(No Model.) 2 Sheets—Sheet 1.

J. GJERS.

APPARATUS FOR EQUALIZING THE TEMPERATURE OF STEEL INGOTS.

No. 291,331. Patented Jan. 1, 1884.

Fig 2.

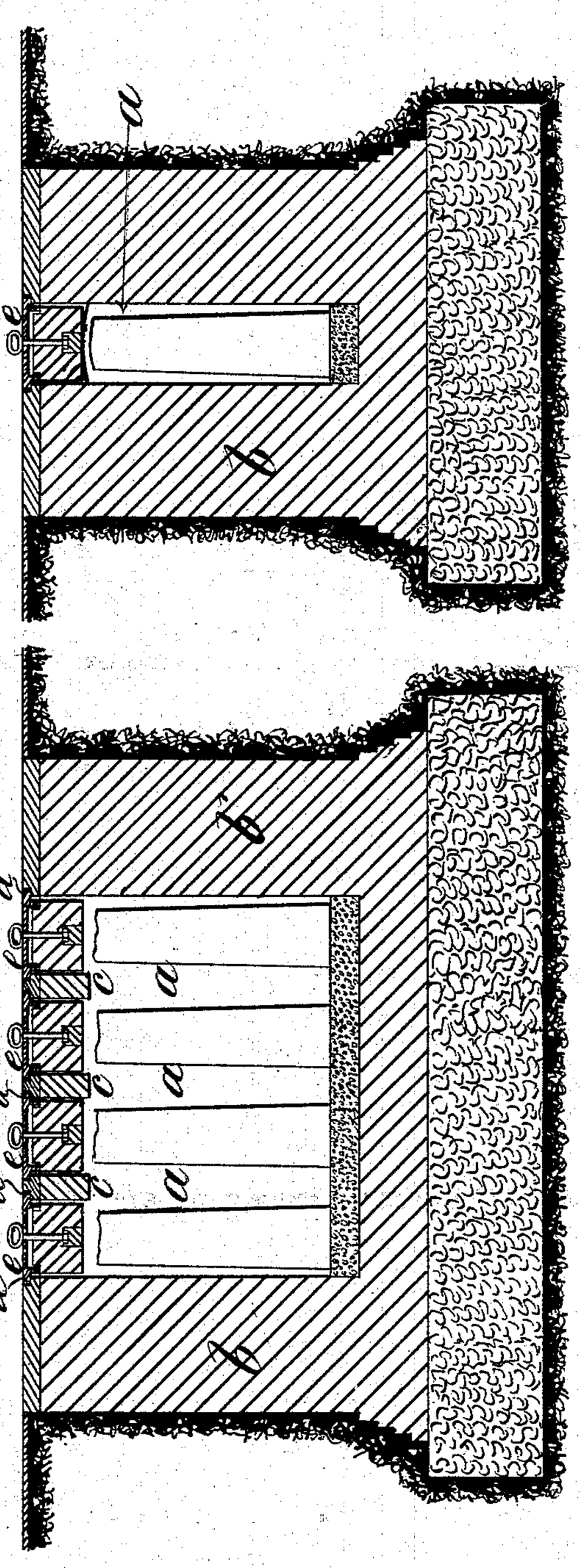
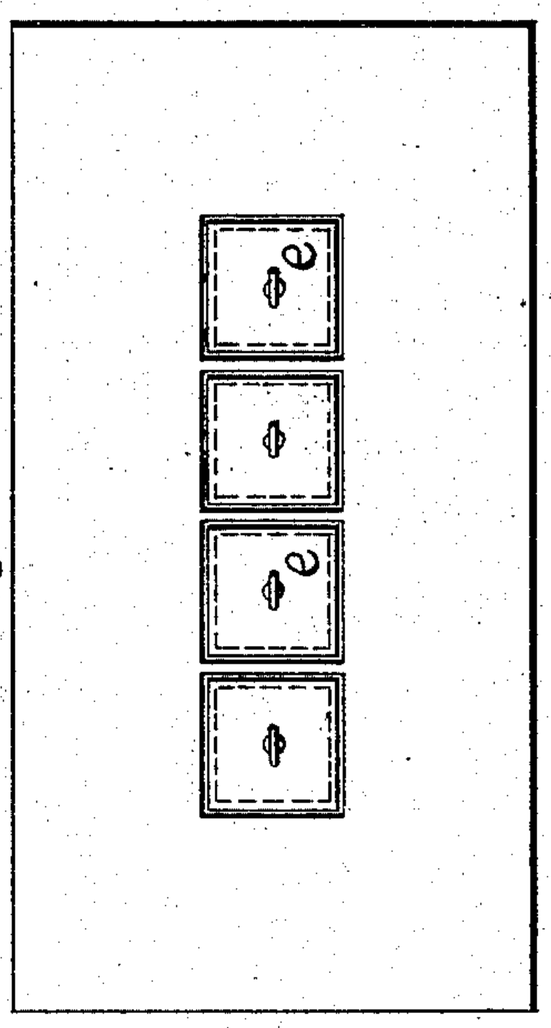


Fig 1.

