

No. 695,840.

Patented Mar. 18, 1902.

J. A. ROSE & W. P. BROCKSCHMIDT.

HEATING GRATE.

(Application filed Jan. 14, 1901. Renewed Feb. 3, 1902.)

(No Model.)

Fig. 1.

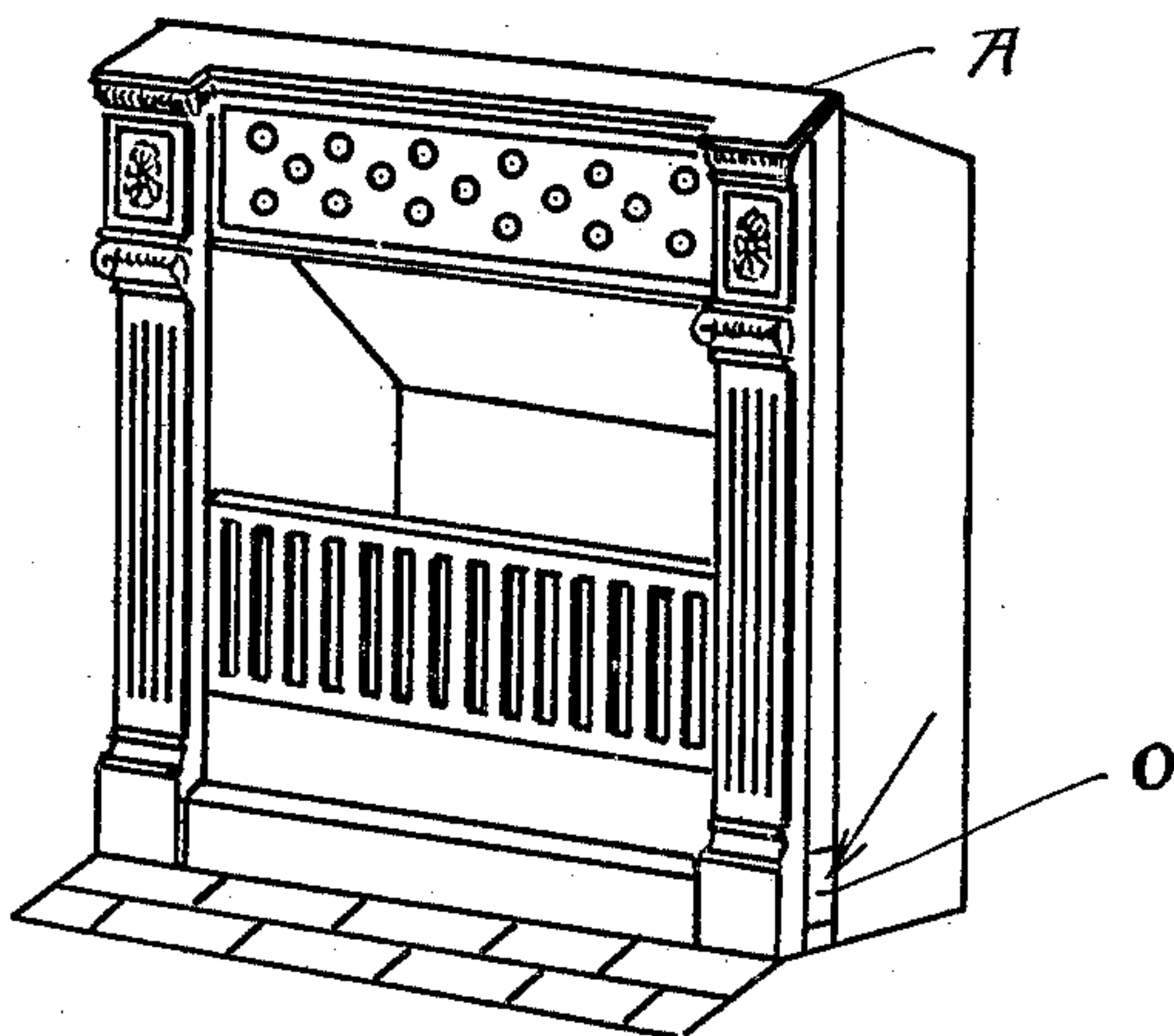


Fig. 2.

