No. 864,099. PATENTED AUG. 20, 1907.

G. C. LANDIS.

COKE OVEN.

APPLICATION FILED APR. 12, 1907.

Fig. 1.

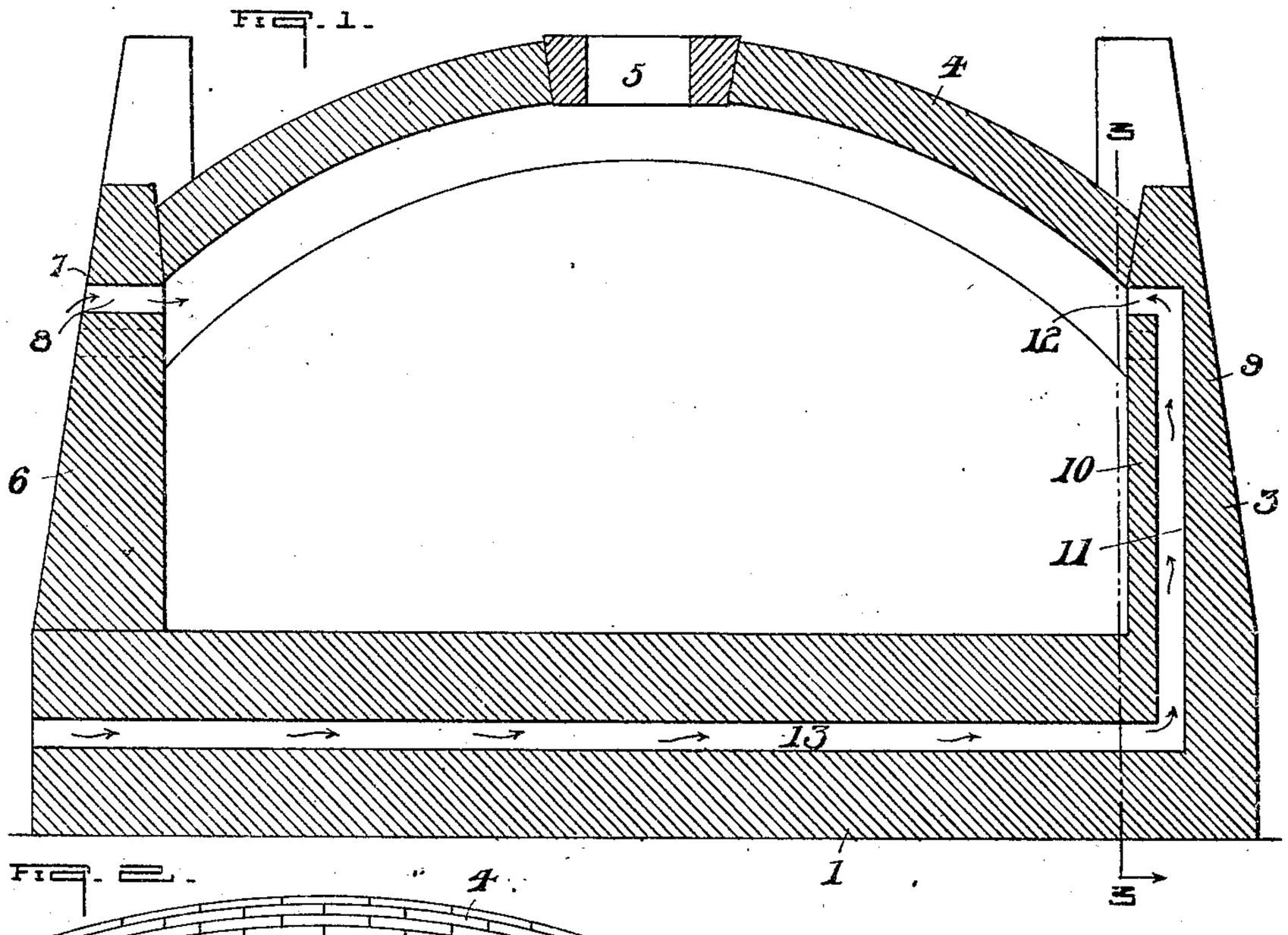


Fig. 2.

