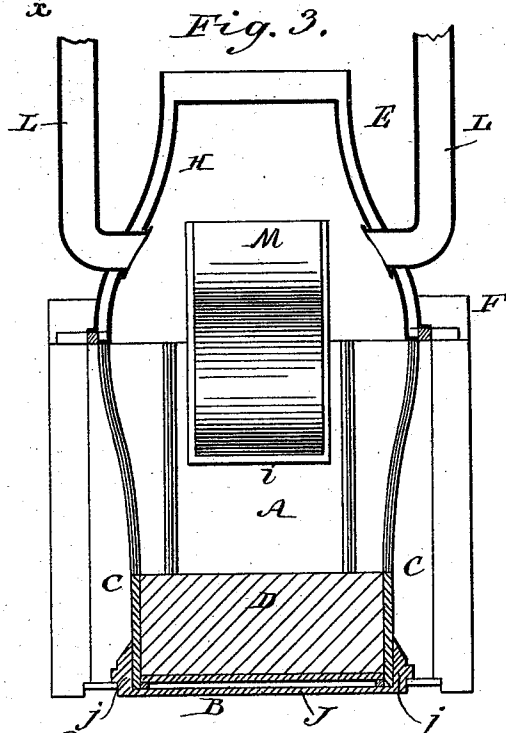
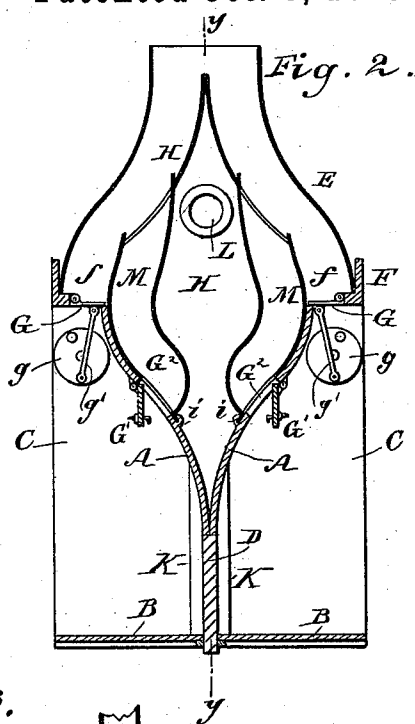
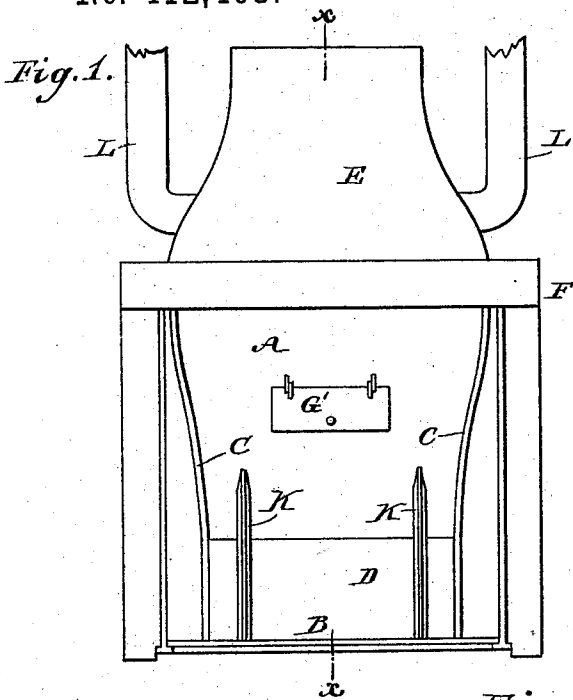


(No Model.)

J. S. CLOUD & S. D. DEARMAN.
FIRE PLACE AND HEATER.

No. 412,468.

Patented Oct. 8, 1889.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOSEPH S. CLOUD AND SAMUEL D. DEARMAN, OF SPARTANBURG, SOUTH CAROLINA, ASSIGNORS TO THEMSELVES AND JOHN G. WHITE, OF NORFOLK, VIRGINIA.

FIRE-PLACE AND HEATER.

SPECIFICATION forming part of Letters Patent No. 412,468, dated October 8, 1889.

Application filed February 26, 1889. Serial No. 301,188. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH S. CLOUD and SAMUEL D. DEARMAN, both of Spartanburg, in the county of Spartanburg and State of South Carolina, have invented new and Improved Fire-Places and Heaters, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a fire-place or heater made in accordance with our invention. Fig. 2 is a sectional elevation on line *x x* of Fig. 1, and Fig. 3 is a similar view on line *y y* of Fig. 2.

The invention will first be described in connection with the drawings and then pointed out in the claims.

A represents the curved back plates of the fire-place or heater; B, the hearth; C C, the side plates, and D represents the lower division-plate between the two opposite fire-places. The hearth and the back and side plates and also the dome E are set in a suitable frame F, to be built into the wall of a building. The dome E connects with the chimney-flues to carry away the smoke and products of combustion, and the throats *f f* are provided with dampers G G, which may be opened and closed by crank-wheels *g* and connecting-rods *g'*, as shown in Fig. 2.

H is a hot-air chamber inclosed by the dome E and resting upon and between the curved backs A. From this hot-air chamber air is taken by pipes L L to heat upper rooms, and in this chamber are formed the flues M M, through which the smoke and products of

combustion pass when the dampers G are closed, and the dampers G', closing the openings G² in the back plates A, are opened. The hearths B are set in a base-plate J, having flanges *j j* to hold the side plates C, which may be readily removed. The air-chamber H is held in place by flanges *i i*, formed at the back of the curved back plates A A, as shown clearly in Fig. 2.

K K are wide rods or flanges at the back of the fire-places to hold the fuel away from the curved plates A to form space for air to pass back of the fuel up to the damper-openings G², as will be understood from Fig. 2.

By constructing the fire-place or heater in this manner and by means of the dampers all of the heat may be utilized for heating both lower and upper rooms; and while we have shown in the drawings only an open fire-place for burning wood as fuel, we propose to use coal by using portable grates.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the curved back plates, of an air-heater H, having flues M, substantially as described.

2. The back plates A, having the openings G² and the dampers *f*, in combination with the air-heater H, held above the back plates, and provided with the flues M, coinciding with the openings G², and the dampers G', controlling the openings G², substantially as described.

JOSEPH S. CLOUD.
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Witnesses:

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