

(No Model.)

2 Sheets—Sheet 1.

W. H. ALBACH.

BAKE OVEN.

No. 301,319.

Patented July 1, 1884.

Fig. 1.

asbestos

A
tin

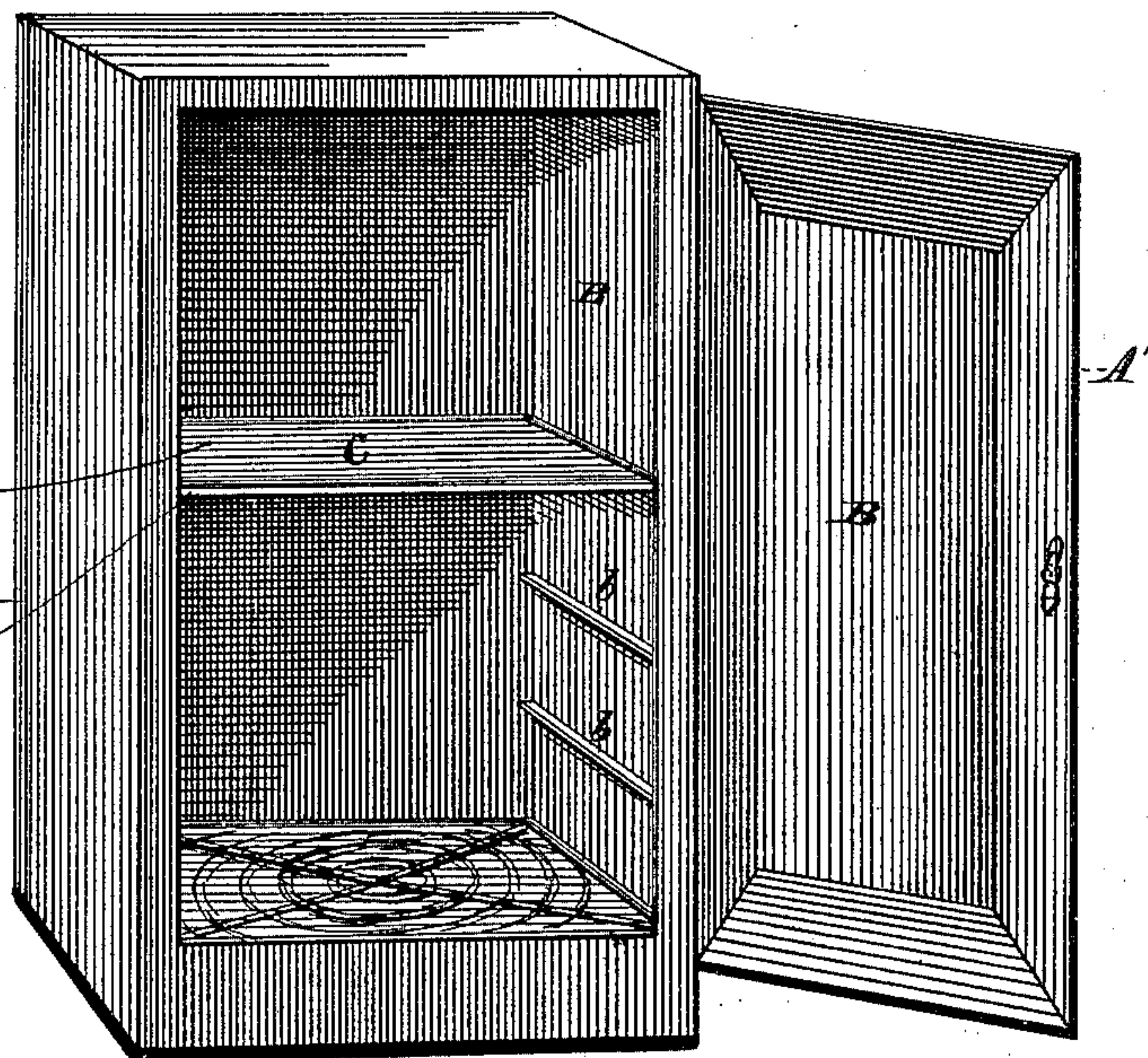
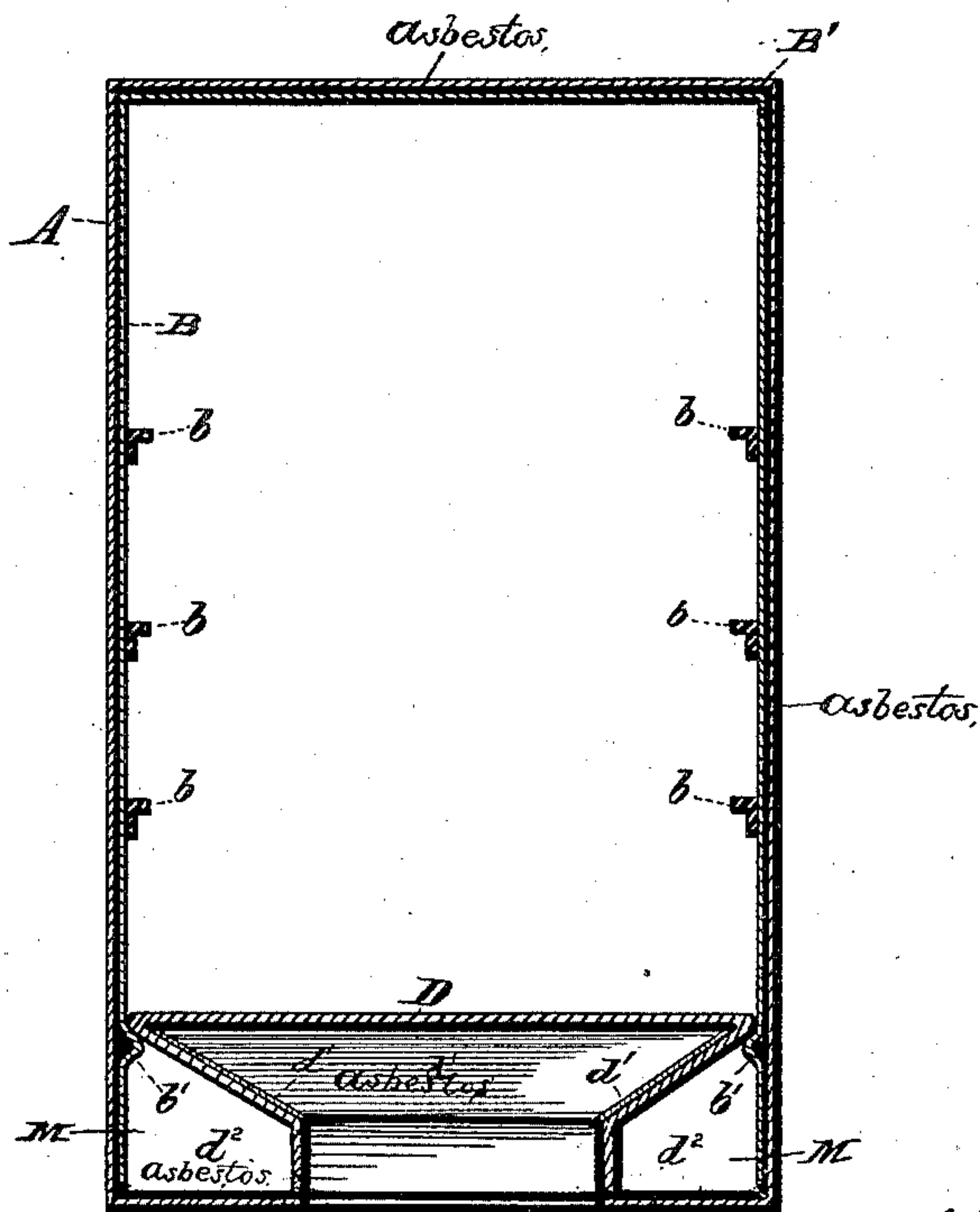


