

No. 617,930.

Patented Jan. 17, 1899.

J. KENNEDY.
HOT BLAST STOVE.

(Application filed Sept. 7, 1897.)

(No Model.)

Fig. 1.

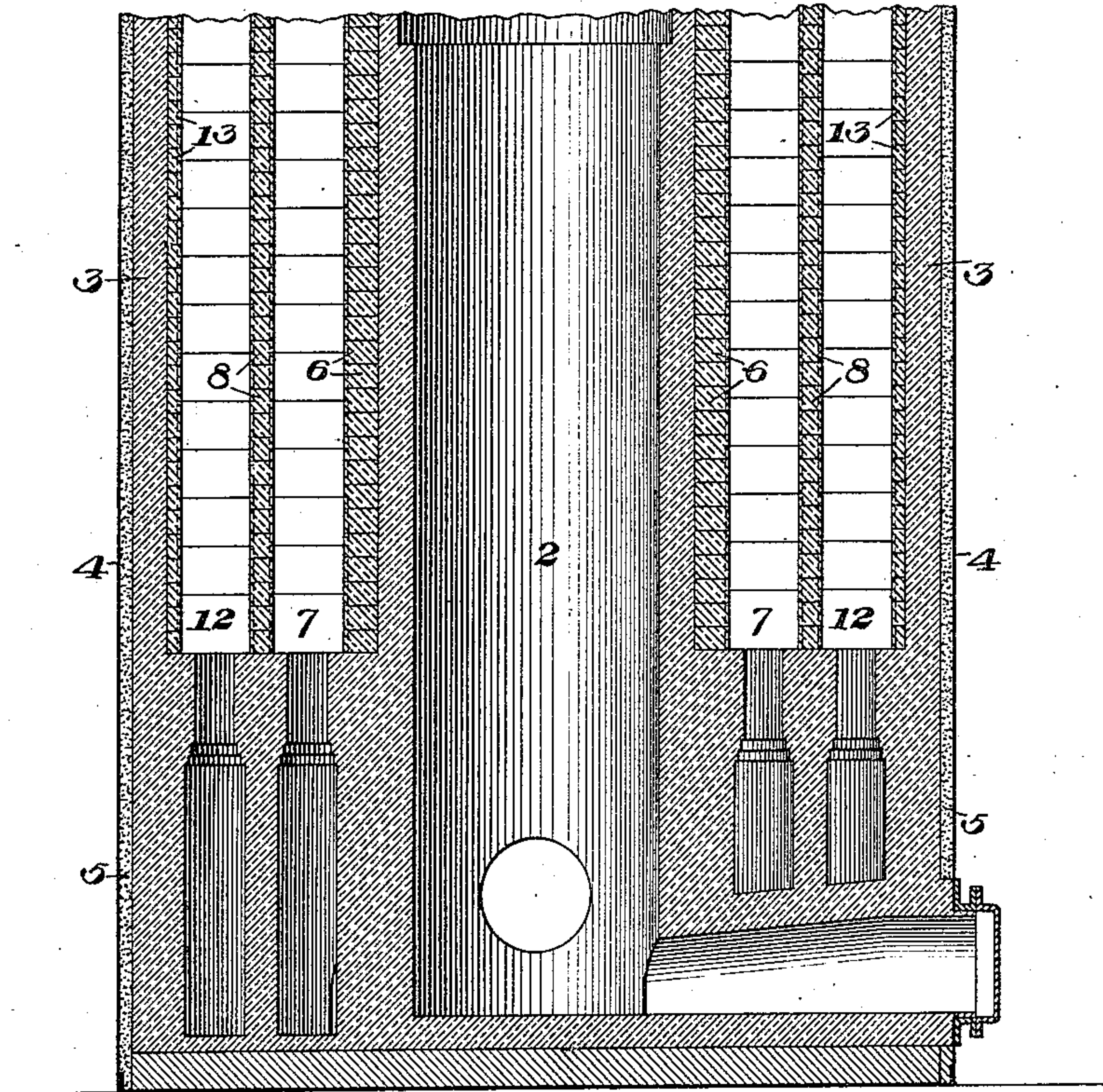
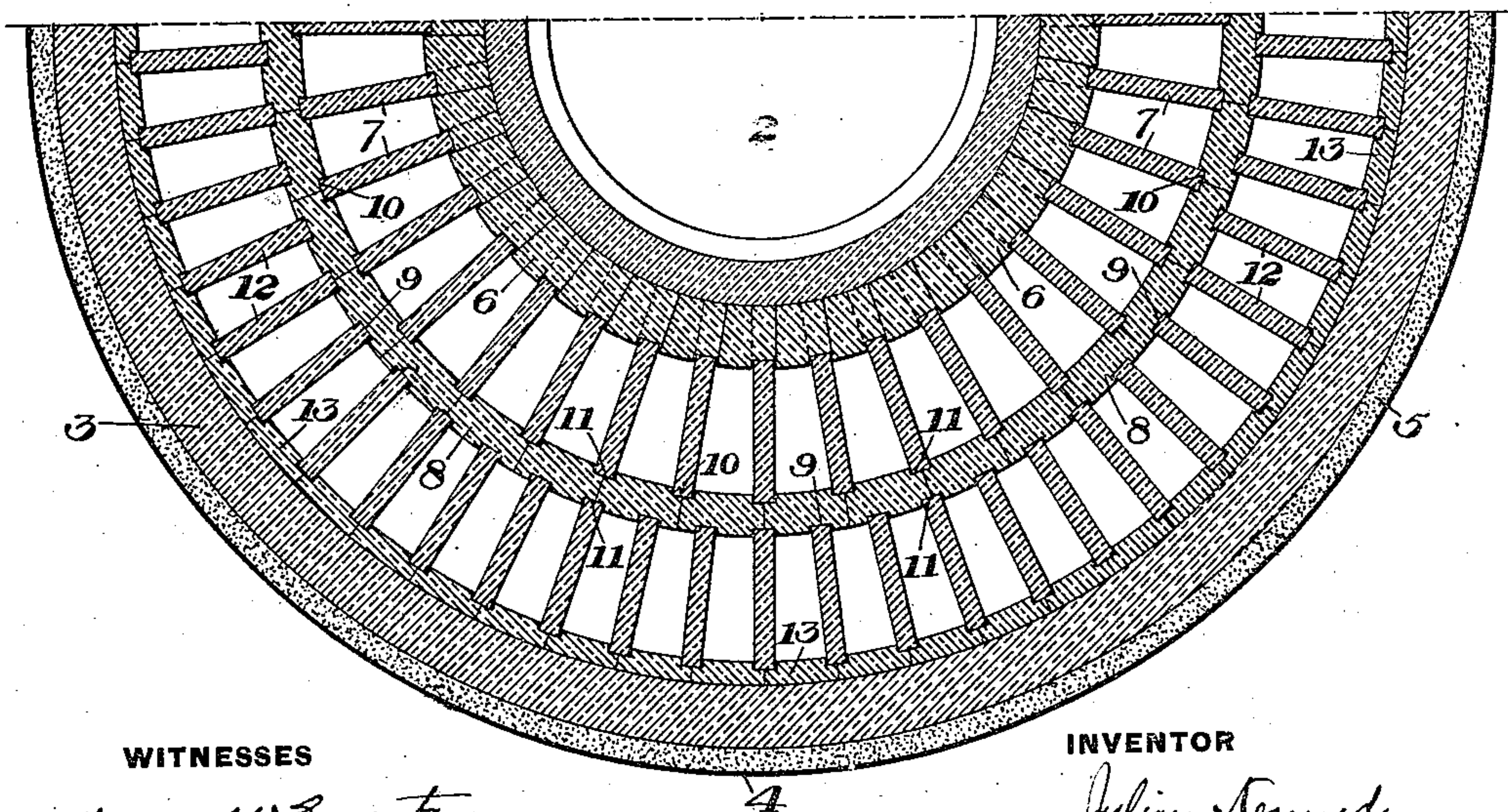


