

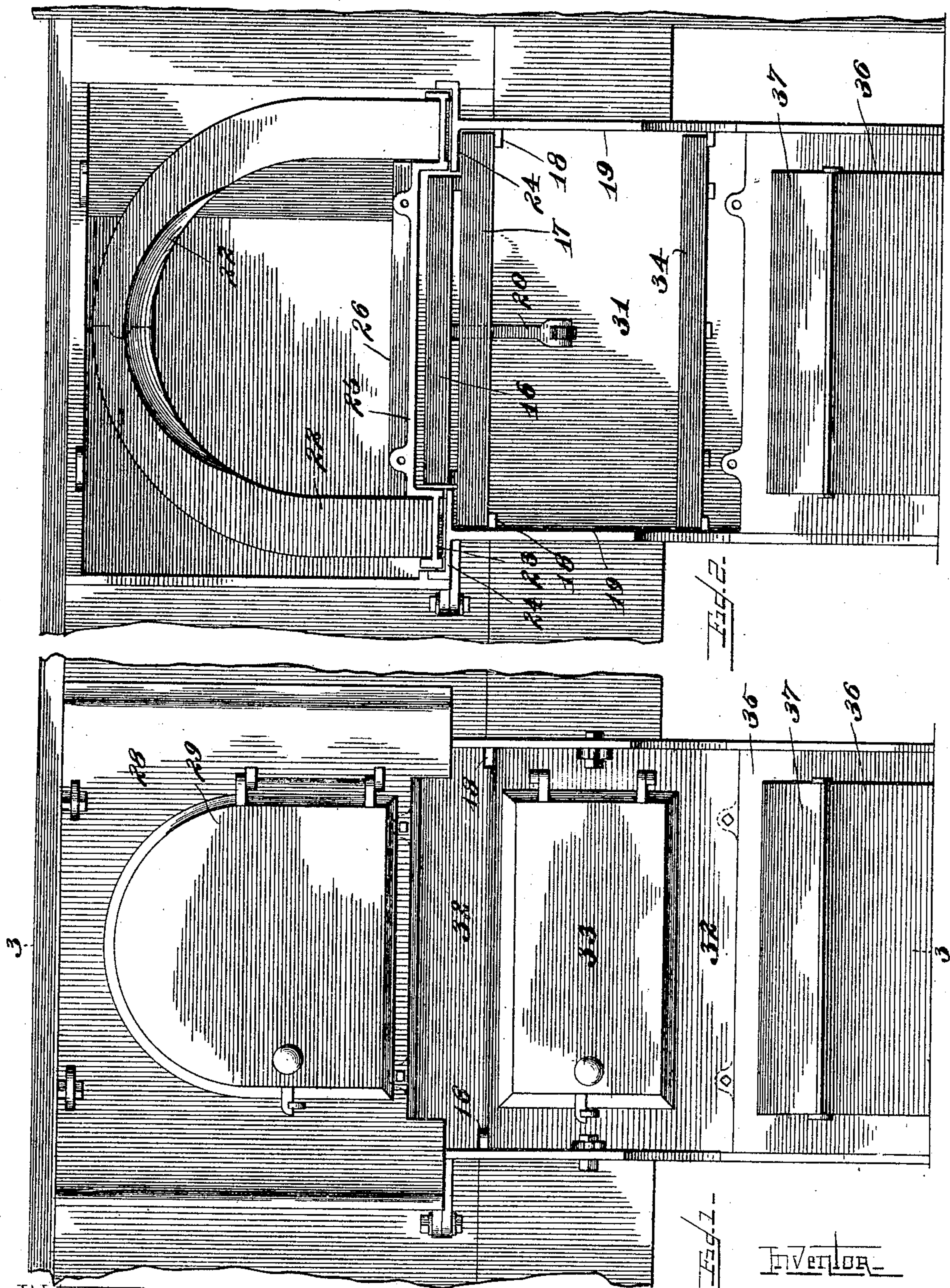
No. 819,417.

