

No. 712,690.

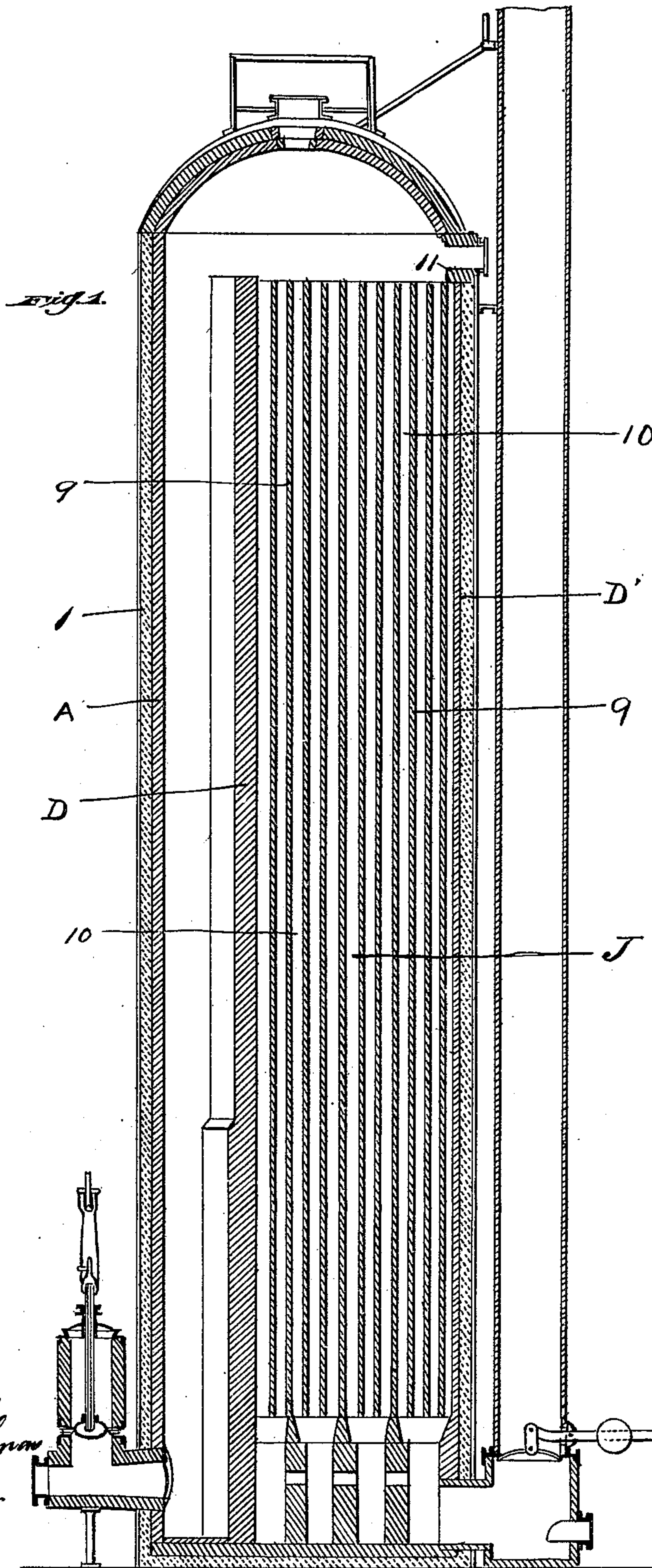
Patented Nov. 4, 1902.

D. LAMOND.
HOT AIR STOVE.

(Application filed Dec. 30, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
J. P. Jeffman
M. Hunter

