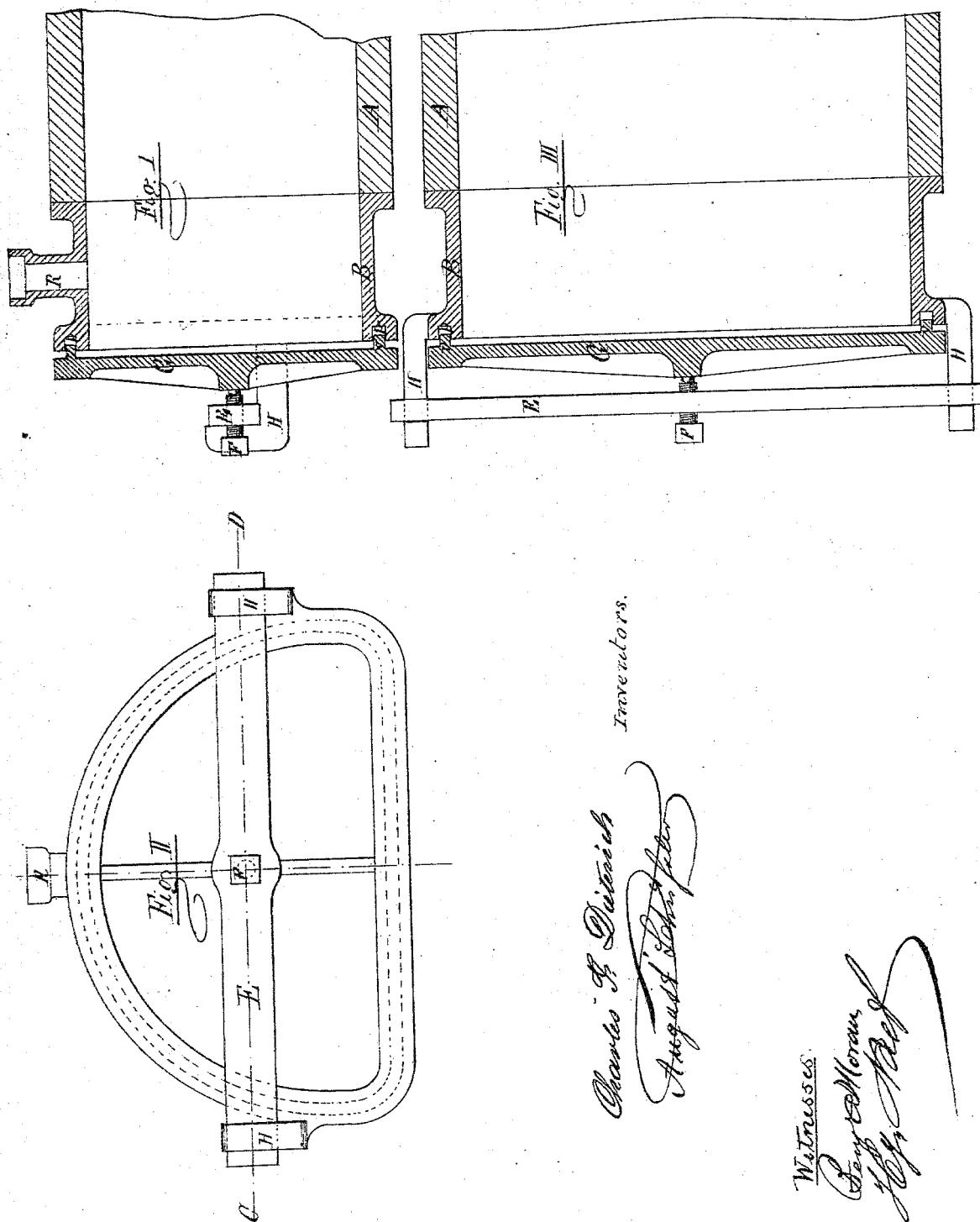


CHARLES F. DIETERICH & A. SCHUESSLER.

Improvement in Air-Tight Joints for Gas-Retorts.

No. 115,586.

Patented June 6, 1871.



Inventors.

Charles F. Dieterich
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Witnesses.

Henry C. Moran
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UNITED STATES PATENT OFFICE.

CHARLES F. DIETERICH AND AUGUST SCHÜSSLER, OF NEW YORK, N. Y.

IMPROVEMENT IN AIR-TIGHT JOINTS FOR GAS-RETORTS.

Specification forming part of Letters Patent No. 115,586, dated June 6, 1871.

To all whom it may concern:

Be it known that we, CHARLES F. DIETERICH and AUGUST SCHÜSSLER, both of the city, county, and State of New York, have invented a new and improved Device for making the Joints of Lids, or Man or Hand-Holes, on Gas-Retorts Air-Tight; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Heretofore man-hole plates or lids on gas-retorts which are subjected to a high temperature have been closed air or gas tight against the retort by simply interposing a layer of loam between it and the retort and by screwing the lid against the loam.

The nature of our invention now consists in applying, in a practical manner, an elastic packing which is capable of withstanding a very high temperature between these lids and the retort, so that these lids or plates may be taken off and put on without damage to the packing, which will necessarily prove a great saving in time and material against the customary method of interposing clay or loam, as the latter has to be renewed each time the lid is taken off.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

Figure I is a longitudinal section of the end of a retort with our packing applied. Fig. II is an end view of the same; Fig. III, a longitudinal section through C D of it.

A is the end of the retort as made of fire-clay; B, a short cast-iron neck or mouth-piece of the same internal section as the retort, which is fastened properly to it, and which is closed by the lid G, the latter being tight against B, by means of the loose bar E and

the bolt F. (See Figs. II and III.) The neck B is provided with one or more recesses or grooves, *p p*, on the surface of its opening. These recesses are filled with an elastic packing, which will withstand high temperature without losing its elasticity; such, for instance, as fibers of asbestos or any other suitable material. The lid G is provided with a projecting rim, or a corresponding number of rims, which fit easily into the said recesses *p p*. The lid, being pressed by the screw-bolt F, with this projection against the packing in *p p*, will thus close the retort perfectly air-tight, and the lid may be taken off and put on again without disturbing or injuring the packing any. The same result may, however, be obtained by making the groove or recess *p p* in the man-hole plate or lid, and a corresponding projecting rim on the end of the neck or mouth-piece B, it being substantially the same construction. The mouth-piece B we furnish with a short nozzle, R, which is closed on top with a stopper of clay or loam, or which may be closed with a suitable safety-valve, so that the retort may be relieved of any excessive pressure of gases through this nozzle in case the standing-pipe leading the gases from the retort should become clogged up.

What we claim as our invention, and desire to secure by Letters Patent, is—

One or a number of recesses or grooves and corresponding projecting rims, in combination with an elastic packing, of suitable material, on joints of man or hand hole plates or lids for gas-retorts which are subject to a high temperature.

CHAS. F. DIETERICH.
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Witnesses:

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