Fig. 2.



WITNESSES

W. Engel
Geo. W. King

INVENTOR

W. Harrison Albach
By Leggett & Leggett ATTORNEYS

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2 Sheets—Sheet 2.

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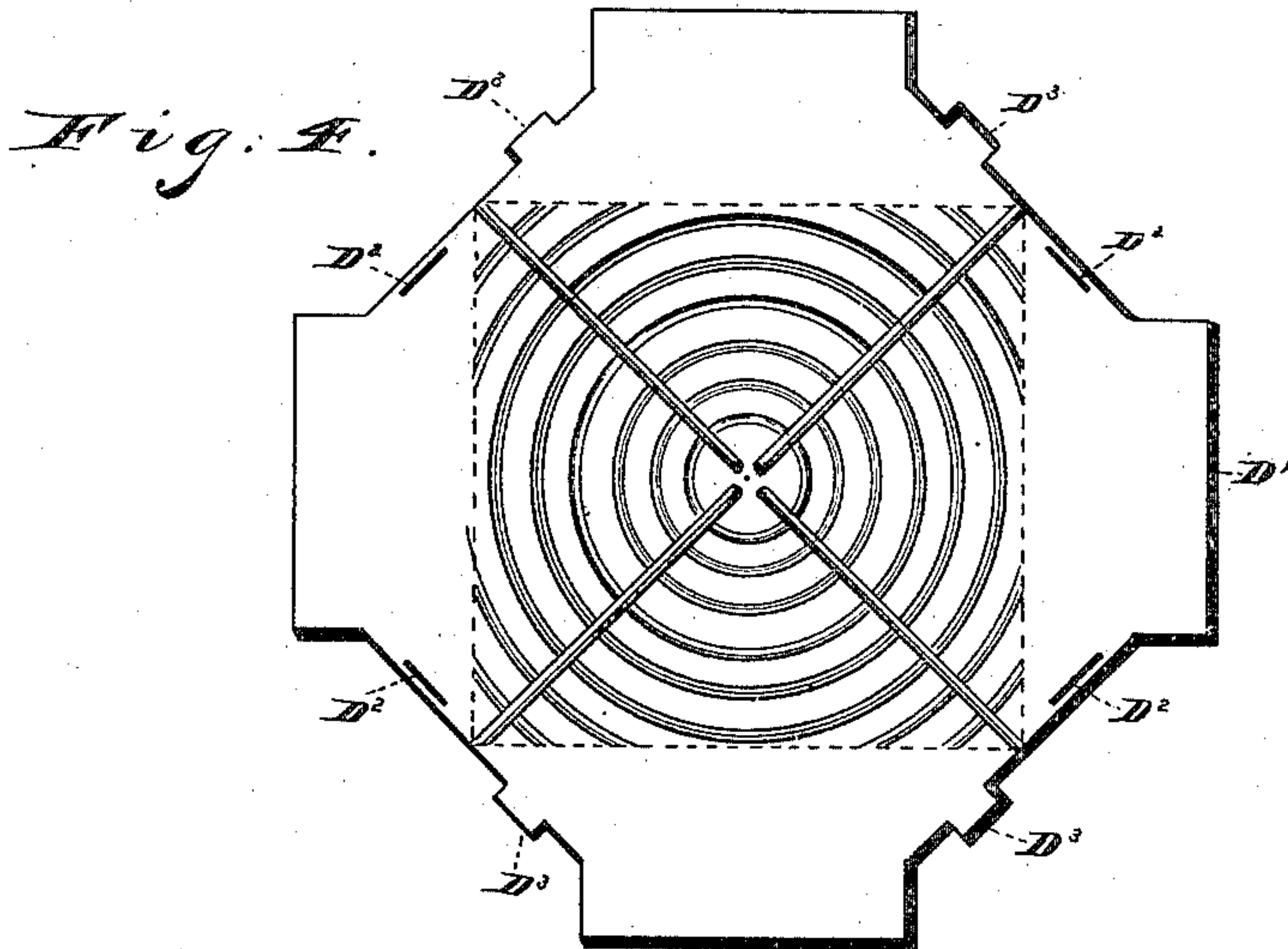


Fig. 3.