J. FAULDS.
BAKE OVEN.

PATENTED MAY 1, 1906.

APPLICATION FILED MAR. 17, 1904.

4 SHEETS—SHEET 1.



Witnesses—

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INVENTOR—

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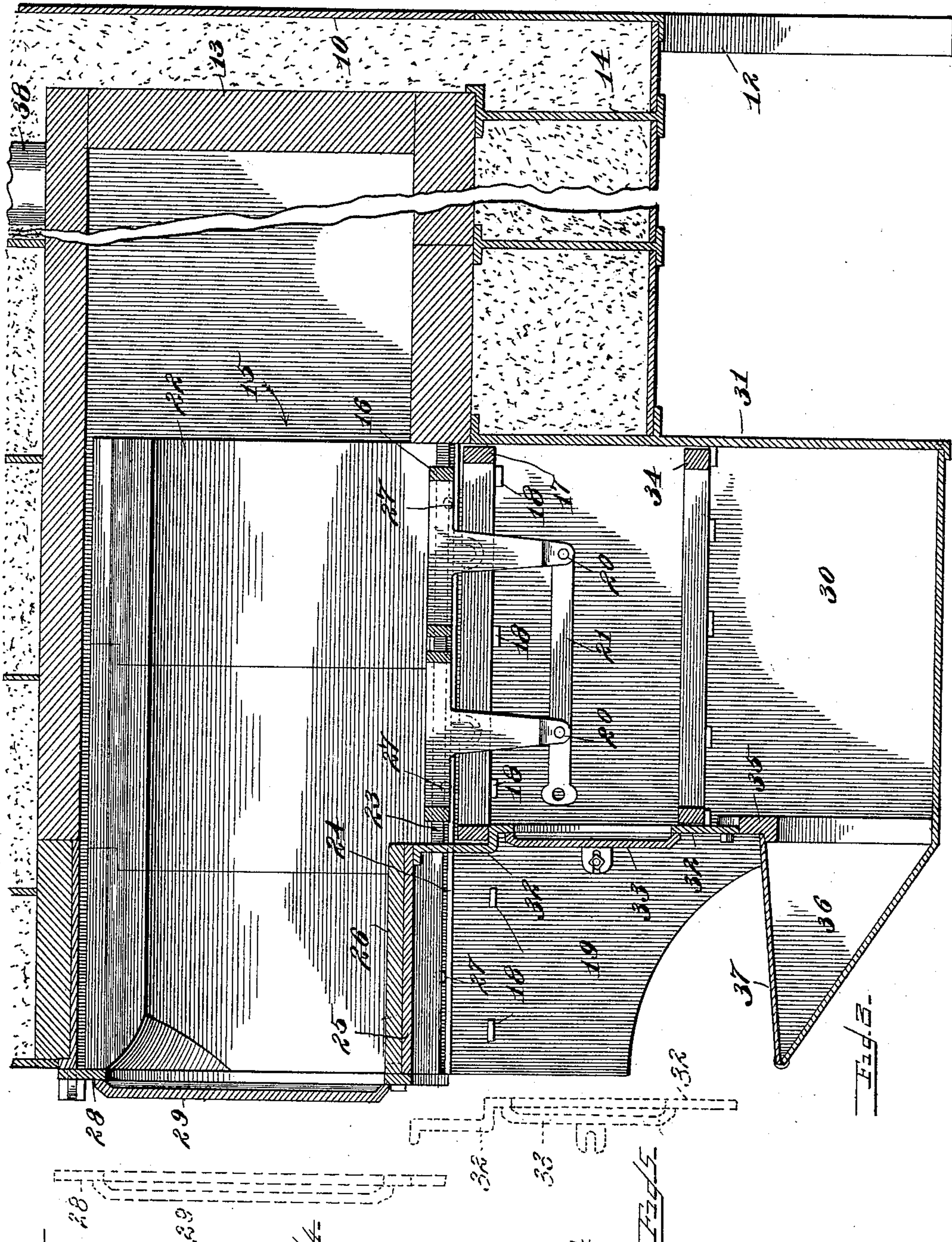
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Witnesses—

