2 Sheets--Sheet 1.

T. C. DAMBORG.

Fire-Places.

No. 128,953. Patented July 16, 1872.

Fig. 1.

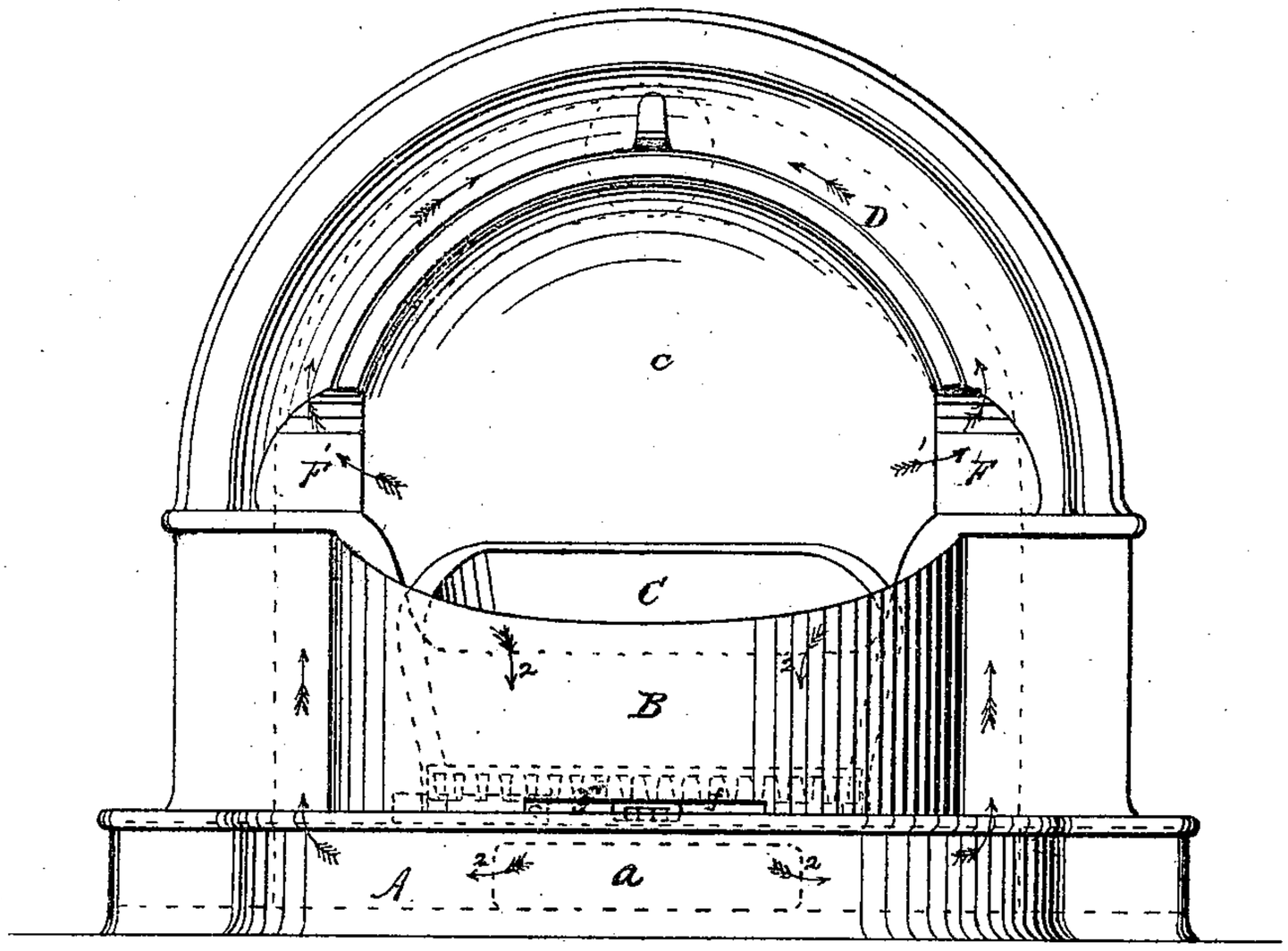
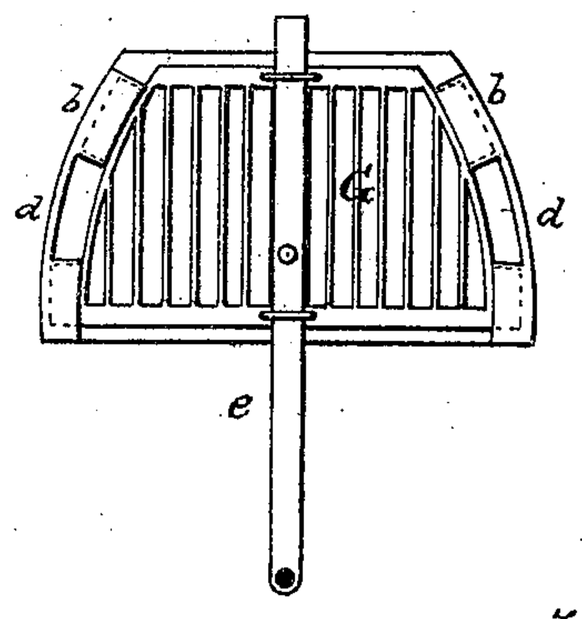