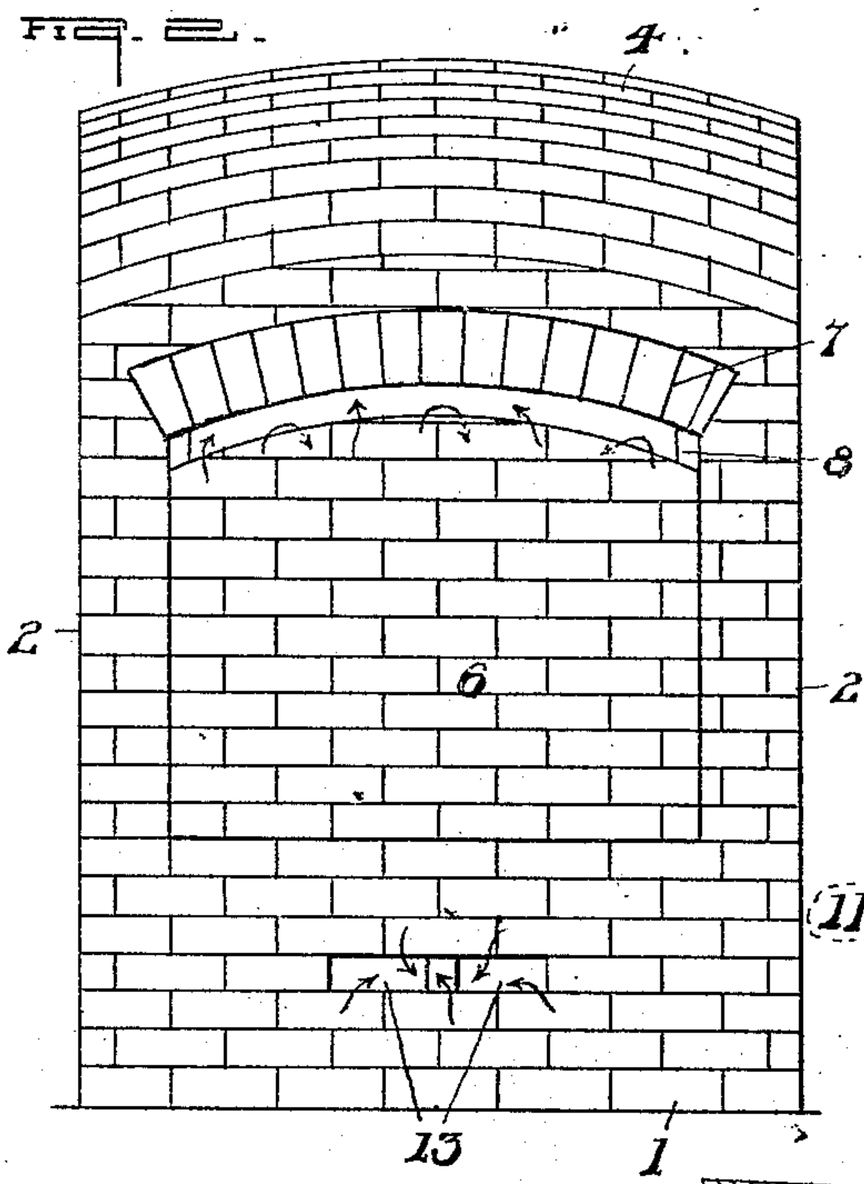


Fig. 3.

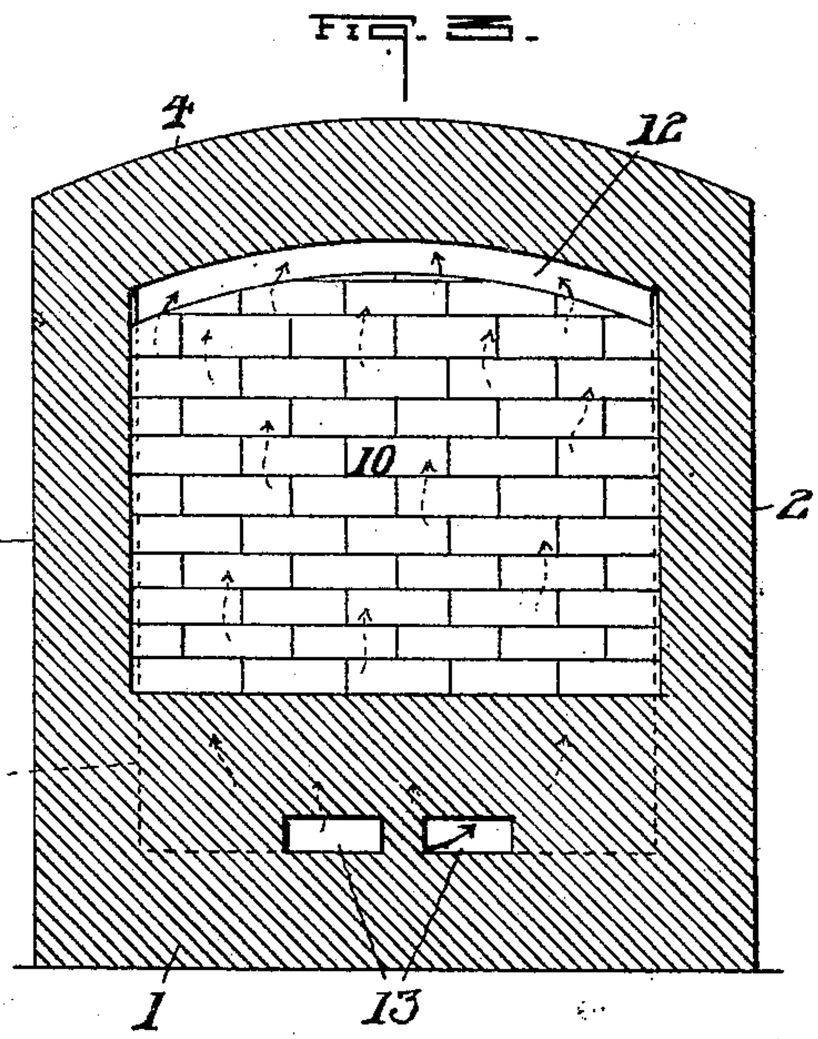
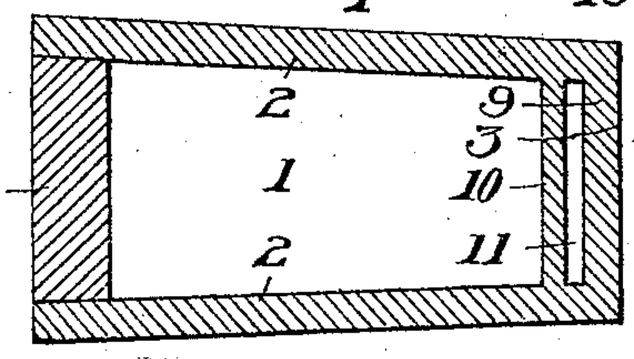