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Fig. 2
23
27
24

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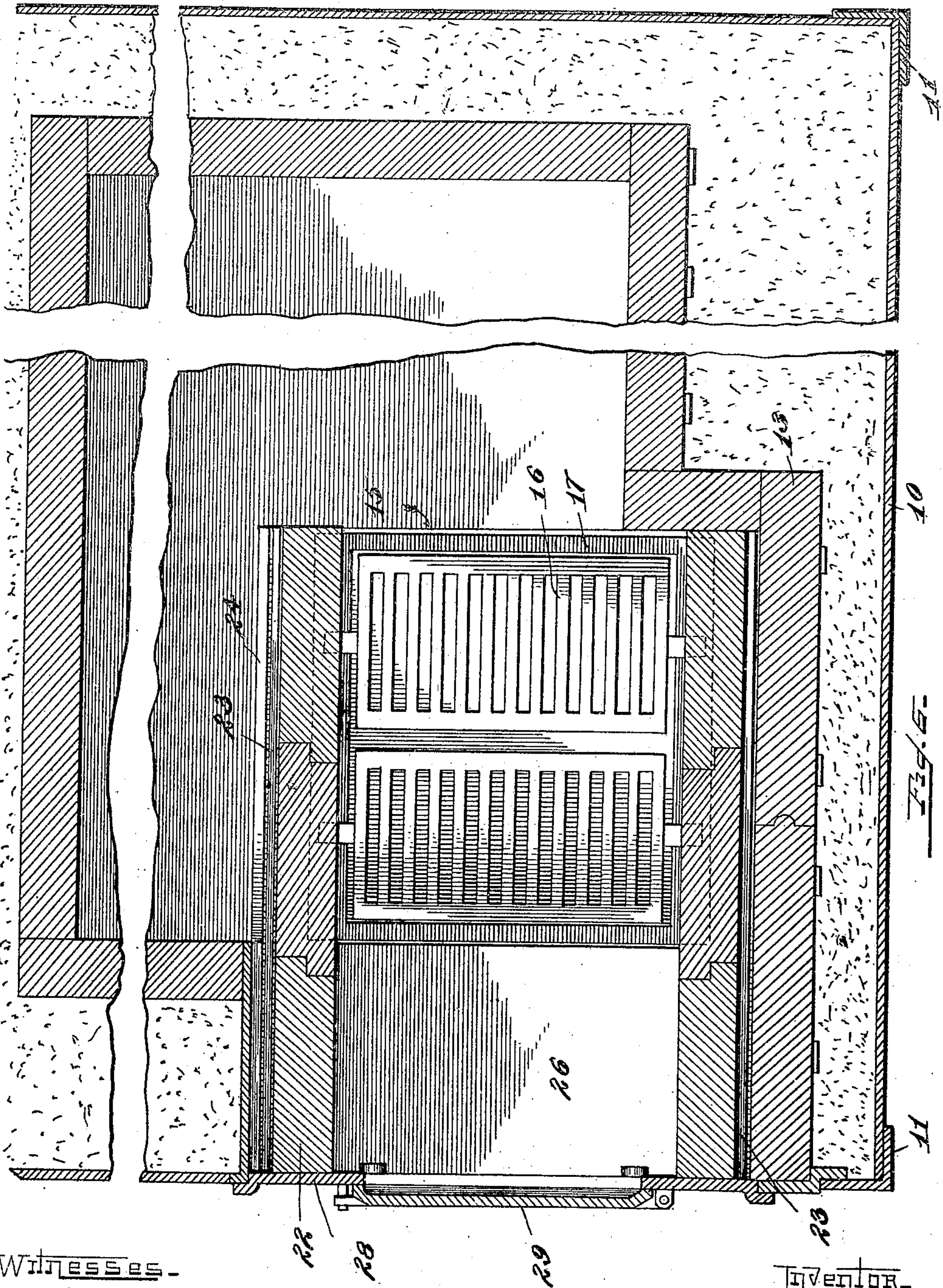
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WITNESSES—

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No. 819,417.

