

E. BACKUS.

Fire Grate.

No. 5,307.

Patented Sept. 25, 1847.

Fig. 1

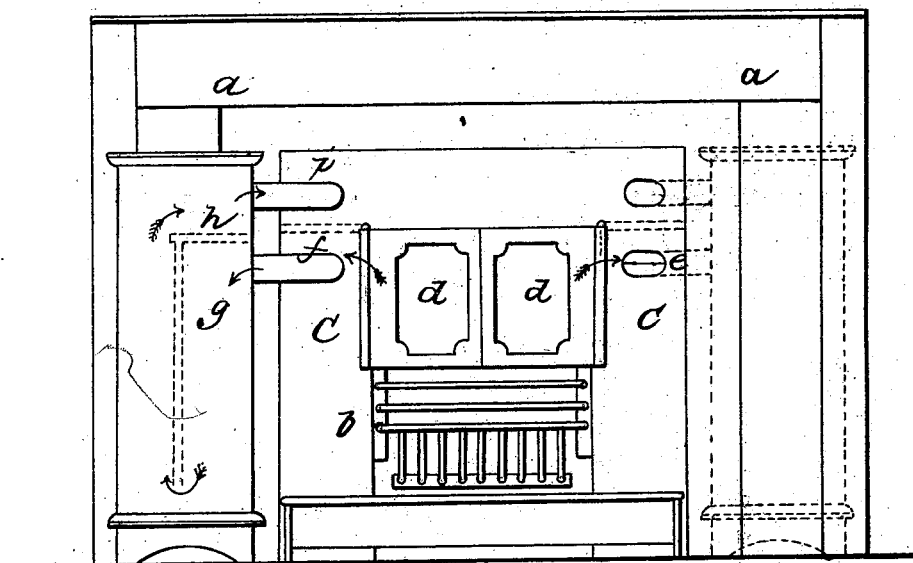
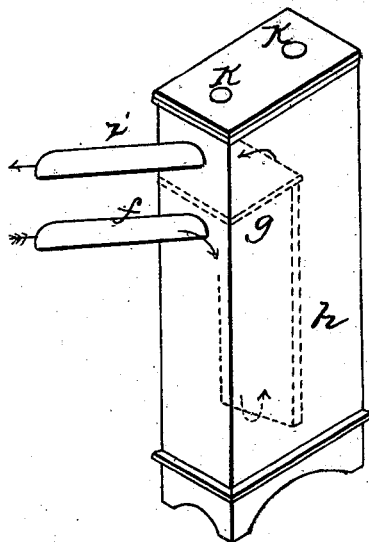


Fig. 2



UNITED STATES PATENT OFFICE.

EVENS BACKUS, OF BROOKLYN, NEW YORK.

FIRE-GRATE.

Specification of Letters Patent No. 5,307, dated September 25, 1847.

To all whom it may concern:

Be it known that I, EVENS BACKUS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Fire-Grates and Radiators Connected Therewith, and that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front elevation of the grate with one radiator only attached, the other being shown in red lines; Fig. 2, one of the radiators detached.

The construction is as follows: In a common chimney piece (*a, a*) a grate (*b*) is set, the jambs (*c*) of which are made hollow; the grate is furnished with two doors (*d*) to increase the draft. Besides the ordinary outlet for the products of combustion, there are two others one into each jamb and when the throat of the grate is stopped, (which may be done by an ordinary lattice or other valve) not shown in the drawing, then the heat, smoke, &c. is turned into the side jambs as indicated by the red arrows and pass out through a hole (*e*) in the front of the jamb

to which an oblique pipe (*f*) is fitted which conveys it into a radiator or drum (*g*) in which there is a partition (*h*) shown in the drawing by dotted lines, that causes it to descend to near the bottom, thence it ascends and passes back into the chimney through another oblique pipe (*i*). These radiators (*g*), of which there are two, are four sided prisms having an dsuitable ornament thereon; and are placed one on each side of the chimney piece; they stand on legs, and through them pass two or more pipes (*k*) open at top and bottom through which the air of the room circulates. It will be perceived that these radiators can be removed when the weather is too warm to require their additional heat, and then the grate has only the characteristics of a common grate, and it is obvious that they can be replaced at pleasure.

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

The combination of the removable radiators with a common open fire grate provided with doors substantially in the manner here- in described and for the purposes set forth.

EVENS BACKUS.

Witnesses:

J. D. W. BRINCKERHOFF,
TIMOTHY HUMPHREVILLE.