

W. P. MILLER.

Fireplace.

No. 62,053.

Patented Feb. 12, 1867.

Fig. 3

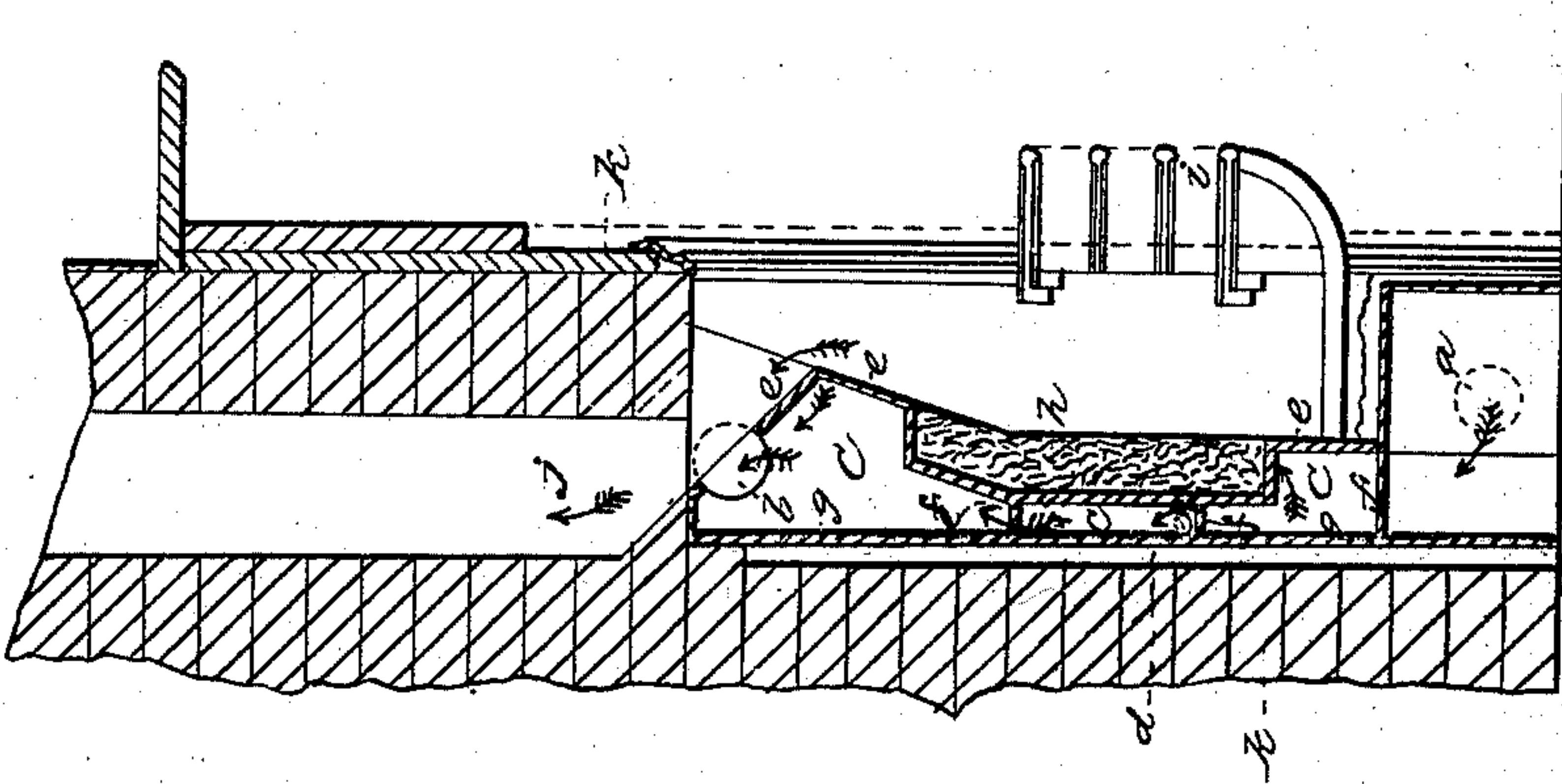


