

No. 754,866.

PATENTED MAR. 15, 1904.

H. HEACKER.
BAKE OVEN.

APPLICATION FILED JULY 26, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

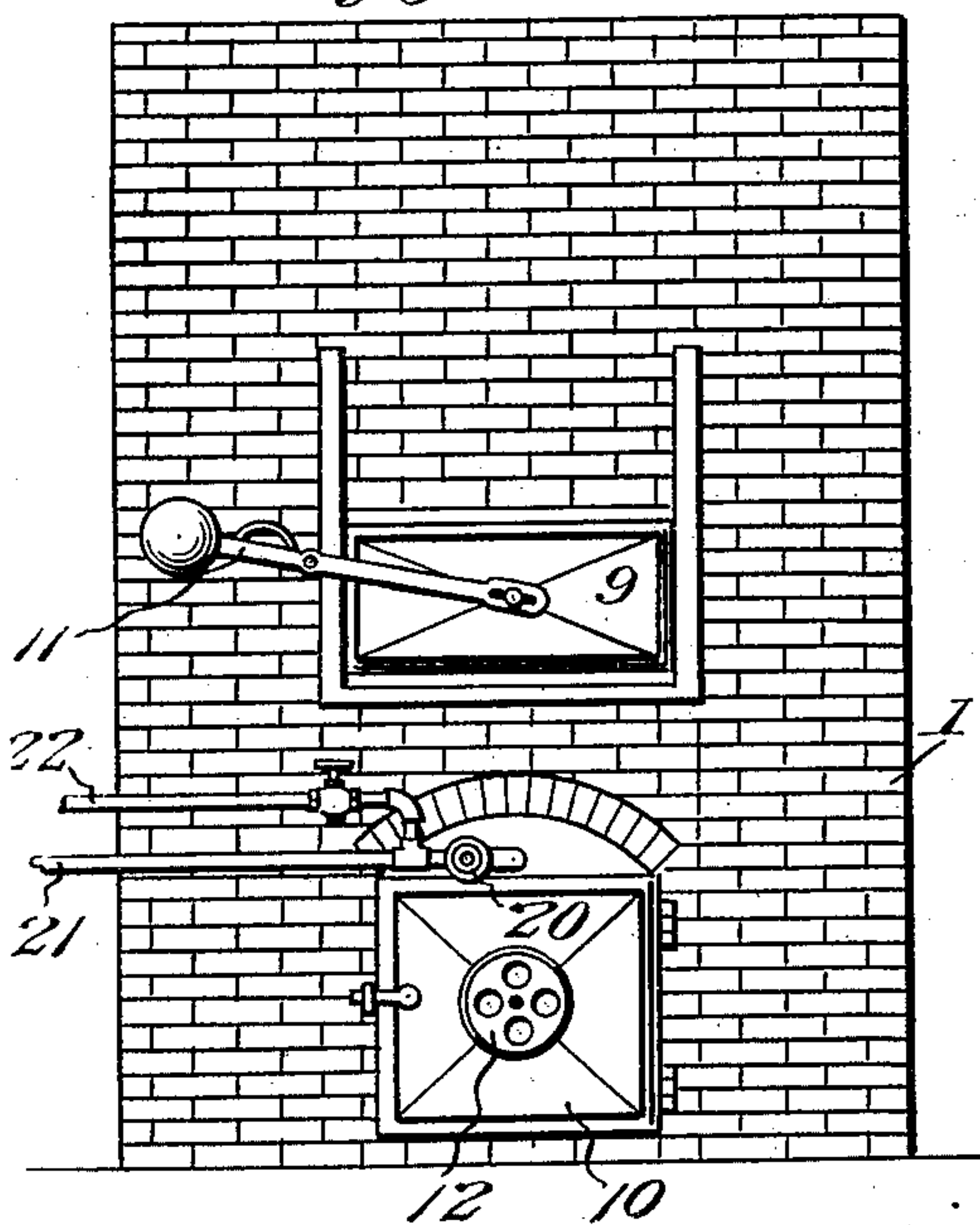


Fig. 2.