Inventor
D. Lamond
By
O. D. Lewis
His Atty

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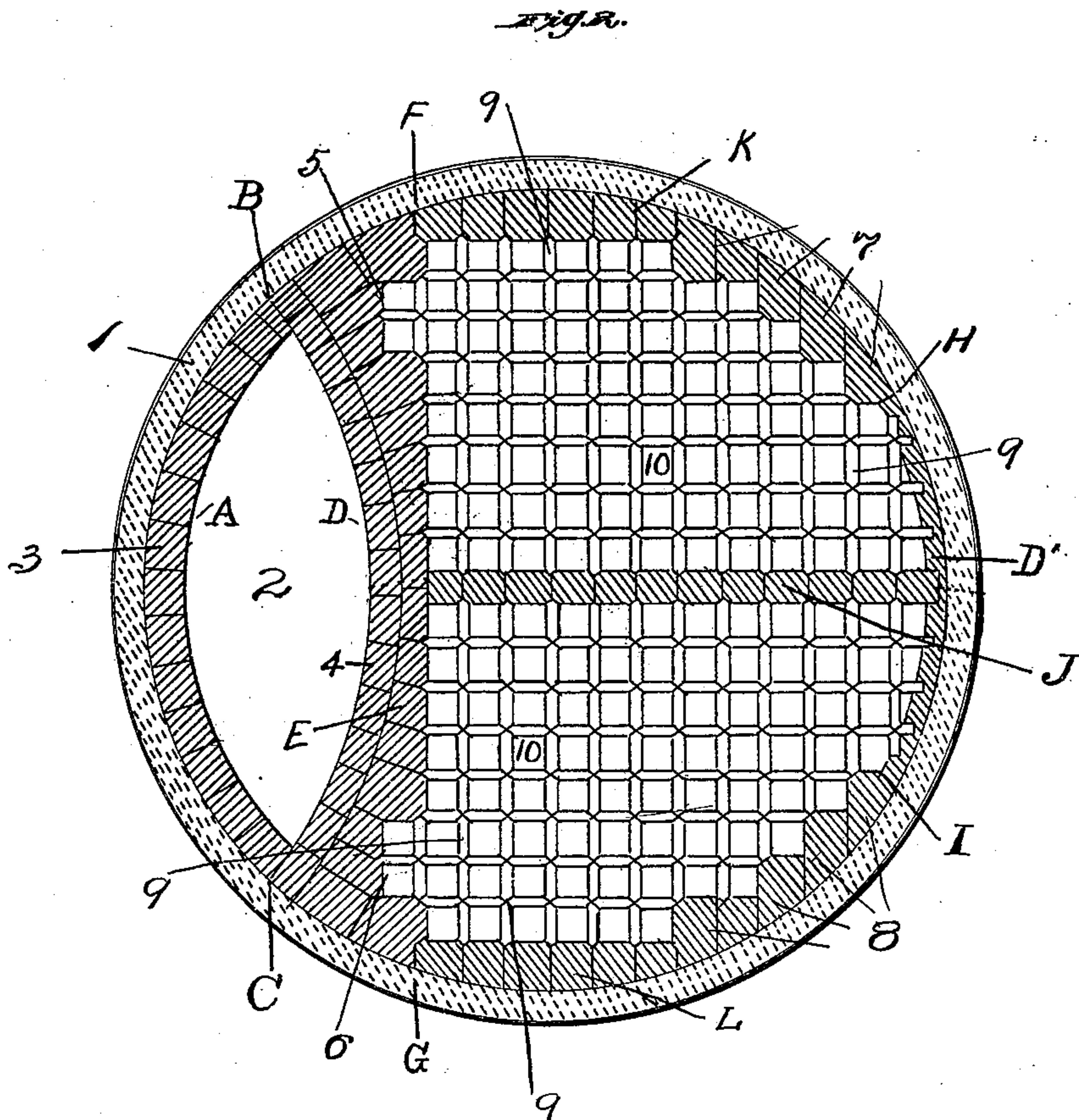
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File

UNITED STATES PATENT OFFICE.

DAVID LAMOND, OF PITTSBURG, PENNSYLVANIA.

HOT-AIR STOVE.

SPECIFICATION forming part of Letters Patent No. 712,690, dated November 4, 1902.

Application filed December 30, 1901. Serial No. 87,735. (No model.)

To all whom it may concern:

Be it known that I, DAVID LAMOND, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Hot-Air Stoves, of which improvement the following is a specification.

My invention relates particularly to the construction of the partition-walls which divide the lattice brickwork and combustion-flue in hot-air stoves.

The object of my invention is to provide a structure that will remain intact, or, in other words, preserve its form for an indefinite period regardless of the expansion and contraction occasioned therein by variations of temperature. With this object in view I have in the accompanying drawings illustrated a stove embodying my improvements, wherein—

Figure 1 is a longitudinal sectional view of a stove of the above-described character, showing my improvements. Fig. 2 is an enlarged sectional view of the same, more fully disclosing said structure.

Referring to said views for a description in detail, the numeral 1 designates the outer cylindrical wall of said stove, and 2 the combustion-flue thereof. In this case the combustion-flue 2 presents, sectionally, a convexed appearance, one side thereof being formed by a wall A, composed of a series of built-up layers of bricks 3, arranged radially from B to C, the opposite wall D being composed of built-up layers of bricks 4, radially arranged in reverse direction. The said wall D is reinforced at its rear by a structural wall E, extending from F to G, presenting a practically straight surface excepting for the offsets 5 and 6, formed therein. Diametrically across the stove and at right angles from the said wall E and engaging into a radial wall D' at the opposite side of the stove from H to I is formed a divisional-wall structure J. From the ends of said wall E at F and G are formed the structural walls K and L, which walls have formed thereon the offsets 7 and 8 as they recede toward said wall D.

Grooves are formed within all surface-walls except those of the combustion-flue for the reception of the lattice-brickwork 9, which

lattice-work forms the main vertical passages 10.

The vertical passages extending from H to I, wherein the short lattice-brick are employed, are not made use of and are covered by a layer of brick 11, as shown at Fig. 1.

In stoves of this character, wherein the walls K and L present curved surfaces conforming with that of the stove and the wall D is flat, it has been demonstrated in practice that expansion and contraction result in forcing the said wall D toward the flue and causing the same to collapse, and the lattice-work at the walls K and L becomes displaced; but when the walls are constructed in the manner herein shown, especially the wall D, it is impossible for said wall D to collapse, as said wall may be said from its structure to possess all the qualities of a "keystone," resisting whatever strain may be placed thereupon by expansion in the lattice-work.

I am aware that others have employed lattice-work in furnace structure with grooves in the walls to receive the lattice-brick connecting therewith and division-walls therein; but they differ in structure from that herein illustrated and claimed.

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

1. In a hot-air stove, a lattice-work, a covering for the rear lattice-work flues and a combustion-flue having sectionally a convexed form, one side of which forms, a divisional wall between the flue and the lattice-work.

2. In a hot-air stove, a lattice-work, a flue having a wall concaved on the flue side and straight on the lattice-work side and a covering 11, over the rear lattice-work flues.

3. In a hot-air stove, a lattice-work, a combustion-flue having sectionally a convexed form, one side of which forms a divisional wall between the flue and the lattice-work, a covering for the rear lattice-work flues and a wall J dividing the lattice-work.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DAVID LAMOND.

In presence of—

D. D. LAMOND,
FRED. O. HENZI.