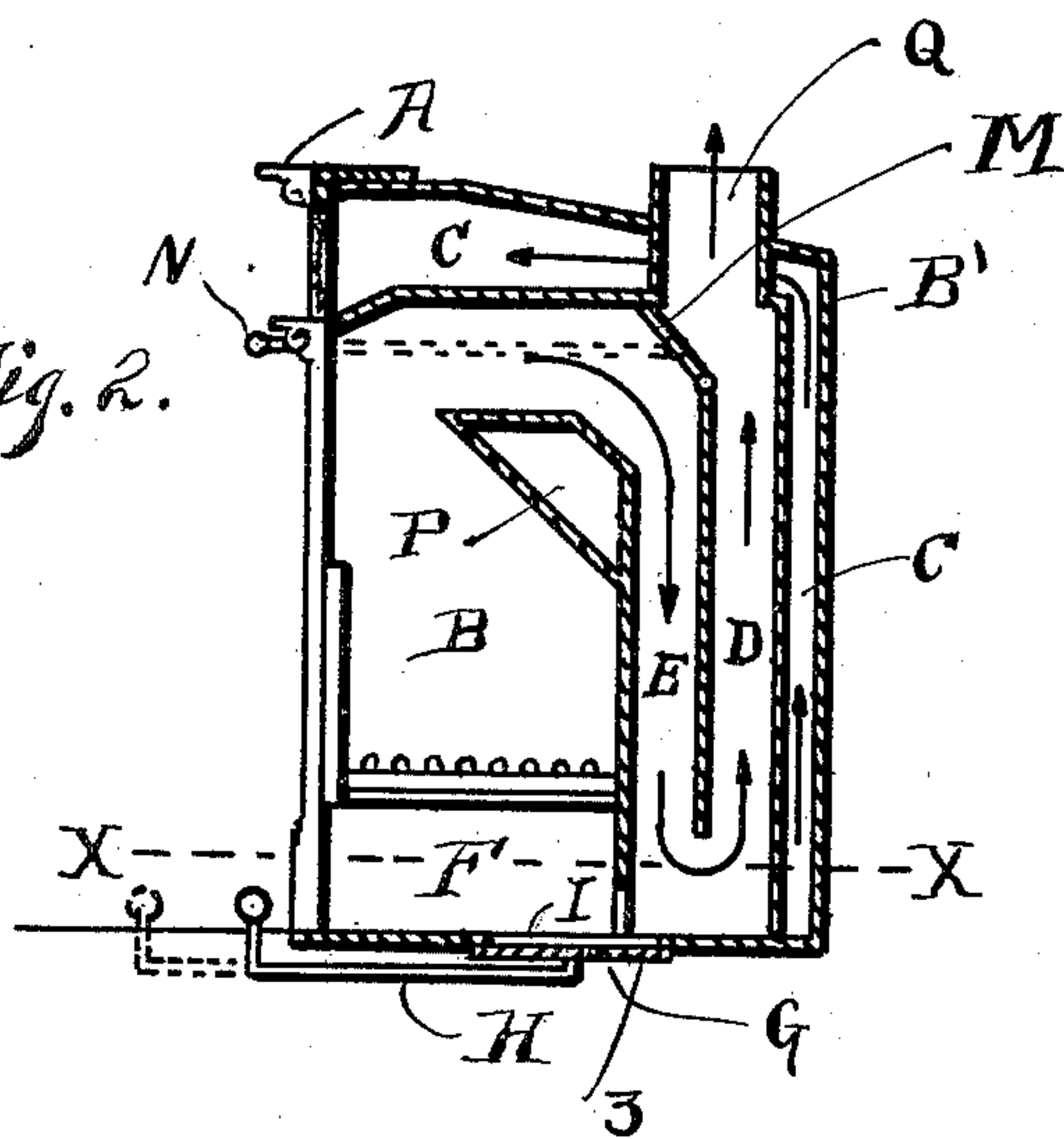
