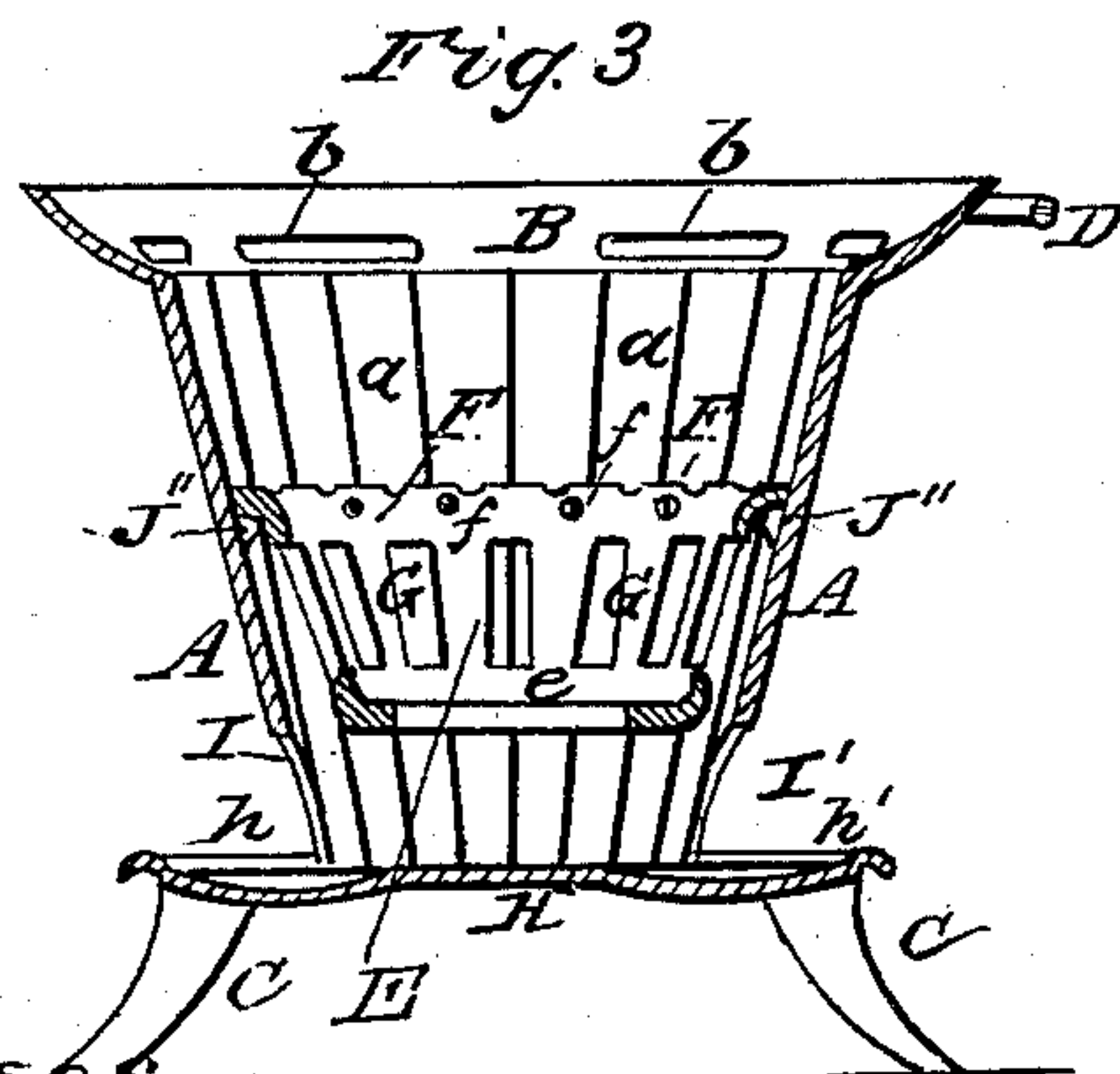
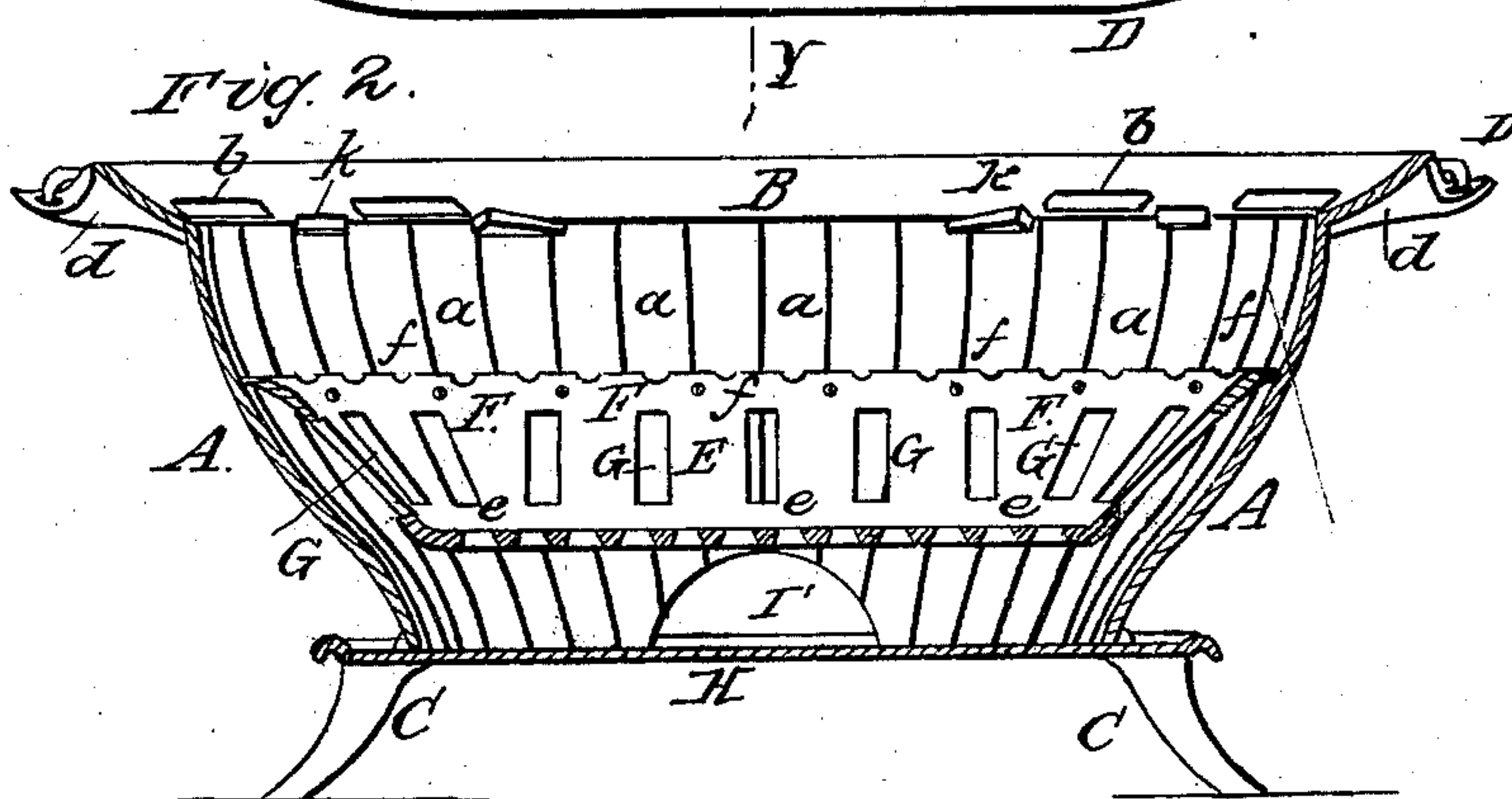
