

No. 748,468.

PATENTED DEC. 29, 1903.

W. VAN B. BEASLEY.

FURNACE.

APPLICATION FILED AUG. 27, 1903.

NO MODEL.

Fig. 1.

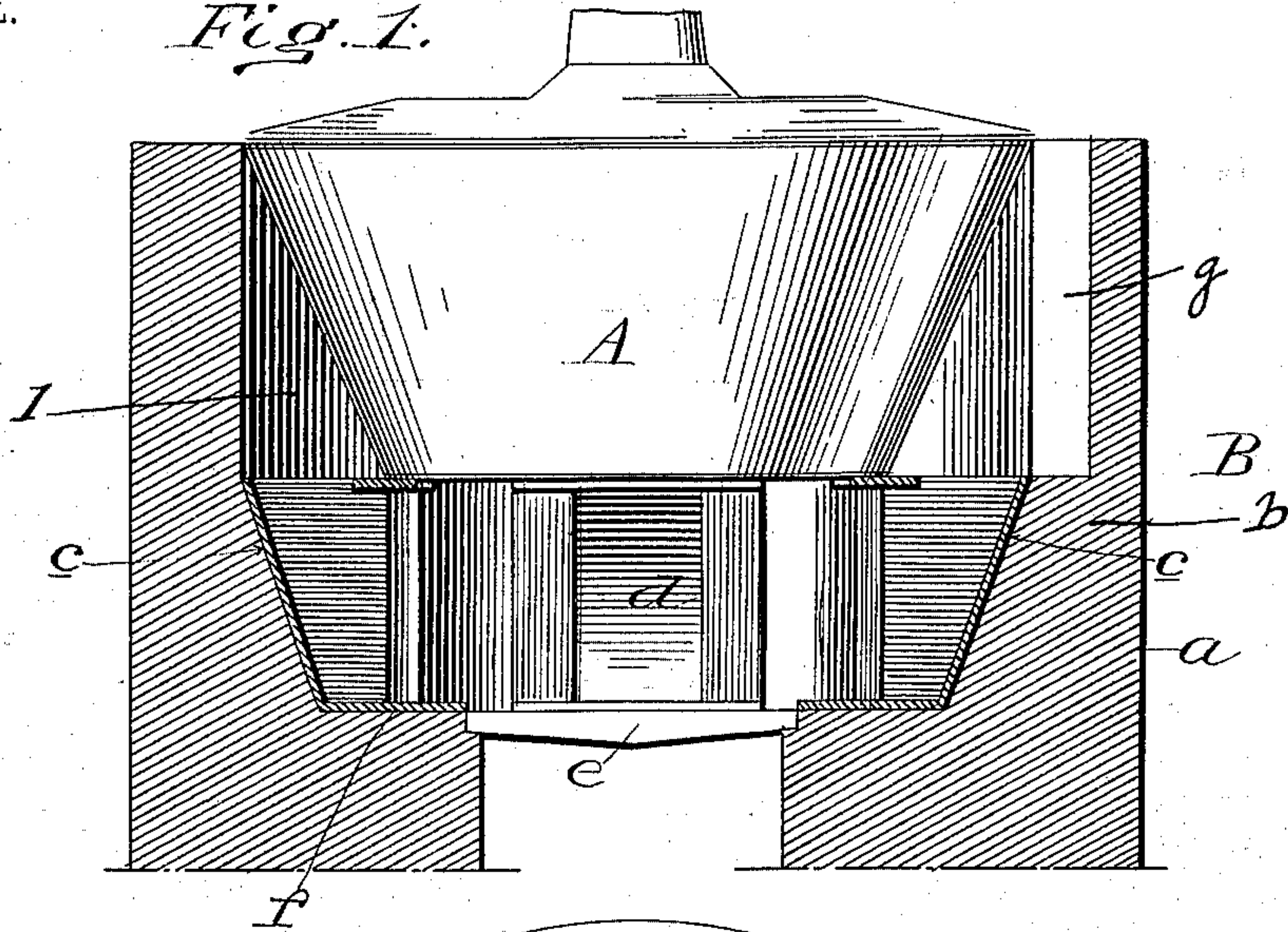


Fig. 2.