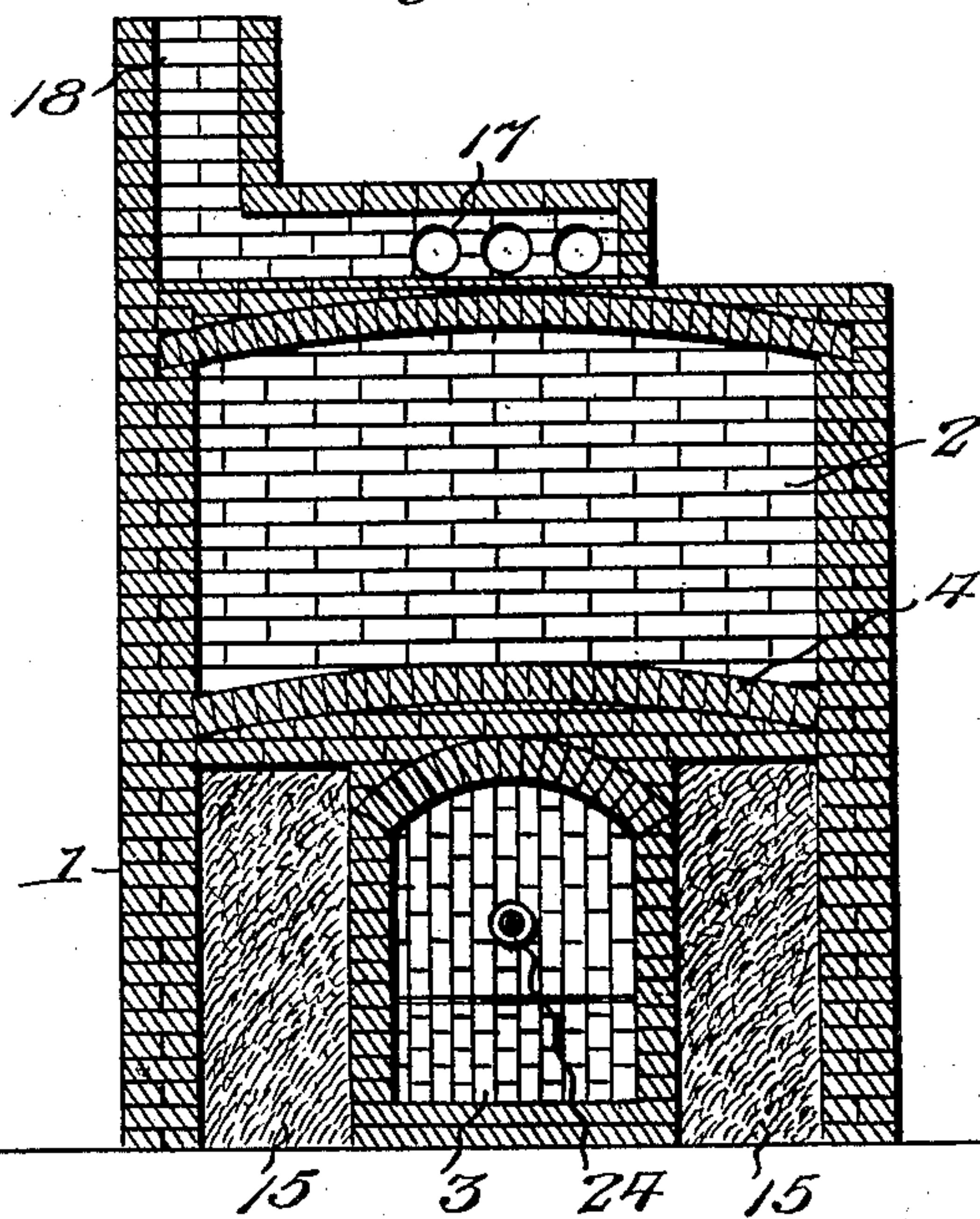