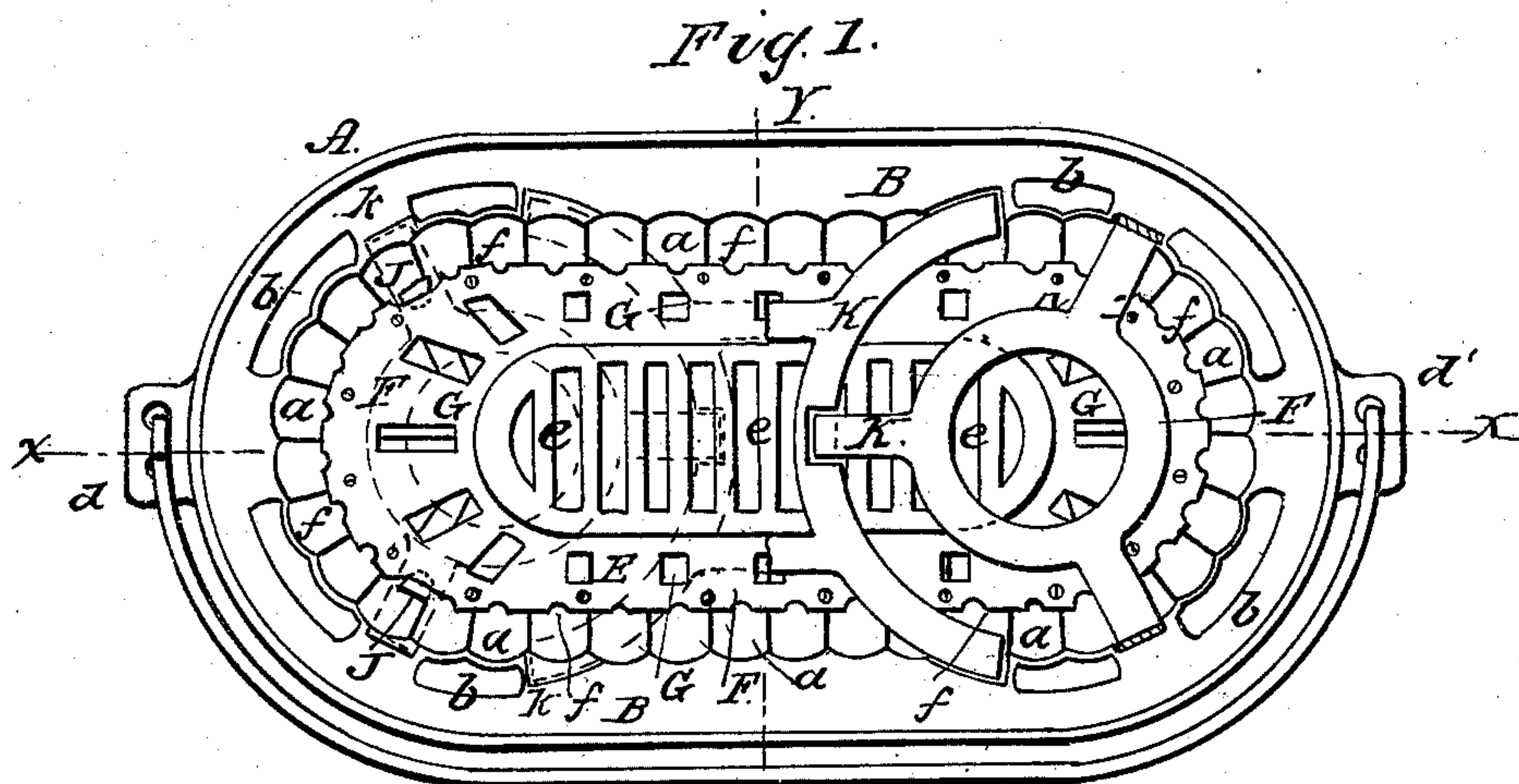