Fig. 2.



WITNESSES

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JULIAN KENNEDY, OF PITTSBURG, PENNSYLVANIA.

HOT-BLAST STOVE

SPECIFICATION forming part of Letters Patent No. 617,930, dated January 17, 1899.

Application filed September 7, 1897. Serial No. 650,758. (No model.)

To all whom it may concern:

Be it known that I, JULIAN KENNEDY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Hot-Blast Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a partial central vertical section of a hot-blast stove constructed in accordance with my invention, and Fig. 2 is a partial horizontal section of the same.

My invention relates to hot-blast stoves, and is designed to provide an improved construction of heating-surface therefor by which the air and gases shall be divided into thin broad streams, while the bricks composing the checker-work may be simply and cheaply made and placed in position and form a strong and substantial structure.

In the drawings, 2 represents the usual central combustion-chamber, and 3 the outer wall, between which and the casing 4 is placed the compressible filling 5. Around the combustion-chamber is built up an annular series of bricks 6, these bricks being preferably set in clay and each having on its outer face a recess extending from one corner and of a width corresponding to the thickness of the radial bricks 7, the ends of which fit therein.

The outer ends of these radial bricks 7 enter recesses in an annular wall composed of bricks 8. Each of the bricks 8 is provided on its outer edge with an intermediate recess 9 and an end offset or recess 10, and upon the inner edge are provided recesses 11 11 at each corner. The bricks 8 are preferably set in clay, and in each horizontal layer the bricks are alternately reversed in position, as shown in Fig. 2, so that the inner radial bricks 7 rest within recesses formed by the registering corner-recesses of the bricks 8, while the outer radial bricks 12 rest alternately within the registering end recesses and within one of the intermediate recesses. This peculiar construction of bricks enables the bricks of the intermediate annular wall to all be made of the same shape, while at the same time the number of radial bricks in the outer row is increased over that of the inner row, the ra-

dial lines which inclose two spaces in the inner row inclosing three spaces in the outer row. The outer ends of the radial bricks 12 rest within registering end recesses of a series of thin flat bricks 13, which are preferably set in loosely against the inner face of the outer wall, so that they may be easily removed to replace the bricks when injured.

In building up the inner bricks 6 the bricks of each horizontal series are reversed in position from those of the next series above or below, thus breaking joints vertically, as indicated by dotted lines in Fig. 2. I also preferably make the bricks forming the annular walls of such a height that they break joints horizontally with the radial bricks. Thus I may make the bricks forming the annular walls, say, six inches in height, while the lowermost series of radial bricks are fifteen inches in height, the other radial bricks being twelve inches in height. This will bring each alternate horizontal joint in the annular walls three inches above the joints of the radial bricks.

The advantages of my invention will be apparent to those skilled in the art, since a stove is afforded in which the currents of gas or air are divided into thin broad streams, thus increasing the economy of the stove. Only three different forms of bricks are required for the annular walls, and the construction is strong and easily removed and replaced.

The outer wall of the stove may be composed of bricks similar to bricks 6, the recesses of the bricks being on their inner faces in this case. The recesses of the bricks in these inner and outer walls may be at any point intermediate of their length, provided they are at one side of the center thereof, and many other variations in the sizes, shapes, and arrangement of the bricks may be made without departing from my invention, since

What I claim is—

1. In a hot-blast stove, an annular wall composed of bricks each having at one end two vertical edge recesses, a single vertical edge recess at the other end, and an intermediate vertical recess near the latter end.

2. In a hot-blast stove, the combination with one of the annular walls of the stove, of

a series of thin flat bricks set loosely against the same and having recesses, and radial bricks entering said recesses.

3. In a hot-blast stove an annular wall
5 composed of bricks each having at one end two vertical edge recesses, a single vertical edge recess at the other end, and an intermediate vertical recess near the latter end, the bricks of any horizontal series being so placed
10 that the similar ends of adjacent bricks abut against each other.

4. In a hot-blast stove, the combination with an annular wall composed of bricks having recesses, of radially-extending bricks entering said recesses, the horizontal joints of
15 the radial bricks being on different levels from those of the horizontal joints of the bricks forming the annular wall.

5. In a hot-blast stove an annular wall
20 composed of bricks, each having a vertical recess at one side of the center thereof the bricks of each horizontal row being turned the other side up from those of the adjacent row above and below, so that the bricks break
25 joints vertically.

6. In a hot-blast stove, a pass having an intermediate annular wall composed of bricks having recesses therein, and two annular series of radially-extending bricks, entering
30 said recesses on opposite sides of the wall, the outer series having a larger number of radially-extending bricks than the inner series and both series of radial bricks being in the same pass.

35 7. In a hot-blast stove, the combination with an annular wall surrounding the central

combustion-chamber, said wall being composed of bricks each having a recess at one outer corner, of radial bricks entering said recesses, an intermediate annular wall com- 40 posed of bricks having registering recesses for the said radial bricks, each brick of said intermediate wall having an outer intermediate recess in its length and registering end recesses, an outer series of radial bricks enter- 45 ing the outer recesses of the intermediate annular wall, and an outer annular wall containing bricks having recesses engaged by the outer ends of the outer row of radial bricks.

8. In a hot-blast stove, an annular wall 50 composed of bricks, each having a vertical recess at one side of the center thereof, the bricks of each horizontal row being turned the other side up from those of the adjacent row above and below, so that the bricks break 55 joints vertically, in combination with radially-extending bricks entering the recesses of the bricks in the annular wall.

9. In a hot-blast stove, a pass having two annular series of radially-extending bricks, 60 and an intermediate annular wall having recesses engaged by the ends of the radial bricks, the outer annular series having a larger number of radial bricks than the inner series, and both series being in the same pass. 65

In testimony whereof I have hereunto set my hand.

JULIAN KENNEDY.

Witnesses:

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