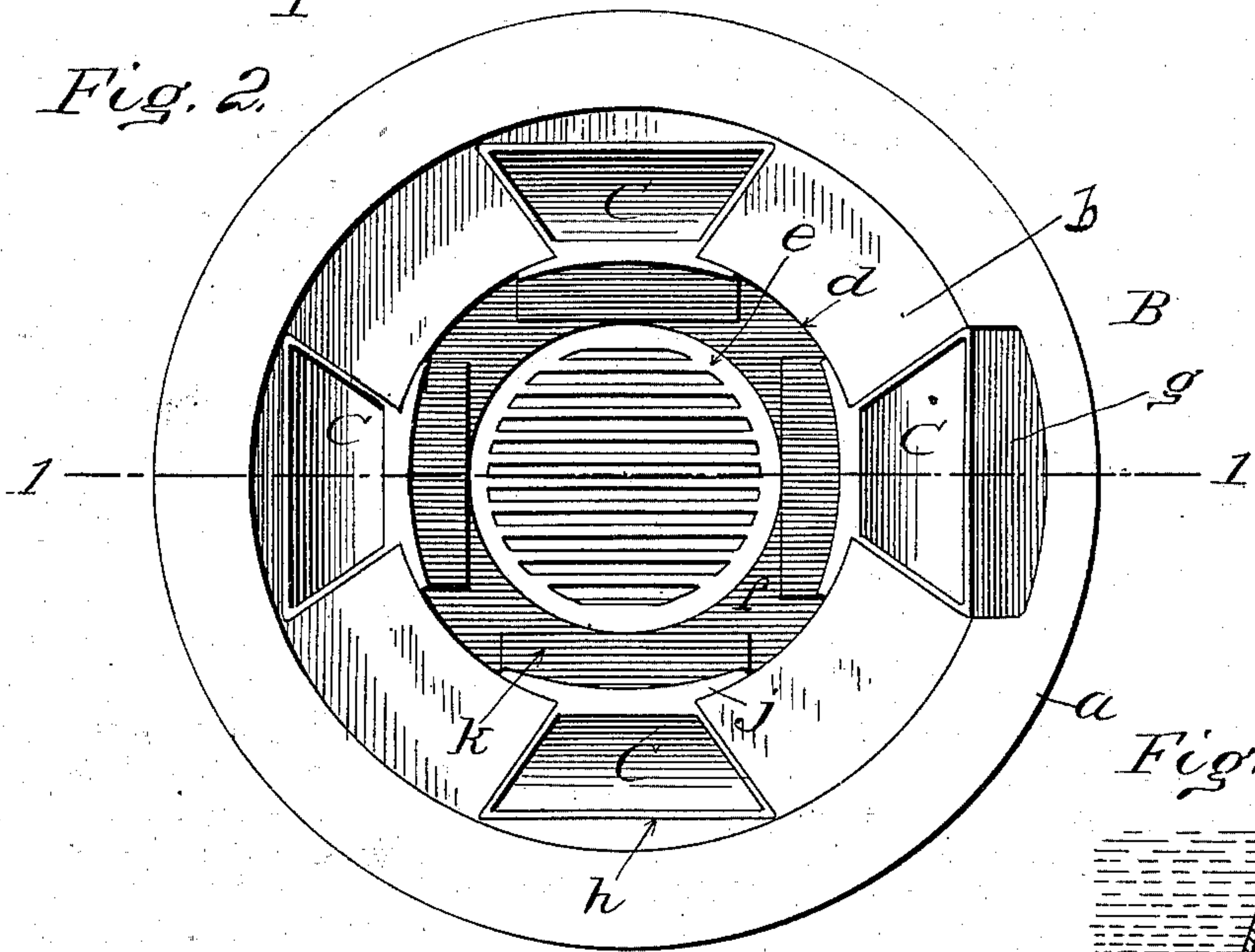


Fig. 4.