Fig. 1

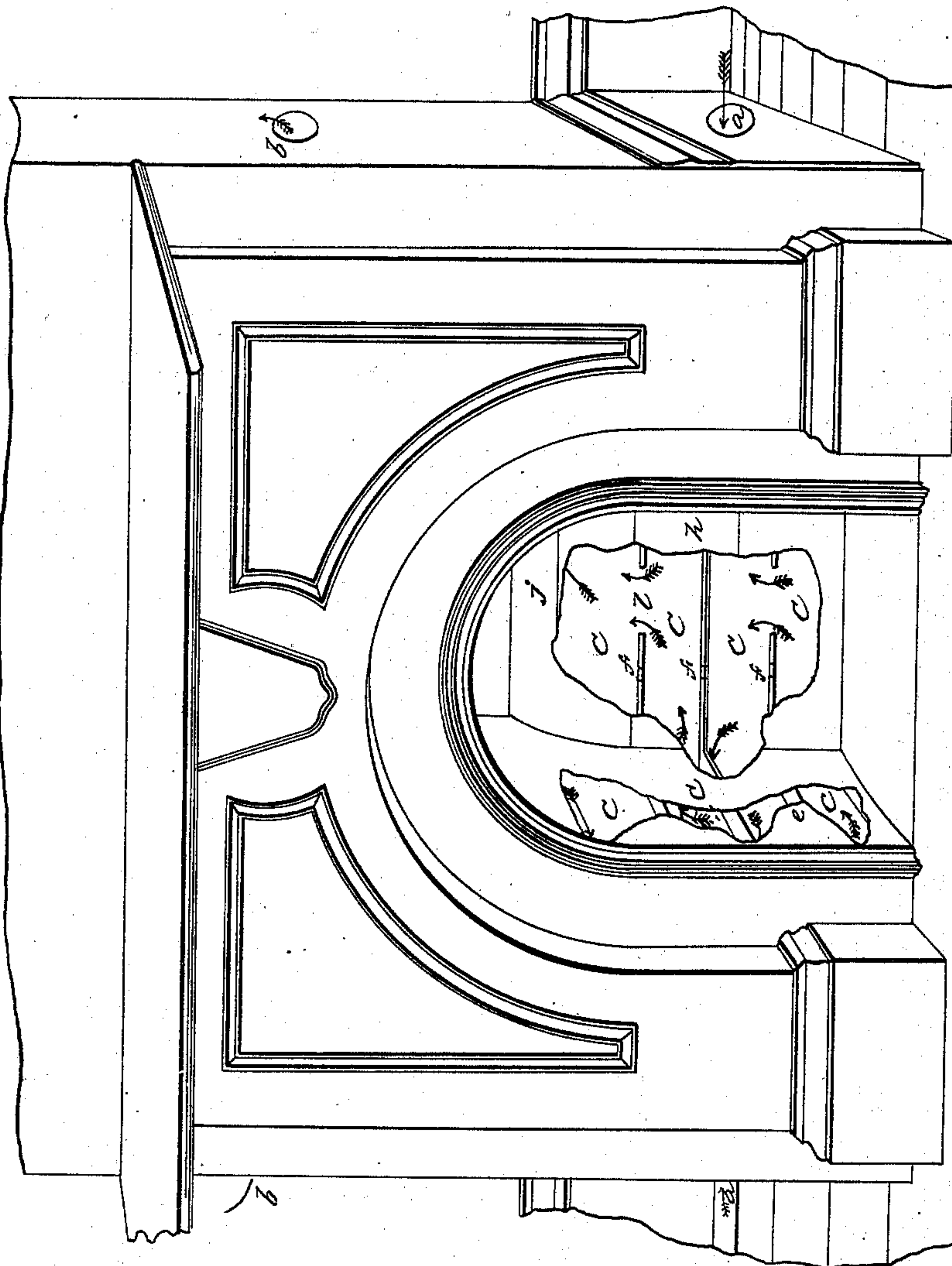
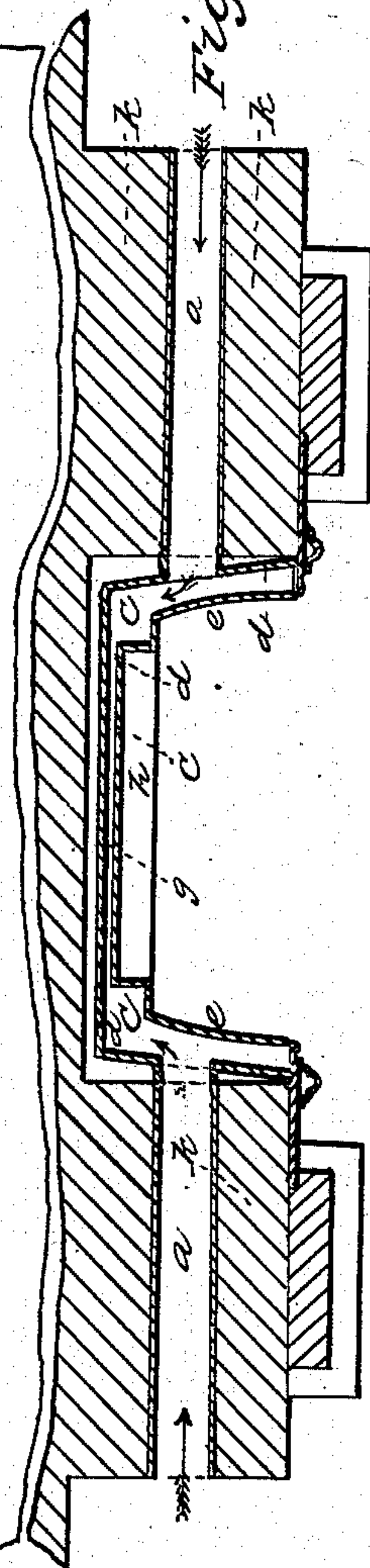


