E. G. GERMER.

FIRE POT OR LINING.

APPLICATION FILED JAN. 31, 1908.

900,011. **Patented Sept. 29, 1908.**

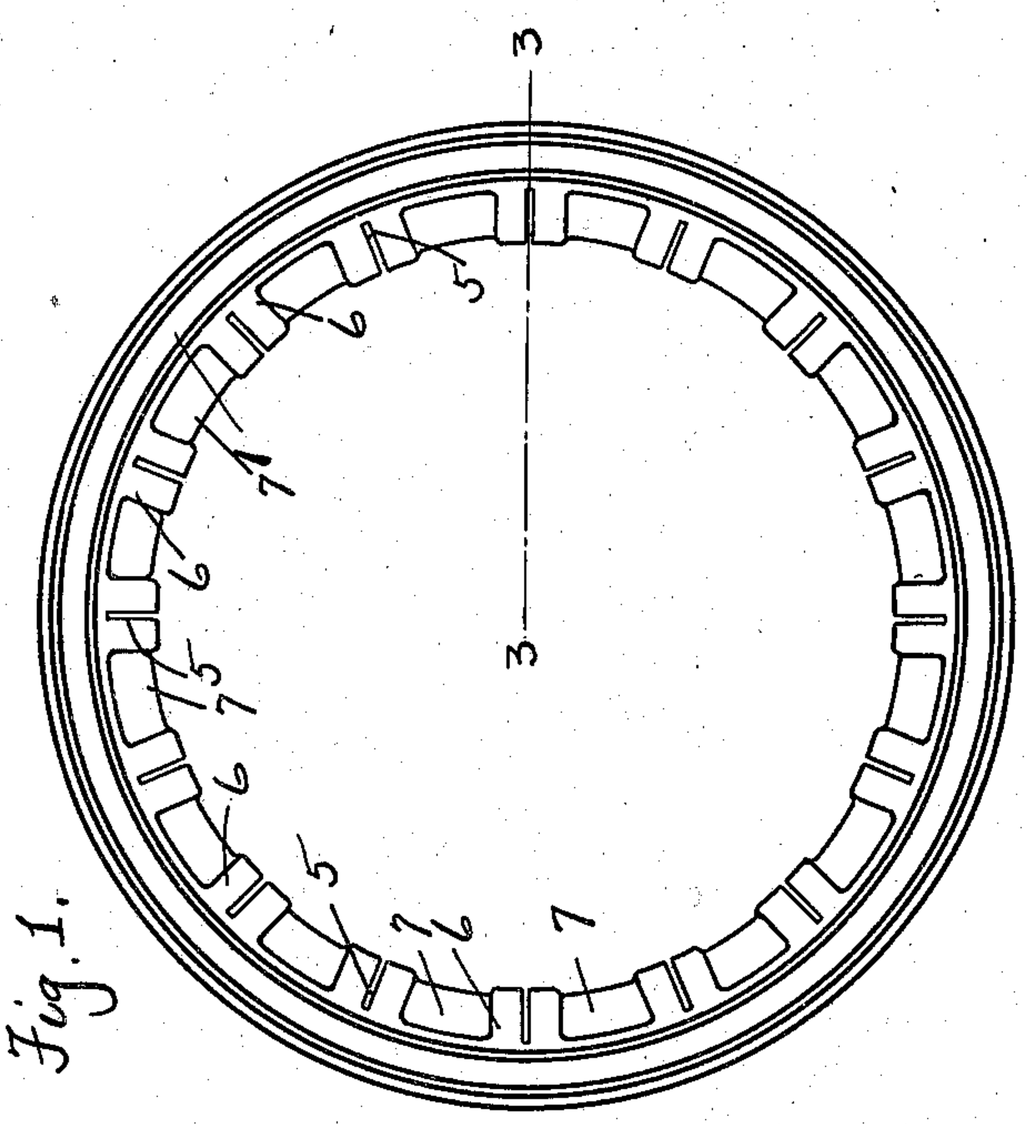

Fig. 1.