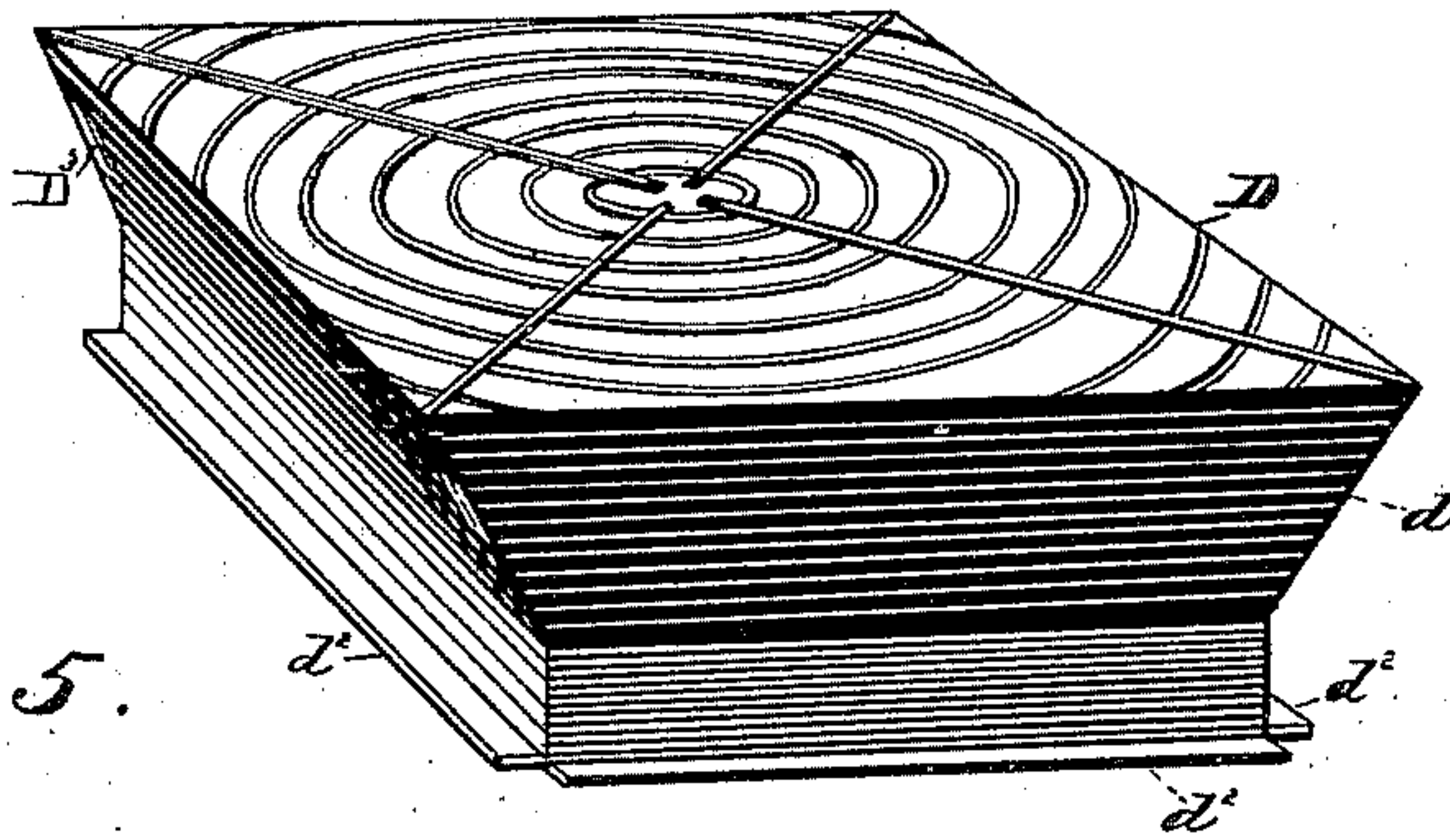