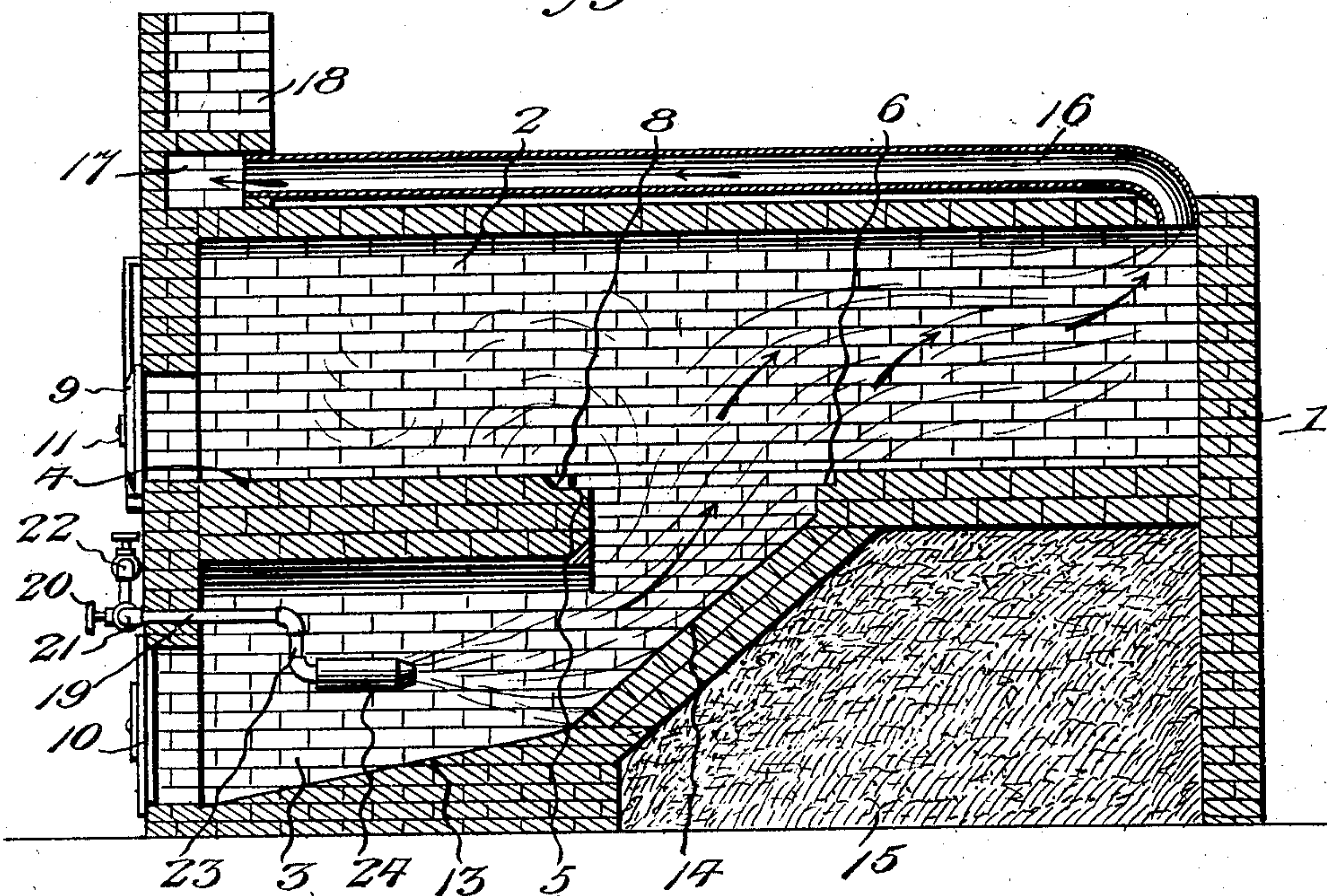