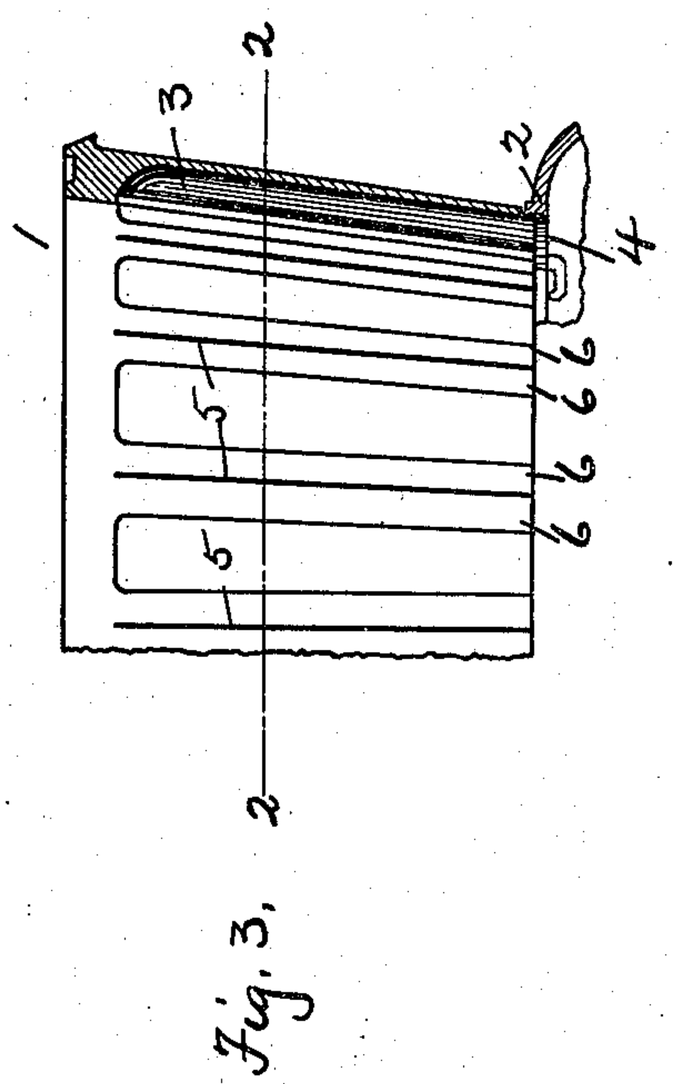

Fig. 3.

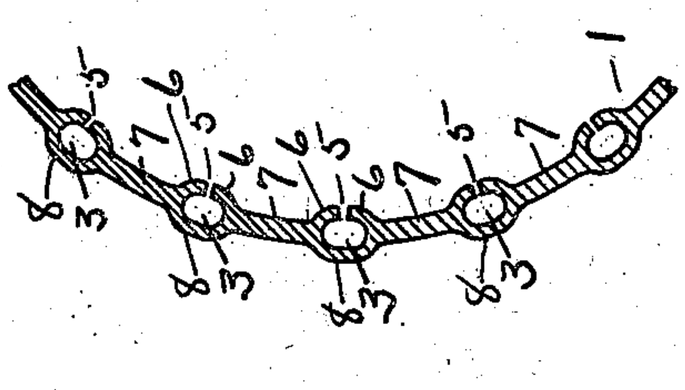

Fig. 2.

WITNESSES

K. K. Kane.

J. L. McLaughlin

INVENTOR

Edward G Germer

by R. R. Lord.

ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD G. GERMER, OF ERIE, PENNSYLVANIA.

FIRE-POT OR LINING.

No. 900,011. Specification of Letters Patent. Patented Sept. 29, 1908.