Fig. 2.



Witnesses.
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L. N. Brook.

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Chas. F. Fansbury

2 Sheets--Sheet 2.

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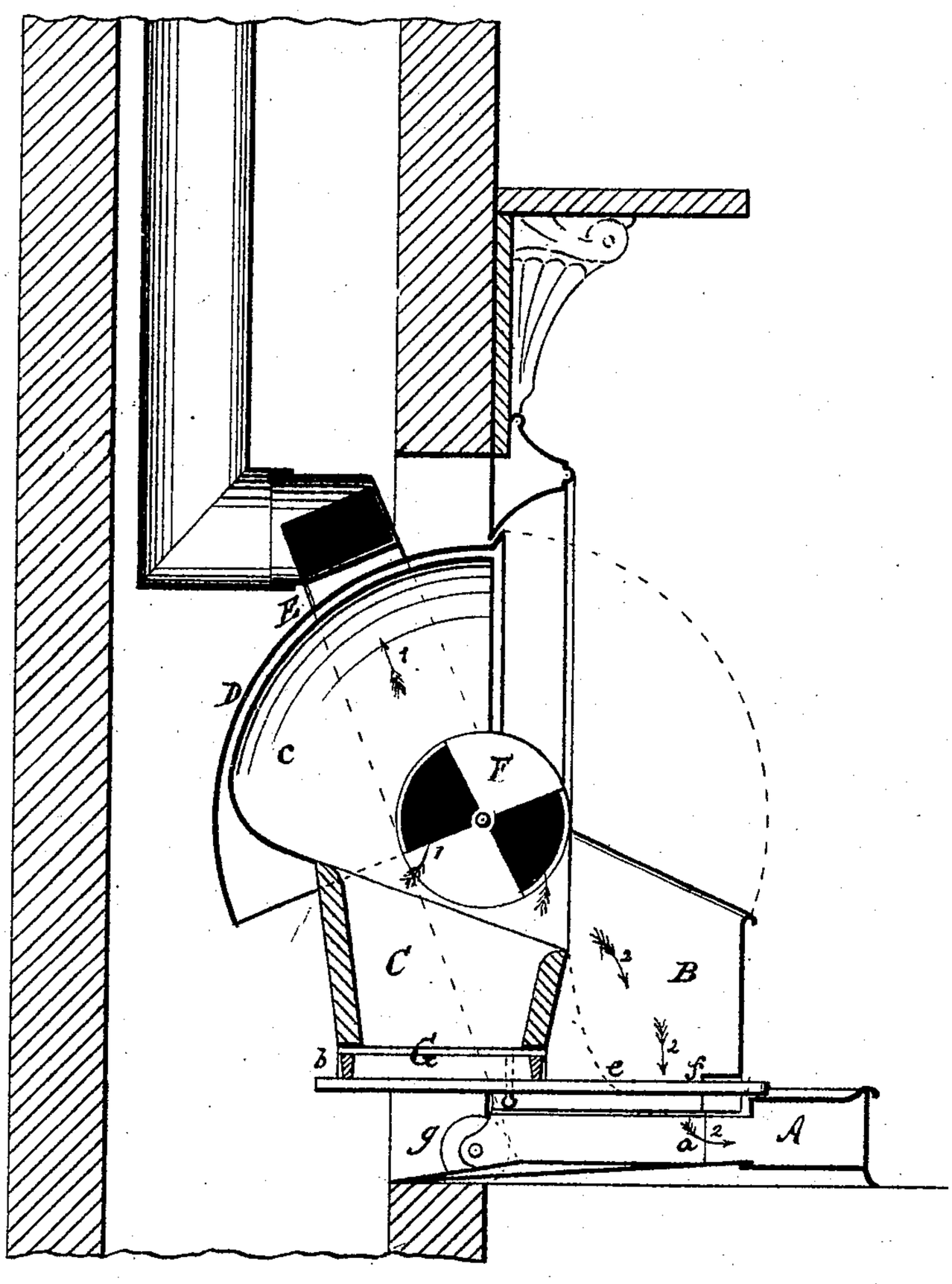
Fig. 3.