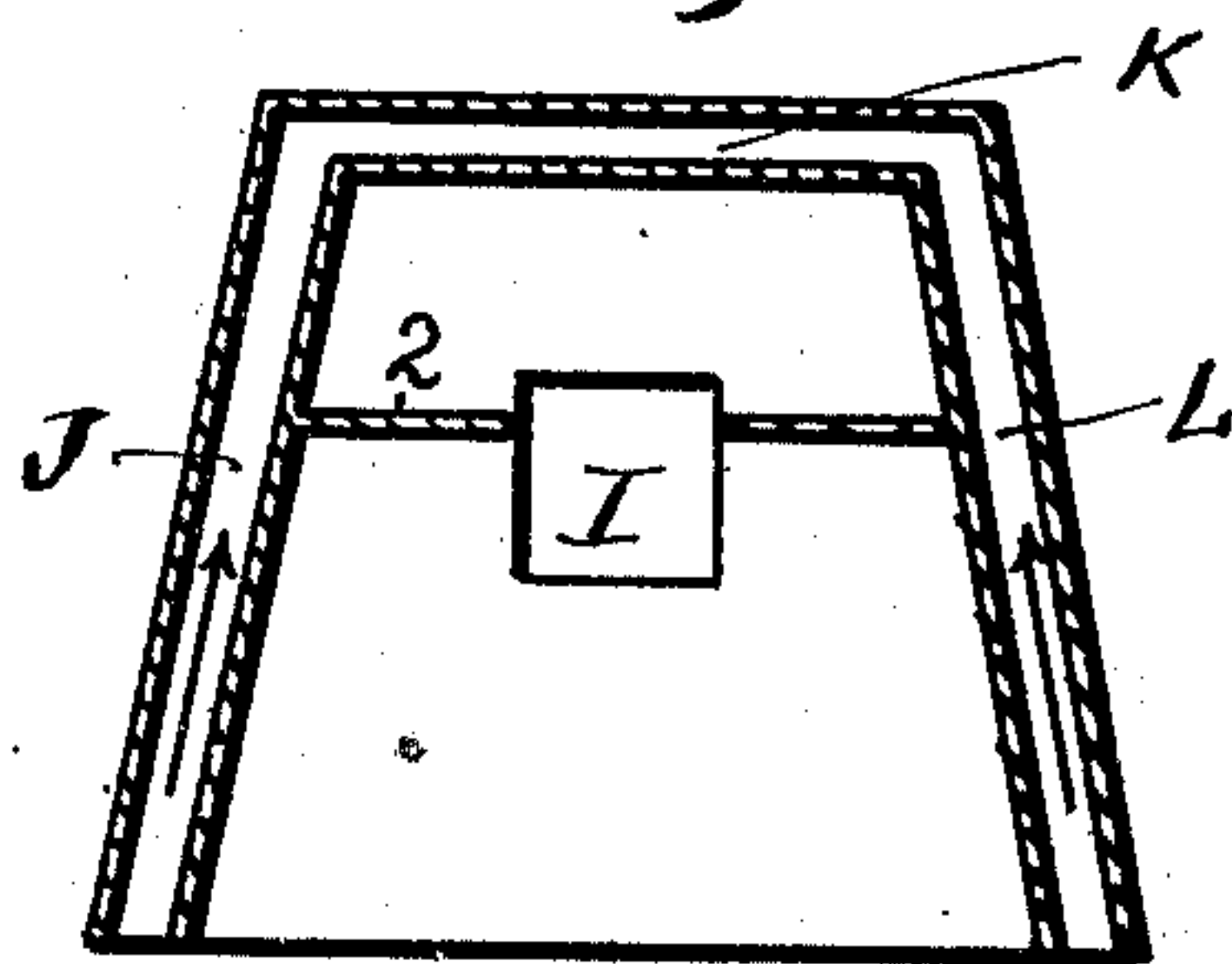