Fig. 4.



WITNESSES:

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GEORGE C. LANDIS, OF CONNELLSVILLE, PENNSYLVANIA.

COKE-OVEN.

No. 864,099. Specification of Letters Patent. Patented Aug. 20, 1907.

Application filed April 12, 1907. Serial No. 367,729.

To all whom it may concern:

Be it known that I, GEORGE C. LANDIS, a citizen of the United States, residing at Connellsville, in the county of Fayette and State of Pennsylvania, have invented or discovered new and useful Improvements in Coke-Ovens, of which the following is a specification.

My invention relates to coke ovens and more particularly to those having their rear ends located against banks or other coke ovens or other abutments.

In ovens of this type it has not been practicable heretofore to supply air through the rear ends thereof, because they were closed or made inaccessible by reason of said banks, ovens or abutments.

It is the principal object of my invention to produce coke-ovens of said type, which may be supplied with air at both the front and the rear ends.

The ovens may be internally of any desired figure, but I prefer that the sides shall be slightly flared from rear to front, so that the coke in the oven may be drawn out in a single mass without binding on the said sides.

Of course, some of the advantages of my oven may be obtained with the sides parallel or curved outwardly.

Referring to the drawings, Figure 1 is a central longitudinal section of one form of coke oven to which my improvements may be applied; Fig. 2 a front elevation of said oven; Fig. 3, a section on the line 3—3 of Fig. 1; and Fig. 4, a horizontal section on a reduced scale.

On the drawings, 1 represents the floor of the oven and 2, the parallel sides thereof. The rear end of the oven is closed by the wall 3, and the top, by the preferably arched roof 4, having the trunnel or charging hole 5 in the center thereof.

The front 6 of the oven included by the floor 1, the two side walls 2, and the top of the arch 7, which is substantially at the level of the lowest portion of the roof 4, is bricked in as shown in Fig. 2 or provided with a door, so as to leave an air inlet just below the arch 7 as shown in Fig. 2, the said inlet being marked 8.

The rear wall 3 is built double, the rear section 9 entirely closing the rear end of the oven while the front section 10, which is parallel to the rear section and separated therefrom by the space or flue 11, is shorter than the rear section, a space 12 being left at the top of the front section, which space preferably is at the level of the space 8 and communicates with the space or flue 11. The space 12 like the space 8 is preferably curved or arc-shaped and extends entirely across the space between the side walls 2.

In the floor 1 is the flue 13 which extends from the front of the oven to the bottom of the space 11, shown in Fig. 3 by dotted lines.

The oven is filled and operated in the usual way, but in addition to the usual supply of air through the slot or space 8, an additional supply of air is led into the oven through the slot or space 12, which is in communication with the external air by means of the space or flue 11 and the flue 13. The direction of the air currents is shown by the arrows on the said flues.

By means of my invention ovens of the type described can be supplied with air at both ends, as well as if the ends of the ovens were accessible or provided with such slots as 8 in their rear ends. By supplying air to both ends of the ovens, the combustion is more uniform throughout the oven and the usual dead space always existing at the rear ends of the usual oven which takes air from the front only is made as active in the coking operation as the space in front of the trunnel holes.

It will be observed from Fig. 4 that the coke can be withdrawn readily from the oven without liability of binding on the sides thereof, because they are flared from rear to front. It is only necessary that a suitable drawing tool be engaged with the rear side of coke, when, by the application of sufficient force to the tool, the entire charge may be withdrawn at one operation.

I claim—

In a coke oven, a roof having a central opening, a floor having an air flue extending from the front to the rear thereof, a front wall, a rear wall of two parallel sections spaced apart to form a vertical air passage as wide as the rear wall and connected to the flue in the floor, the front wall having an opening leading directly from the external air into the front end of the oven and the front section of the rear wall being of less height than the rear section, whereby a sheet of air the width of the rear wall may enter the rear end of the oven.

Signed at Connellsville, Pa., this 2 day of April 1907.

GEORGE C. LANDIS.

Witnesses:
P. BUFANO,
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