Fig 3.



Witnesses;
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J. H. Blackwood

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Attorney

(No Model.) 2 Sheets—Sheet 2.

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Fig 4.

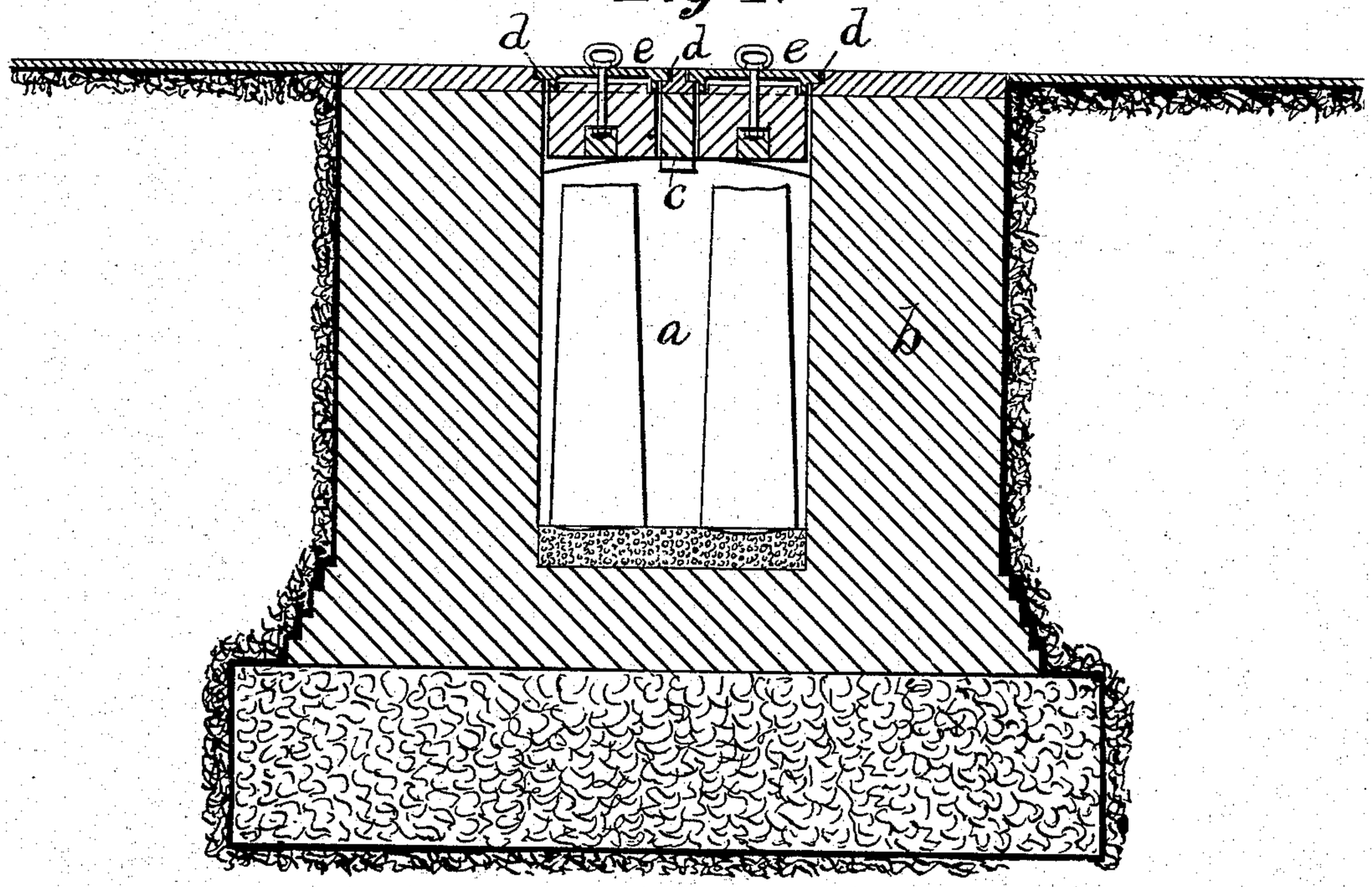
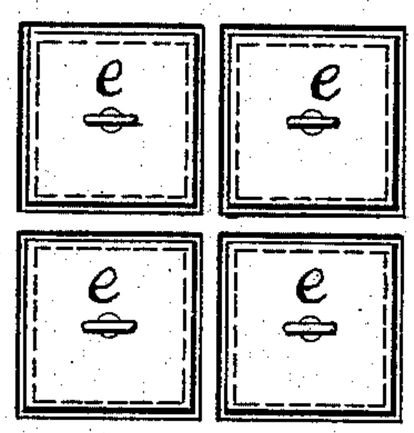