Application filed January 31, 1908. Serial No. 413,504.

To all whom it may concern:

Be it known that I, EDWARD G. GERMER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Fire-Pots or Linings, of which the following is a specification.

This invention relates to fire pots or linings, and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

The objects of the invention are to both cheapen the construction of the pot, and to increase the efficiency of the same.

The invention is illustrated in the accompanying drawings as follows: Figure 1 shows a plan view of the pot. Fig. 2 a section on the line 2—2 in Fig. 3. Fig. 3 a section on the line 3—3 in Fig. 2.

1 indicates the fire pot taken as a whole. 2 a portion of the stove on which the fire pot ordinarily rests. The fire pot is provided with a series of cells 3, these being cast in the walls of the pot. These cells register with perforations 4 in the support 2 by means of which air is delivered to the cells. The slits 5 connect the cells with the interior of the pot, and preferably extend from top to bottom of the pot, and are also preferably continuous, so as to allow for free expansion and contraction of the metal forming the walls of the pot. The continuous slit also assures a more even introduction of air to the fire chamber within the pot. These general characteristics have been heretofore utilized, as for instance in the construction shown in my former patent August 3, 1897, No. 587,366.

In the present construction the inner walls of the cells project into the fire pot beyond the intervening walls 7. In this manner a greater quantity of burning fuel is brought nearer to the opening. For example in my former patent all the fuel within a given radius of the opening is included in less than a semi-circle viewed in cross section. Whereas in the present construction the fuel enters between these projections, so that the mass within a given radius is appreciably increased. In this way the delivery of air is brought nearer to a greater mass of fuel, and consequently reaches the burning fuel with less obstruction, and in this manner increases the efficiency of the pot.

In the present construction, also I have arranged the cells in an intermediate position in the walls. The front walls of the cells projecting inwardly and the outer walls of the cells projecting outwardly from the general line of the intervening walls. With this manner of construction the walls of the cells may be made somewhat thinner, and inasmuch as there are many of these, the saving in the entire pot is considerable. Furthermore the walls of the cells with relation to the intervening walls may be given a more uniform thickness, thus equalizing the strains incident to contraction and expansion.

It will also be apparent, that a greater portion of the walls surrounding the cells are directly exposed to the burning fuel, so that the walls are heated to a higher degree, thus assuring more uniform temperature between the outer walls of the cells, and the intervening walls of the pot. That this is an important consideration is evident from the fact, that the outer walls of the cells form small vertical sections, which are exposed on the outside to the outer air, and on the inside protected from the direct action of the fuel, so as to be much cooler than other parts of the pot, which are directly exposed to the action of the fuel. Anything, therefore, that tends to decrease this difference of temperature is important, and this construction in connection with the continuous slits relieves the pot very largely of all injurious strains.

What I claim as new is:

1. A fire pot or lining having vertical cells arranged in its wall and continuous openings from the cells to the part of the fire pot or lining normally occupied by fuel, said openings extending approximately from the top to the bottom of the fire pot or lining, the inner walls of the cells projecting into the fire pot or lining beyond the intervening portions of the wall and the intervening portions of the wall being free from obstructions preventing the fuel from filling the space between the projecting walls.

2. A fire pot or lining having vertical cells arranged in its wall, and continuous openings from the cells to the part of the fire pot or lining normally occupied by fuel, said openings extending approximately from top to bottom of the pot or lining, and the inner and outer walls of the cells projecting from the intervening portions of the wall.

3. A fire pot or lining having vertical cells arranged in its wall and continuous openings from the cells to the part of the fire pot or lining normally occupied by fuel, said openings extending approximately from top to

bottom of the pot or lining, the inner and outer walls of the cells projecting from the intervening portions of the wall, and the intervening portions of the wall being free from the obstructions preventing the fuel from filling the space between the projecting walls.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDWARD G. GERMER.

Witnesses:
H. C. LORD,
K. R. KANE.