters designate like parts.

Figure 1 is a perspective view of the grate-back. Fig. 2 is a transverse vertical section of the same.

The hollow grate-back I cast in two parts, of suitable size for ordinary sitting-room grates. The form of the front plate is shown in the figures; and on the inner surface are three ribs, B, the use of which are to both stiffen the front plate and to form separate air-passages.

At Fig. 2 one of the ribs B' is shown as closing up the space between the front and back plate.

When it is desirable I extend this rib upward, filling the space above, and thereby dividing the back into two apartments. At C, Fig. 1, is an orifice in the right end of the back. To this orifice is attached suitable pipe, to convey the heated air to an upper room, when, by extending the central rib to form

two apartments, a similar orifice is provided for the opposite end, the pipe connected therewith extending to another room. The back plate, which is bolted onto the front, presents a plane surface, with the exception of the projections D D', which serve only to direct the current of air forward into the upper and lower chambers. E is the inlet for the air which is supplied from the outside of the building. The upper projection of the back extends forward to aid in forming the throat for the flue, and the lower projection extends forward beneath the grate-bars.

The operation may be described thus: The air enters from without the building through the inlet E, passing around the projection D' upward between the walls, and carried forward, by the projection D, into the upper chamber, and thence out through the side orifices into upper rooms. The air in its passage through the back becomes heated, and being conveyed through suitable pipes to upper rooms. Thus these rooms become warmed in a convenient and economical manner.

What I claim as my invention is—

The hollow grate-back provided with ribs B B', projections D D', inlet E, and orifice C, constructed substantially as set forth, and for the purpose of heating an upper room.

JOSEPH D. OGLE.

Witnesses:

R. J. TWEED,
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