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN A. ROSE AND WILLIAM P. BROCKSCHMIDT, OF GRAND RAPIDS,
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HEATING-GRATE.

SPECIFICATION forming part of Letters Patent No. 695,840, dated March 18, 1902.

Application filed January 14, 1901. Renewed February 3, 1902. Serial No. 92,287. (No model.)

To all whom it may concern:

Be it known that we, JOHN A. ROSE and WILLIAM P. BROCKSCHMIDT, citizens of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Fireplaces, of which the following is a specification.

This invention relates to certain new and useful improvements in fireplaces; and the object thereof is to construct a fireplace which shall be simple in its construction, strong and durable, efficient in its use, comparatively inexpensive to set up; and it consists of the novel combination and arrangement of parts hereinafter more specifically described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereunto appended.

In the drawings forming a part of this specification, Figure 1 shows a perspective view of a grate constructed in accordance with our invention. Fig. 2 shows a vertical sectional view on line *a a* of Fig. 3, and Fig. 3 shows a horizontal sectional view on line *x x* of Fig. 2.

Similar letters refer to similar parts throughout the several views.

A represents the outer shell or case.

B represents the fire-pot.

B' represents the grate-back.

C represents an air-chamber at the top of the grate.

J K and L represent air-spaces opening into the air-space C and surrounding three sides of the fire-box.

E represents the down smoke-flue, and D the up smoke-flue.

M is a damper adapted to close the opening from the fire-box into the down-flue E or to the up-flue D at pleasure.

N is a handle for operating the damper M.

P is an air-passage connecting air-spaces J and L, allowing the heated air to flow freely.

I is an opening in the base of the grate below the grate-bars, a portion of the opening being under the down-flue E.

The back of the fire-pot is shown by 2. This back forms the partition between the down-flue E and the fire-box.

3 shows that part of the opening I that is beneath the down-flue E.

A damper G is adapted to be moved horizontally by means of the handle H, (shown in Fig. 2,) the solid lines showing the damper closed and the dotted lines showing the position of the handle when the damper is opened. When the damper is opened, the ashes fall down, and if dust arises it passes upward into the flue E and is carried away through the up-flue D. It will be noted that after dumping the ashes the damper G may be moved so as to entirely cover the opening into the air-space below the grate-bars and still leave an opening into the flue E, whereby the rising dust will be carried off. The smoke-escape flue is shown by Q. The movement of the smoke when the damper is in the position shown in Fig. 2 is from the fire-box B into and down the flue E, and thence up the flue D to the outlet Q. When the direct draft is required, the damper M is turned so as to close the passage into the down-flue E and allow the smoke and heated gases to pass directly into the outlet Q. The air is admitted into the inlet O, from whence it passes into air-chamber J and L and from thence into air-spaces K, P, and C, escaping through openings in the front of the shell of the grate.

The damper H and handle, as shown in Fig. 2, are below the upper surface of the floor, and that is our preferred form of damper.

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

1. In a fireplace, a base provided with an opening communicating with the ash-space and smoke-flue, a horizontally-sliding damper for closing said opening, and a handle at the front of the fireplace for operating said damper and having its main portion arranged below the floor-level.

2. In a fireplace, a base provided with an opening registering with the ash-space and smoke-flue, a sliding damper arranged below the floor-level for closing the opening, and a handle at the front of the fireplace for operating said damper and connected to the lower face of the latter.

3. A fireplace, provided with an air-chamber at the top, rear and sides thereof, an air-passage connecting the sides together, air out-

lets and inlets, down and up flues communicating with the smoke-flue, and a base provided with an opening registering with the flues and an ash-space; a sliding damper engaging the lower face of the base for suitably closing said opening, and a damper M for opening or closing the top of the said down or up flues for obtaining a direct or indirect draft.

10 4. A fireplace provided with an air-chamber at the top, rear and sides thereof, an air-passage connecting the sides together, air outlets and inlets, down and up flues communicating with the smoke-flue, and a base
15 provided with an opening registering with the flues and an ash-space; a sliding damper for

suitably closing said opening, a handle connected to said damper for operating the same and arranged below the floor-level, a damper M for opening and closing the top of the said down and up flues for obtaining a direct or indirect draft, and means for operating said chamber M. 20

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses. 25

JOHN A. ROSE.

WILLIAM P. BROCKSCHMIDT.

Witnesses:

EDWARD TAGGART,

JAMES B. DAVIES.