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

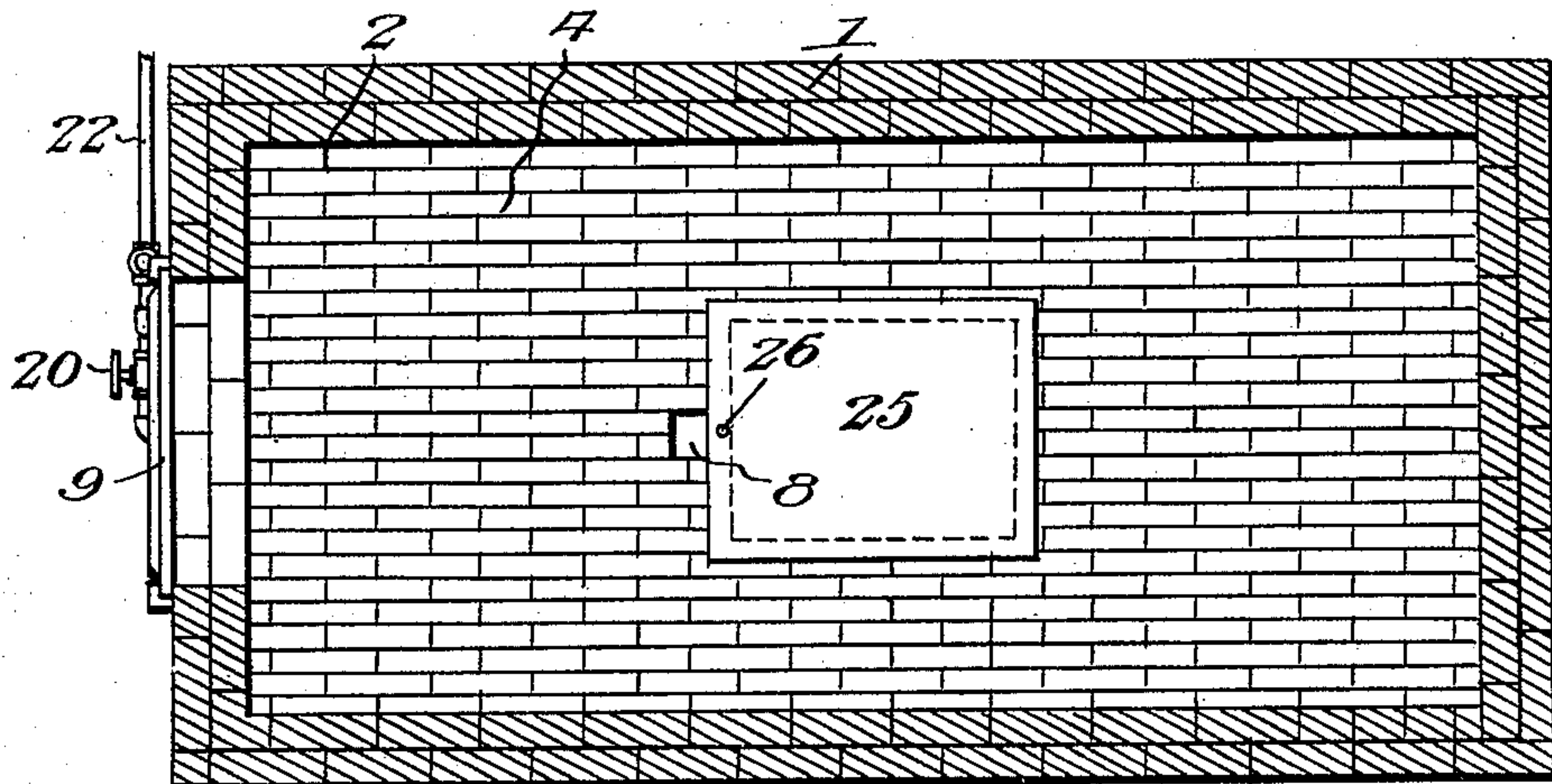
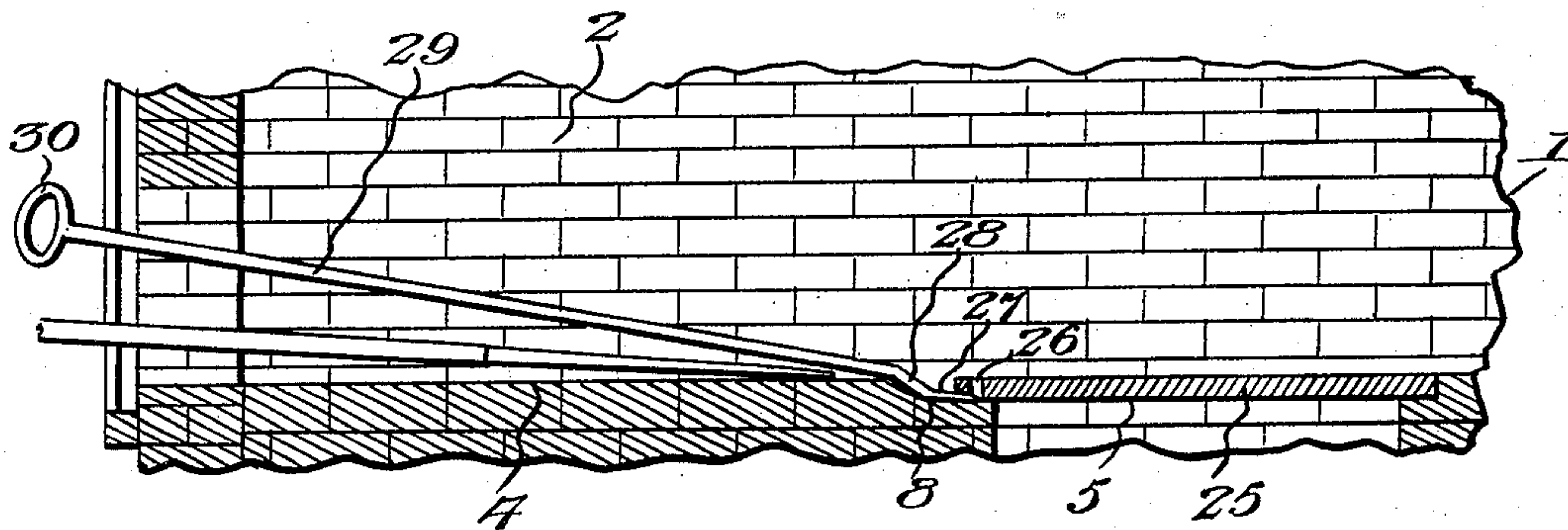