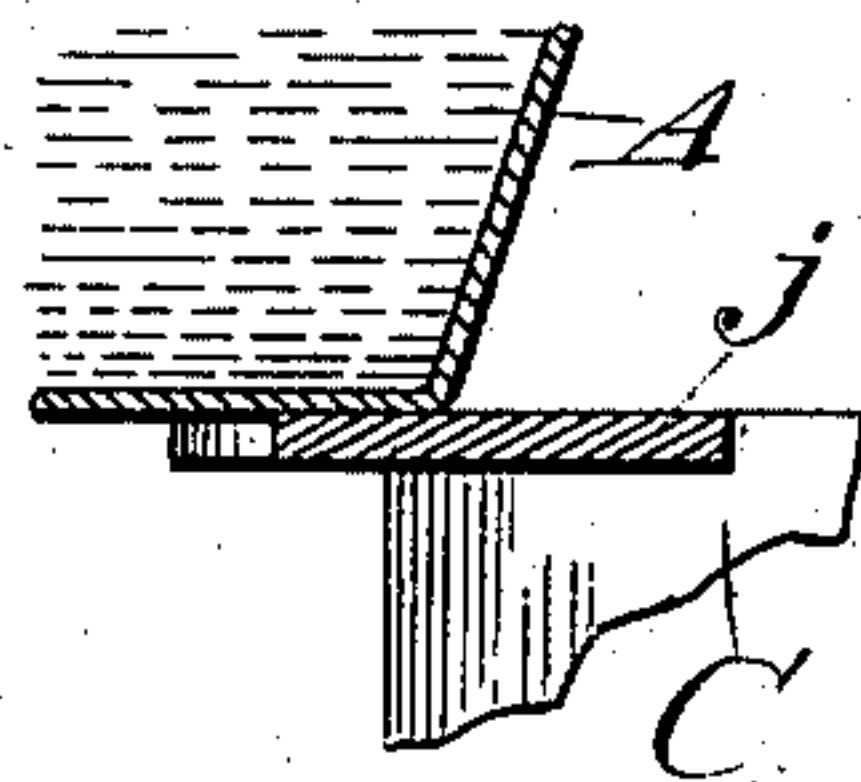
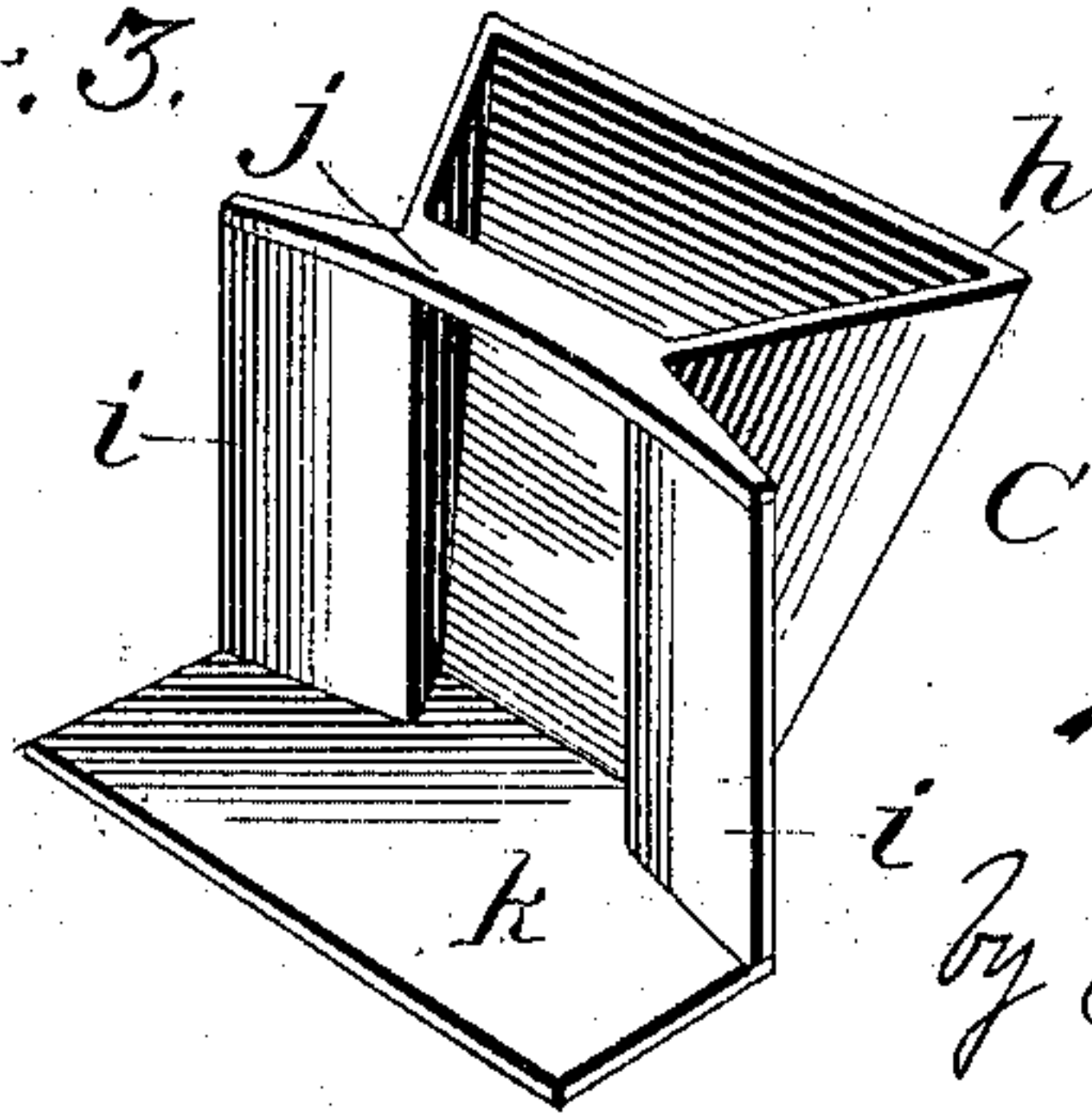


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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FURNACE.