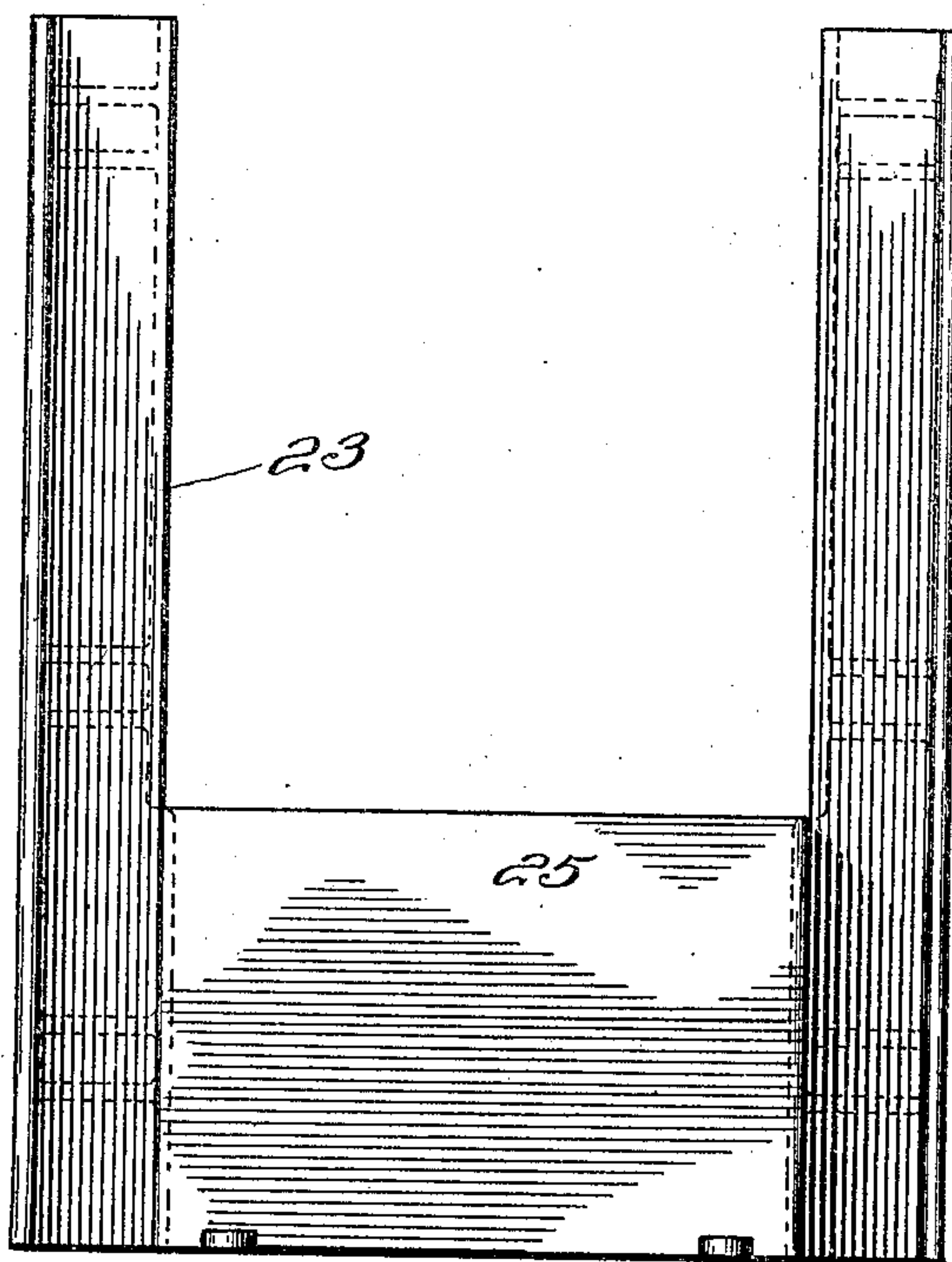
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4 SHEETS—SHEET 4.