Fig. 5.



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HERMAN HEACKER, OF SAN DIEGO, CALIFORNIA.

BAKE-OVEN.

SPECIFICATION forming part of Letters Patent No. 754,866, dated March 15, 1904.

Application filed July 25, 1903. Serial No. 167,012. (No model.)

To all whom it may concern:

Be it known that I, HERMAN HEACKER, a citizen of the United States, residing at San Diego, in the county of San Diego and State of California, have invented new and useful Improvements in Bake-Ovens, of which the following is a specification.

This invention relates to bake-ovens, and more particularly to means for heating such class of devices by the use of an oil-burner or oil-burning apparatus; and the primary object of the same is to provide a simple and effective construction and arrangement whereby the usual form of "Dutch" oven may be thoroughly heated by a burner consuming oil in an expeditious manner.

A further object of the invention is to provide a crude-oil furnace for a bake-oven and to so dispose said furnace that it will be most effective in regularly heating the entire oven.

With these and other objects and advantages in view the invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a front elevation of an oven embodying the invention. Fig. 2 is a transverse vertical section of the same. Fig. 3 is a longitudinal vertical section taken through the center thereof. Fig. 4 is a horizontal section above the floor of the oven. Fig. 5 is an enlarged longitudinal vertical section of a portion of the oven, showing the manner of establishing communication between the furnace and the oven.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates the surrounding wall of the oven and furnace, preferably formed of brick, and divided into an oven 2 and a furnace 3 by a horizontal partition 4, having an opening 5 at an intermediate point with a surrounding seat 6 at its upper portion to receive a removable closure or cover. The forward portion of the seat 6 has a recess 8 communicating therewith to facilitate the removal of the closure or cover in a manner

which will be presently explained. The oven 2 and furnace 3 have lower movable doors 9 and 10, respectively, the door 9 being vertically slidable and provided with a weighted actuating-lever 11, pivoted adjacent to one end of the door, whereby the latter may be raised and held in elevated position in guides applied to the wall of the oven adjacent to the opening normally covered by the door 9. The door 10 is hinged and provided with the usual latch and has a central damper 12 for tempering the furnace.

The furnace 3 has a lower upwardly-inclined bottom 13, continuing into a rear upwardly-inclined deflecting-wall 14, terminating adjacent to the rear portion of the opening 5. The furnace 3 is of materially less width and length than the oven 2 and is centrally located under the latter, mainly at the front, and defined by side walls 15, parallel with the side walls of the complete structure and at a distance from the latter. Open spaces are formed between the side walls of the furnace and the surrounding side walls of the complete structure and between the rear inclined deflecting-wall 14 and the rear end of the wall structure, and said spaces are filled in with earth or other suitable material. Connecting with the rear upper portion of the oven 2 are three pipes 16, which are exteriorly located and extend forwardly parallel with the top of the oven and enter a lateral extension 17 of a chimney or stack 18, the said pipes 16 serving as means to convey the products of combustion passing up through the oven to the chimney or stack.