SPECIFICATION forming part of Letters Patent No. 748,468, dated December 29, 1903.

Application filed August 27, 1903. Serial No. 170,987. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VANBURAN BEASLEY, a citizen of the United States, residing at Bryant, in the county of Early and State of Georgia, have invented new and useful Improvements in Furnaces, of which the following is a specification.

My invention pertains to furnaces; and it consists in the efficient and durable furnace hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, forming part of this specification, Figure 1 is a section taken in the plane indicated by the line 1 1 of Fig. 2 and illustrating a still comprising my novel furnace with the kettle in elevation. Fig. 2 is a plan view of the furnace as it appears with the kettle removed. Fig. 3 is an enlarged perspective view of one of the metallic flues forming part of my invention, and Fig. 4 is a detail vertical section illustrative of the manner in which the kettle bears on the upper ends of the several metallic flues.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a turpentine-kettle, which may be and preferably is of the ordinary well-known construction, and B is the furnace. The furnace in the present and preferred embodiment of my invention comprises a casing *a*, of fire-brick or other suitable material, a bench *b*, formed in the casing and having in its inner side a plurality of recesses *c*, which are of dovetail form in cross-section and are tapered toward their lower ends, a combustion-chamber *d*, a grate *e*, a hearth *f*, a chimney *g*, and a plurality of metallic flues C. These latter are preferably cast of iron and respectively comprise an uptake portion *h*, shaped in conformity to the recesses *c* in bench *b*, curvilinear flanges *i*, extending laterally outward from the inner edges of the side walls of the portion *h*, a crown-bar *j*, connecting said flanges and resting flush with the upper end of the portion *h*, and a horizontal wall *k*, which closes the lower end of the portion *h* and extends inwardly from the flanges *i*.

The several flues C are arranged in the cas-

ing *a* in the manner shown in Figs. 1 and 2—that is to say, with their uptake portions *h* in the recesses *c*, their crown-bars *j* flush with the upper side of the bench *b*, their flanges *i* at the inner side of said bench, and their walls *k* on the hearth. In virtue of the metallic flues being thus arranged in the casing it will be observed that they constitute the sole means by which the flames can pass from the combustion-chamber *d* to the annular space *l* around the kettle A, and hence there is no liability of any part of the kettle being unduly heated and the rosin therein burned. It will also be observed that the kettle rests on and is supported by both the flues C and the bench *b*. This will be appreciated as an important advantage when it is remembered that in the ordinary still the brickwork on which the kettle rests burns out after a short period of use and lets the kettle fall, frequently with the result that the tail-gate of the kettle is broken off and the still set on fire. In addition to supporting the kettle and conducting flames to the side thereof, so as to assure the heating of all the rosin in the kettle, my novel flues prevent burning and disintegration of the bench *b*, and thereby preclude the flames reaching the side of the kettle except through the flues.

It will be appreciated from the foregoing that my novel flues add but little to the cost of a still and yet materially increase the efficiency and prolong the usefulness of the same.

I have entered into a detailed description and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A furnace comprising a casing, a bench of fire-brick arranged in the casing and having recesses, and metallic flues disposed in the said recesses of the bench.

2. A furnace comprising a casing, a combustion-chamber, a bench of fire-brick surrounding the combustion-chamber and having recesses, and metallic flues arranged in the recesses of the bench, and open at their inner sides and upper ends.

3. A furnace comprising a casing, a combustion-chamber, a bench of fire-brick surrounding the combustion-chamber and having downwardly-tapered recesses, of dovetail form in cross-section, in its inner side, and metallic flues having uptake portions corresponding in shape to the recesses in the bench, arranged in said recesses, and open at their inner sides and upper ends, and also having flanges at the inner edges of the side walls of said uptake portions, resting at the inner side

of the bench, and crown-bars *j* resting flush with the upper side of the bench.

4. As a novel article of manufacture, a cast-metal flue having a downwardly-tapered uptake portion, of dovetail form in cross-section, open at its inner side and upper end, and also having flanges extending laterally outward from the side walls of the uptake portion, a crown-bar at the upper end of said portion, and a bottom wall or flange.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM VANBURAN BEASLEY.

Witnesses:

J. T. FREEMAN,
A. M. IRWIN.