A. J. REDWAY.
Portable Furnace.

No. 66,738.

Patented July 16, 1867.



Witnesses
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United States Patent Office.

ALBERT J. REDWAY, OF CINCINNATI, OHIO.

Letters Patent No. 66,738, dated July 16, 1867.

CHARCOAL-FURNACE.

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

TO WHOM IT MAY CONCERN:

Be it known that I, ALBERT J. REDWAY, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented a new and useful Charcoal-Furnace; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

This invention relates to that class of household utensils commonly known as charcoal-furnaces or summer-stoves, and my improvement consists in constructing the furnace in such a manner as to obtain the greatest amount of heat with the least quantity of fuel and most perfect combustion of the smoke and gases of combustion, thus abating one of the nuisances attending the use of charcoal-furnaces; the construction being also such as to secure an equal ignition at every part, and so as to effectually preserve the external plates from over-heating. In the accompanying drawings—

Figure 1 is a plan or top view of a charcoal-furnace, embodying my improvements.

Figure 2 is a longitudinal section of the same, taken at the line X X; and

Figure 3 is a transverse section, at the line Y Y.

A represents the outer shell or body of the furnace, which is of an oblong form, and has an upper flaring-rim, B, which is pierced with openings *b b*, &c., for a purpose which will be hereafter explained. The body A rests upon feet C C', and has ears *d d'*, to which is attached the bail or handle D. The inner side of the body is provided with a series of concave flutes or channels *a a a a a*, &c., which extend from the lower part of said body to the bottom edge of the flaring rim B. E is the detachable grate or fire-basket, having the customary fire-bars, *e e e*, &c., and this grate flares upwardly and outwardly, and its upper margin is provided with a congeries of crenulated caliducts, F f. The flaring sides of this grate are provided with elongated openings, G G G, &c., for the admission of air to the burning fuel. The bottom of the grate is some distance above the hearth-plate H, and this plate has slight depressions, *h h'*, which are immediately under the large air-inlets I I' of the outer shell. J J' J'' J''' are lugs projecting from the inner side of the shell A, and these lugs serve to support the grate E, and to prevent its weight from springing the sides of the shell, whenever the latter has been weakened by a long-continued fire in the furnace. K K' is a light frame or centres for the support of the cooking-utensils, &c., and the ends of this frame rest in sockets *k k'*.

When the furnace is in operation the entire supply of cold air requisite for the combustion of the fuel enters through the openings I I' of the shell A, and passes between the fire-bars *e e* and through the openings G G and crenulated caliducts F f, thus causing a thorough burning of the fuel without driving the heat to any one side of the stove, so as to burn out the sides, as occurs with furnaces whose air-inlets are only at the ends or at one side thereof. This action of the precisely opposite and opposing currents of air ascending the aforesaid caliducts on all sides, while insuring complete combustion, also effectually preserves the sides from over-heating.

I claim herein as new, and of my invention—

The combination, with the shell or body A, having interior flues or channels *a a* and air-inlets I I' at its opposite sides, of the detachable grate or fire-basket E *e*, having a crenulated edge *f f*, perforations or caliducts F, and air-openings G G, all as herein described, and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

ALBERT J. REDWAY.

Witnesses:

GEO. H. KNIGHT,

HOWARD DOUGLASS.