Fig. 2



Witnesses:
M. L. Lawler
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Inventor:
W. P. Miller

United States Patent Office.

WARREN P. MILLER, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 62,053, dated February 12, 1867.

IMPROVEMENT IN FIRE-PLACE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WARREN P. MILLER, of the city and county of San Francisco, and State of California have invented a new and improved Mode of Constructing Fire-Places, by the use of which a large saving of fuel is effected; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure No. 1 is a perspective view of a fire-place, with a portion of the back and jamb broken away, thus exposing to view the air passages indicated by the arrows.

Figure No. 2 is a longitudinal section of fire-place and cold-air ducts, hot and dead-air chambers, brick-work, &c.

Figure No. 3 is a vertical transverse section, showing the hot and cold-air ducts, dead-air chamber, divisions in the heating-chamber, smoke-flue, grate, &c.

Like letters refer to like parts on the several drawings.

Letters *a a* are cold-air ducts; letters *b b* are hot-air ducts; *c c c c* chamber, where the air is heated; *d d* dead-air chamber; *e e* cast-iron back and jamb; *f f f* ledges, cast on the back and jambs to divide the hot-air chamber into compartments, but which are connected by small passages, as shown at *l l*; *g g* a smooth, bright metallic partition, dividing the hot from the dead-air chamber; *h h* a recess in the back, filled with soap-stone or fire-bricks; *i* fire-grate; *j* smoke-flue; *k k k* brick-work.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct an iron fire-place of the proper form, with a recess in the back where exposed to the greatest heat, the same to be filled with soap-stone or brick. Ledges are cast upon the back and jambs, so as to form the same into air passages, in connection with the partition *g g*, which forms the outside of the hot-air chamber, said partition being made of bright, smooth iron for the purpose of reflecting back or confining the heat in the chamber, so as to be conducted into the room through the ducts *b b*. The space in the brick-work is made sufficiently large, so that when the fire-place is set, there will remain an air chamber all around the metal back *g g*, as shown at *d d*. It will be readily understood that when the air that fills the chamber *c* becomes heated by being in contact with the fire-place *e e*, it will be forced out through the ducts *b b* by means of the cold air entering through the ducts *a a*. Thus it will be seen that a constant supply of hot air will be discharged into the room as long as the fire is kept up in the grate.

Double fire-places have been made in various ways, of materials such as brick, soap-stone, and iron. All such I do not claim.

What I claim as new, and desire to secure by Letters Patent, is—

1. A lining or partition, *g*, made of a suitable reflecting metal, and located within an air-heating chamber, behind the fire-place or chamber, and separating the latter from the dead-air chamber, substantially as and for the purpose specified.

2. In combination with the partition *g*, I claim the air-heating chamber *c c c*, and dead-air or non-conducting chamber *d*, all constructed and arranged in the manner and for the purpose specified.

WARREN P. MILLER.

Witnesses:

W. W. LAWTON,
A. P. MONTENO.