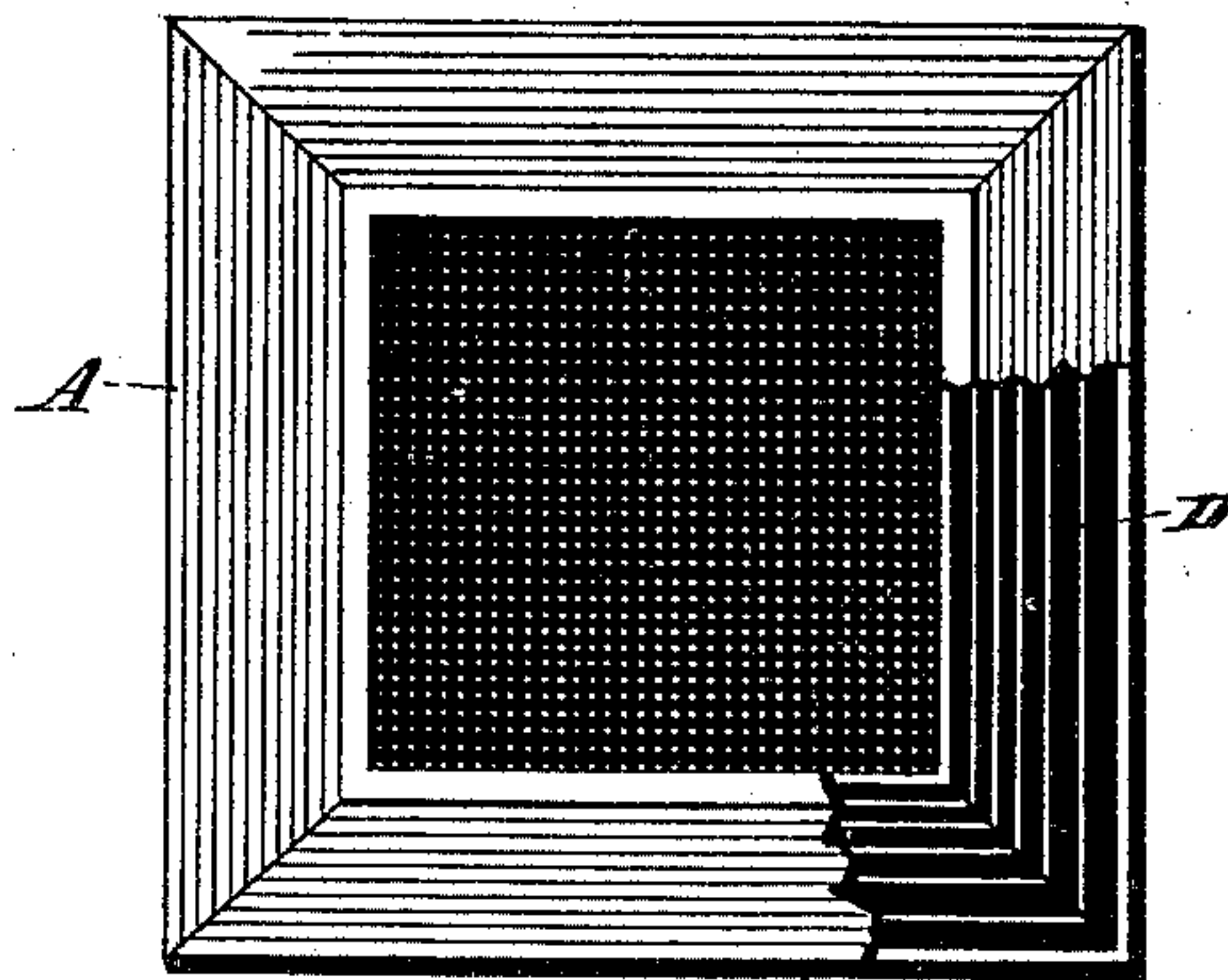


