H. BAREUTER.

COKE OVEN DOOR.

APPLICATION FILED JAN. 19, 1914.

1,093,522. Patented Apr. 14, 1914

Fig. 1

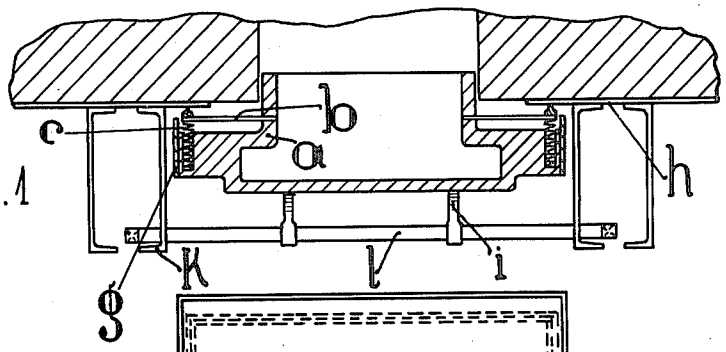



Fig. 2

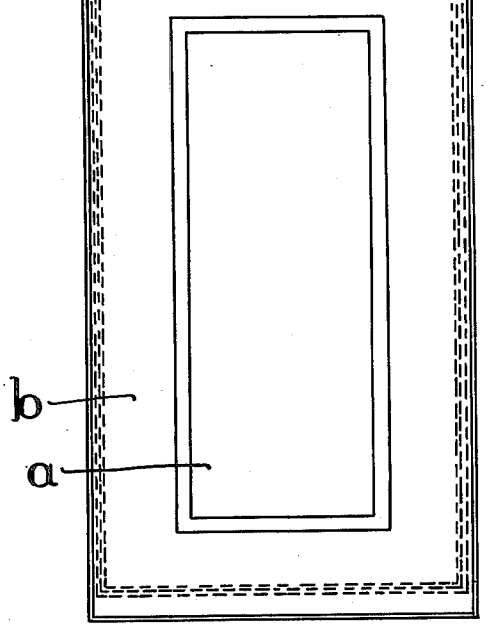



Fig. 3

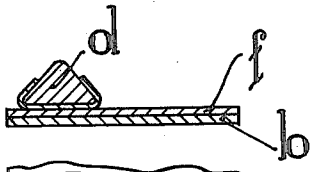
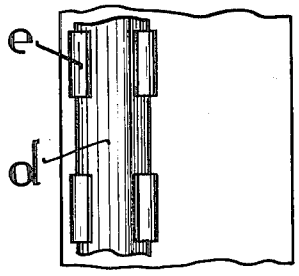



Fig. 4




Witnesses:

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# UNITED STATES PATENT OFFICE.

HEINRICH BAREUTER, OF ESSEN-WEST, GERMANY.

## COKE-OVEN DOOR.

1,093,522. Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed January 19, 1914. Serial No. 813,039.

*To all whom it may concern:*

Be it known that I, HEINRICH BAREUTER, a citizen of the German Empire, and residing at Essen-West, Germany, have invented certain new and useful Improvements in Coke-Oven Doors, of which the following is a specification.

My invention relates to coke-oven doors having flexible edges for making a tight joint.

The chamber doors of coke-ovens have generally been packed heretofore by smearing the joints with loam after the doors have been inserted. Doors having flexible edges have also been proposed, the object being to obtain a tight joint simply by pressing the door; these doors do not answer their purpose, however, because the wall of the oven always warps or bends, and a tight joint cannot be obtained with known doors of this type.

According to my invention I provide on the door a rim or edge consisting of a flexible sheet-metal plate which is under the action of springs mounted on the door, and on this rim or edge I mount flexible packing. Owing to the packing being provided at the edge of this flexible plate tightly connected to the oven door and to this plate being pressed by springs against the chamber, irregularities of the wall which occur in the course of time are overcome, so that a gas-tight closure of the oven chambers is obtained at once after the doors have been inserted and pressed into position.

The doors can be pressed into position in various ways, for example, directly by means of a compressed air piston or by levers or otherwise.

One illustrative embodiment of the invention is represented by way of example in the accompanying drawing, wherein:—

Figures 1 and 2 are horizontal section and front elevation, respectively, showing a preferred form of my improved coke-oven door, and Figs. 3 and 4 are detail views of the rim of the door on an enlarged scale.

Referring to the drawing, the door comprises the casting *a* into which the sheet-metal edge or rim *b* is tightly inserted. This rim is under the action of springs *c* which are inserted into holes in the casting and carry the packing *d* composed of asbestos for example. This strip of asbestos is preferably carried by a number of holders *e* in order that the flexibility of the plate *b* and of the packing *d* shall not suffer. The rim *b* is covered with a sheet of asbestos *f* for protecting it from the influence of the high temperature. Likewise, protective sheets of asbestos *g* or the like are preferably provided on the sides of the casting *a*.

On closing the door under pressure, owing to the elastic plate covered with packing material a good joint is made even when the wall of the oven is irregular. By covering the oven wall with sheets *h* of sheet-metal the joint can be improved. In the described mode of forming a tight joint the joint is substantially dependent on the oven-door being continuously subjected to pressure. In the illustrative embodiment the pressure is effected by means of the eccentrics *i* which are mounted on the shaft *l* journaled in the brackets *k*, the same being pressed against the door by rotating them.

I claim:—

1. The combination, with a coke-oven door, of a flexible spring-pressed rim mounted at the edges thereof, and flexible packing mounted on the outside face of said rim.

2. The combination with a coke-oven door, of a sheet-metal rim mounted by one edge at the edge of the door, springs carried by the door tending to force the rim outward, and a strip of flexible packing mounted on the outside face of said rim.

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Witnesses:
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