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128,953

UNITED STATES PATENT OFFICE.

THORWALD C. DAMBORG, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FIRE-PLACES.

Specification forming part of Letters Patent No. 128,953, dated July 16, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, THORWALD C. DAMBORG, of the city of Philadelphia, State of Pennsylvania, have invented an Improvement in Grates; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawing, in which—

Fig. 1 is a front elevation. Fig. 2 is a bottom view of the grate, and Fig. 3 is a central vertical section of the grate set in the fire-place.

Similar letters of reference indicate like parts in the several figures.

My invention relates to a low-down grate so constructed as to be capable of conversion into a fire-board, or a downward-burning stove, the parts being made, arranged, and combined as hereinafter more fully set forth and claimed. The first part of my invention consists of means for converting a low-down grate into a fire-board or downward-burning stove; and, to this end, the grate, as a whole, is made up of a hollow foot-plate, A, joined to flues E at each side of the fire-place, as shown in dotted lines, Fig. 3; a fender, B, set in front of the fire-pot and resting upon the foot-plate; a fire-pot, C, provided with a globular or other-shaped back plate, *c*, forming the combustion-chamber, and having a removable grate, G; a sliding globular or other-shaped blower, D, having its axis or center of motion on dampers F, and working in a recess over the back plate *c* of the combustion-chamber; and, finally, the flue E, extending entirely around the back of the combustion-chamber from one end of the hollow foot-plate to its other, as seen in dotted lines, Fig. 1, and provided with dampers F, opening into the combustion-chamber and creating a draught through the fire, and also carrying off the smoke, gases, &c.

The drawing shows my invention as a low-down grate, and if the blower D be drawn out so as to rest on the fender, as shown in dotted lines, Fig. 3, it will only perform its office of accelerating combustion, but if the dampers F be closed so as to cut off the direct draught and the blower drawn down on the fender, the smoke, &c., will be directed through an opening, *a*, in the hollow foot-plate into the flue E; in other words, the draught will be down through the fire and opening *a* into the flue instead of up through the fire and dampers F. Thus the grate will become a base or downward burner, and if the blower is provided with mica-covered openings the grate will have the appearance of a stove. The arrows marked 1 show the direction of the draught when the dampers are opened, and those marked 2 show the same when said dampers are closed.

The blower or shield may be made to slide up the chimney at an angle or vertically, and so arranged as to fit over the front of the grate to effect the same purpose as that shown in the drawing and just described. The grate can also be converted into a fire-board stove by drawing down the blower so as to rest on the fender and leaving the dampers open so as to have the upward draught.

The second part of my invention relates to the construction of the grate. The grate G is secured in grooves or ways *b b* depending from the sides of the fire-pot, and is formed with two flat projections on each side which fit in said grooves, as shown in Fig. 3, dotted lines. Openings *d d* are made in the grooves so that when the grate is turned until the forward projection on one side and the rear projection on the opposite side arrive at said openings the grate will fall out, and thus at once remove all the ashes, &c., from the fire-pot.

If it is desired to rake the fire this can be done by means of a bar, *e*, secured to the grate and projecting forward through an opening, *f*, in the fender, so as to be easy of access. To prevent the dust from flying about the blower need only be drawn down, and if it is desired to get at the grate the fender may be removed or raised, and to effect this latter the fender may be hinged to the side of the casing. The usual connections may be made with this grate for heating up-stairs rooms.

The advantages of my invention are that there is no dust escaping when the fire is raked, the fire can be inclosed as though in a stove at night to prevent danger, and the unsightly blower is done away with, as is also the troublesome screen.

What I claim is—

1. The combination, on one heating apparatus, of a low-down grate, fire-board stove, and downward burner, substantially as described.

2. The combination of the hollow foot-plate A, flue E, dampers F, grate G, fender B, blower D, and fire-pot C, constructed and arranged substantially as described, and capable of being converted into a low-down grate, fire-board stove, and downward burner.

3. The grate G secured in grooves *b*, and constructed, arranged, and operating substantially as set forth.

The above specification of my said invention signed and witnessed at Philadelphia this 29th day of April, A. D. 1872.

THORWALD CHR. DAMBORG.

Witnesses:

W. PRICE DAVIS,

WILLIAM MENDHAM.