Fig. 5.



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ATTORNEYS

UNITED STATES PATENT OFFICE.

W. HARRISON ALBACH, OF MANSFIELD, OHIO.

BAKE-OVEN.

SPECIFICATION forming part of Letters Patent No. 301,319, dated July 1, 1884.

Application filed November 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, W. HARRISON ALBACH, of Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Bake-Ovens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in bake-ovens, designed more especially for oil and gasoline stoves; and it consists in certain features of construction and in combination of parts, hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a view in perspective of my improved bake-oven. Fig. 2 is a vertical section of the same. Fig. 3 is a view in perspective of a heating-chamber constituting a part of the device. Fig. 4 is a plan view of the blank sheet of metal from which the chamber is made. Fig. 5 is a plan view of the bottom of the oven with a portion broken away to show the heater.

A represents the outer shell of the oven, that is preferably rectangular in form, and constructed of sheet metal, and provided with the door A'. B is an inner lining, of sheet-tin, that extends over all parts of the oven, except the bottom, and has attached on opposite sides ribs b, that support one or more removable plates, C, and that may support also perforated or grated shelves, on which articles are placed for baking. Between the outer and inner parts, A and B, is an intermediate lining, B', of asbestos. The door is also lined with tin and asbestos in the same manner. By this construction the heat is retained and utilized in the oven, the radiation of heat through the asbestos lining being merely nominal. The lining of tin makes it easy to keep the inside of the oven clean and bright, so that the top and sides reflect back the heat toward the central part, thereby greatly increasing the effectiveness of the oven, and by means of which the baking on top is done as soon as on the bottom. The lining B at b' is swelled out, as shown in Fig. 2, forming a ledge that extends around the oven, and that forms a guide and partial support for the heating-chamber D. The cavity inside of the

ledge is filled with asbestos or some non-conducting material, so that no heat can escape at this point. The hopper-shaped heating-chamber D is formed of a single piece of sheet metal. The blank D' from which it is made is shown in Fig. 4. The dotted lines show where the blank is bent in forming the chamber, and the blank is provided with the slits D² and the ears D³, that when the sides are bent into position engage and interlock each other and hold the sides firmly together. The sloping sides are lined with asbestos, as shown at d', Fig. 2. At the bottom the metal is bent outward, forming the supporting-flanges d². The top part is corrugated, as shown in Figs. 1, 3, and 4, to admit of the disks expanding and contracting without materially changing the form of the heater or causing too great a strain on the parts. It is desirable that the heating-chamber remain always of the same form and size, so that it will nicely fit the oven at their points of contact. The top part or disk of the said chamber is, however, subjected to intense heat, and therefore to great expansion, to which the sides, if made vertical, could offer but slight resistance; but in the sloping or inclined position in which the sides are placed, the tensile strength of the metal is had to resist the outward thrust of the expanding disk. This tensile strength of the sides is much greater than the expansive force of the disk, which is measured by its stiffness. The disk is therefore held firmly in every direction by the sides, so that its expansion has to be accommodated by the corrugations thereof, and the outer part of the chamber remains substantially the same regardless of the expansion or contraction of the disk. The outer shell, A, has a bottom of sheet metal extending inward far enough to form a support for the flange d², as shown in Fig. 5, and is lined at this point with asbestos m, upon which the said flanges rest, that prevents the escape of heat in this direction. An air-chamber, M, is thus formed around the heating-chamber that aids in retaining the heat in the heating-chamber, and also aids in maintaining an equal temperature of the parts. The opening in the central portion of the bottom that is directly on the fire below admits the heat into the chamber D. Heretofore with ovens for the classes of

stoves aforesaid the heat has either been carried around the oven and out of the stove or been admitted directly into the oven, carrying with it the smoke and gases produced by the combustion below. This with my construction is of course prevented by the heat passing first into the heating-chamber, and is supplied to the oven only as it is transmitted through the said disk. The result is the baking is done quickly, and the juices and peculiar flavor of the articles are retained in a remarkable degree. The slide C is composed of tin on the bottom and asbestos on top, and is placed on any of the ribs above and as near the articles that are to be baked as is practicable, so as to confine the heat in a small space.

What I claim is—

1. In a bake-oven, a heating-chamber located between the fire and the baking-chamber, and constructed of a single piece of sheet metal, the top thereof or disk being corrugated, and the sides sloping inward, and the sides lined with asbestos, substantially as set forth.

2. In a bake-oven, the combination of the

shell or oven proper and a hopper-shaped heating-chamber, in contact with each other only at the upper and lower extremes of the latter, and adapted to form an air-space around the heating-chamber, substantially as set forth.

3. In a bake-oven, the combination of an outer shell and an inner heating-chamber, so arranged as to form an air-chamber, the points of contact between the two parts being protected by an asbestos lining to prevent the passage of heat through the points of contact, substantially as set forth.

4. The combination, with an oven having ribs formed on opposite sides thereof, of the removable plate C, consisting, essentially, of a metallic reflecting-surface below and a lining of asbestos above, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 6th day of November, 1883.

W. HARRISON ALBACH.

Witnesses:

CHAS. H. DORER,

ALBERT E. LYNCH.