Extending into the furnace 3 above the center of the opening covered by the door 10 is a feed-pipe 19, having an exterior valve 20, controlling the flow of fuel therethrough. Connecting with this feed-pipe is an oil-supply pipe 21, and attached to the oil-supply pipe is a valved steam-pipe 22. The feed-pipe 19 projects into the center of the furnace and has an elbow 23, to which a horizontally-disposed burner 24 is attached, and is provided with a rear reduced injecting end through which the fuel is forced into the furnace against the deflecting-wall 14. Certain quan-

ties of oil and steam are admitted to pipe 19 and pass in commingled state to the burner, where they are ignited by suitable means.

A closing-plate 25 is removably fitted over the opening 5 and has an opening 26 in the center of its front end, which is accessible through the medium of the recess 8. The end of the plate immediately in advance of the opening 26 is formed with an under recess 27, in line with the recess 8, to receive an angular foot 28 of a pry-iron 29, the latter being long enough to project through the entrance to the oven and having a grip 30 on the end opposite that provided with the foot. The opening 26 provides a stop means for the end of the foot 28 and facilitates the uplifting of the closing-plate. After the foot 28 has been applied, as shown by Fig. 5, an ordinary peel is inserted under the pry-iron to serve as a fulcrum, and by pressing the said iron downwardly thereagainst the foot 28 will be thrown upwardly, and thereby elevate the closing-plate 25, so that it may be thrown over to clear the opening 5. Communication having been established between the oven and furnace, the burner 24 is supplied with the mixed oil and steam and ignited. The heat and products of combustion from the burner are forced against the wall 14 and thrown upwardly through the opening 5 into the oven, thoroughly heating the latter and finally passing out through the pipe 16 to the chimney or stack 18. After the oven has become thoroughly heated the supply of fuel is cut off from the burner and the closing-plate 25 is again fitted over the opening 5, the said plate fitting in the seat surrounding the upper portion of the opening in such manner as to be flush with the bottom of the oven, so that loaves of bread may be readily disposed in the oven. The oven having been heated loaves of bread are inserted therein or withdrawn therefrom at the proper time and in the usual manner.

It will be understood that the burner 24 causes the heat to be forced rearwardly therefrom against the wall 14 with considerable force, owing to the pressure of the steam admitted to said burner, and the lower inclined wall facilitates the updraft of the heat and causes all sediment that may fall from the burner to gravitate toward the front end of the furnace, thereby obviating the tendency of blowing any sediment or other impurities upwardly into the oven centrally through the opening communicating with the latter. The greater inclination of the wall 14 materially assists in throwing the heat into the oven through the opening 5 without obstruction in view of the fact that the said wall directly leads to the rear terminal of the opening 5, as clearly shown by Fig. 3. By locating the

opening 5 in the center with relation to the oven 2 a greater part of the latter is more thoroughly and quickly heated.

The improved device will be found exceptionally convenient in its operation, and it will be understood that changes in the proportions, dimensions, and minor details may be resorted to without departing from the spirit of the invention.

Having thus fully described the invention, what is claimed as new is—

1. In a device of the class set forth, the combination of an oven, a furnace located at the center below the oven and having a rear upwardly-inclined wall continuing into a bottom wall of less inclination and which descends to the front of the furnace, the top of the furnace being arched and the rear wall and the top of the furnace leading to a central opening establishing means of communication between the furnace and oven, the upper terminal of the rear wall leading directly to the rear wall of the said opening, removable means for closing the opening between the oven and the furnace and operative from the interior of the oven, and an oil-burner having a steam connection and suspended within the furnace above the inclined bottom of the latter and having its inner injecting end in line with the rear inclined wall to deflect the heat upwardly through the opening between the oven and furnace, the burner being under steam-pressure to drive the heat therefrom forcefully against the rear inclined wall.

2. In a device of the class set forth, an oven, a furnace beneath the front extremity of the oven and having a bottom wall inclined upwardly from its front terminal to the lower termination of a rear wall arranged at a greater angle and extending upwardly to the wall separating the oven and furnace and leading to a central opening forming the sole means of communication between the oven and furnace, the upper part of the opening having a seat arranged therearound with a recess at the center of the front portion thereof, a cover adapted to be removably held in the seat and have its upper surface flush with the bottom surface of the oven, the said cover having at the center an under recess leading to a vertical opening therethrough, and a pry-iron insertible into the oven and having an end to engage the central recess and opening in the cover through the medium of the said recess formed in the seat to receive the cover.

In testimony whereof I affix my signature in presence of two witnesses.

HERMAN HEACKER.

Witnesses:

OSCAR ANDERSON,
ALFRED OLSON.