Fig 5



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UNITED STATES PATENT OFFICE.

JOHN GJERS, OF MIDDLESBROUGH, IN THE NORTH RIDING, COUNTY OF YORK, ENGLAND.

APPARATUS FOR EQUALIZING THE TEMPERATURE OF STEEL INGOTS.

SPECIFICATION forming part of Letters Patent No. 291,231, dated January 1, 1884.

Application filed March 23, 1883. Renewed December 12, 1883. (No model.) Patented in Belgium April 13, 1883, No. 61,080, and in Luxemburg October 30, 1883, No. 317.

To all whom it may concern:

Be it known that I, JOHN GJERS, a subject of the Queen of Great Britain and Ireland, residing at Middlesbrough, in the North Riding of the county of York, Kingdom of Great Britain and Ireland, have invented new and useful Apparatus for Equalizing the Temperature of Steel Ingots, of which the following is a specification.

My invention has reference to apparatus for treating steel ingots to enable their temperature to be equalized, so that the ingots may be rolled off into blooms or finished articles without reheating in a reheating-furnace; and my invention has reference to that kind of apparatus for this purpose in which soaking-pits are constructed in a mass of brick-work or like material that acts as an accumulator of heat.

The object of my present invention is to enable two or more ingots to be treated at a time in the same vertical soaking pit or chamber. For this purpose I construct in a mass of brick-work a soaking pit or chamber of a width somewhat exceeding the width or thickness of an ingot, and of a length sufficient to accommodate four or other convenient number of ingots, leaving a small space between the end ingots and the end walls of the pit or chamber, and also a small space between each ingot and the one next to it. This chamber, according to my invention, is made with a top wherein there are formed mouths or openings, the number of which is equal to the number of ingots the pit or chamber is designed to contain at a time. Each of these mouths or openings is provided with a separate cover, for which purpose the upper part of the said mouth or opening is recessed to form a seating.

My invention is illustrated in the accompanying sheet of drawings, wherein Figure 1 is a longitudinal sectional elevation of a soaking pit or chamber designed to receive four ingots at a time. Fig. 2 is a cross-section, and Fig. 3 is a plan. Fig. 4 is a cross-section, and Fig. 5 is a plan, of a chamber having a modified arrangement for receiving the ingots.

a is the pit formed within the mass of brick-work *b*. This pit is closed at the top by a series of arches, *c*, arranged to form, in conjunction with the walls of the pit, four mouths or openings, each recessed at *d* to receive a cover, *e*. By this arrangement, in order to insert or remove an ingot, it is only necessary to remove the cover over the particular ingot to be removed, and thus the heated gases contained in the pit have a tendency to remain therein, thereby to a considerable extent preventing entry of cold air or of any oxidizing medium.

The covers shown in the drawings are of the construction described in the specification of an application for Letters Patent of the United States filed by me the 23d day of March, 1883, Serial No. 89,279.

In some cases, instead of arranging the pit or chamber to receive the ingots in a single line or row, it may be convenient to arrange it to receive them in two (or more) lines or rows, as illustrated in Figs. 4 and 5, provided always that a separate opening having a separate removable cover be provided for each of the entire number of ingots the pit is constructed to contain.

I do not herein claim the process of equalizing the temperature of steel ingots by the apparatus herein described, such having been made the subject of a separate application; but

What I do claim is—

A vertical inclosed pit or chamber for equalizing the temperature of steel ingots, constructed to contain several ingots at a time in a vertical position, and having in its top a number of openings corresponding to the number and positions of the ingots to be treated at a time, each of said openings being provided with a separate removable cover of non-conducting material, substantially as described, for the purpose specified.

JOHN GJERS.

Witnesses:

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Accountant, Middlesbrough.

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Accountant, Church Street, Middlesbrough.