Fig. 8.



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UNITED STATES PATENT OFFICE.

JOHN FAULDS, OF CHICAGO, ILLINOIS, ASSIGNOR TO MIDDLEBY OVEN MANUFACTURING COMPANY, A CORPORATION OF ILLINOIS.

BAKE-OVEN.

No. 819,417.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed March 17, 1904. Serial No. 198,603.

To all whom it may concern:

Be it known that I, JOHN FAULDS, a citizen of the United Kingdom of Great Britain, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Bake-Ovens, of which the following is a specification and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to that class of ovens which are known to the trade as "portable" ovens, consisting of metal frames filled in with masonry to form the furnace-flues and baking-chambers.

The object of the invention is to improve upon this type of oven so as to permit of repairs to the walls of the furnace without destroying the masonry walls of the casing; and this object is attained by constructing the side and top walls of the furnace, which is located within the baking-chamber, independent of the walls and roof thereof, the front plate of the furnace preferably constituting a part of the walls of the casing and being detachable therefrom and the furnace being preferably mounted upon a sliding frame which may be withdrawn from the casing after the front plate has been removed.

In the accompanying drawings, illustrating the invention, Figure 1 is a detail front elevation of the oven. Fig. 2 is a similar view with the front plate of the furnace removed. Fig. 3 is a detail vertical longitudinal section on the line 3 3 of Fig. 1. Fig. 4 is a detail side view of the front of the fire-chamber of the furnace portion of the oven removed from the main structure. Fig. 5 is a detail of the front of the upper portion of the ash-pit removed from the main structure. Fig. 6 is a detail plan section of the oven, taken through the combustion-chamber of the furnace and the baking-chamber of the oven. Fig. 7 is a detailed section showing the grate-support. Fig. 8 is a plan view of the arch-supporting chair.

The outer casing 10 of the oven is preferably of metal and of any desired form and is held by a suitable framing, portions of which are shown at 11 11, and the whole is supported on suitable legs 12, as common in ovens of this type. The inner wall of the oven (shown at 31) is of masonry, and the interspace be-

tween the inner and outer casing is intended to be filled with sand.

The furnace (designated generally as 15) is located in one corner of the oven, its firing-opening being through the front wall thereof. The grate-bars 16 of the furnace are carried by a frame 17, sliding on suitable ways 18, leading inwardly from the front of the oven and carried by the side walls 19 of the ash-chamber of the furnace. Two sets of grate-bars are shown, each provided with a downwardly-projecting arm 20, connected by a rod 21, by means of which the grates may be oscillated on their trunnions. An arch composed of tile 22 covers the grates and forms therewith the combustion-chamber, the tile 22 resting upon a U-shaped chair 23, the side members of which ride upon flanges 24, formed at the tops of the side walls 19 of the ash-chamber and the cross member 25 of which constitutes the dead plate or floor of the mouth of the furnace. This dead-plate is covered by a protecting-tile 26. Antifriction-rollers 27 may be introduced to carry the chair 23.

The front of the furnace is closed by means of an apertured plate 28, provided with a hinged door 29. The ash-pit is shown at 30, closed by the side walls 19, the back wall 31, and as to its front upper portion by the plate 32, having an aperture closed by a removable plate 33. Within the ash-pit there is located a suitable riddle 34 for sifting the ashes as they fall from the grate 15. The lower portion of the ash-pit is closed by an apertured front plate 35, its aperture being closed by means of a chute 36, covered by a hinged lid 37, thereby permitting access to the ash-pit.

In ovens of this kind the tiling of the furnace frequently burns out. As such ovens have heretofore been constructed the furnace can be replaced only by tearing down a considerable part of the wall of the oven, and in order that the work may be properly done this necessitates the employment of workmen skilled in oven-building.

Minor repairs may be made upon the structure herein shown and described by merely removing the front plate 28, and for making more extended repairs the chair 23, with the masonry arch supported thereby, may be drawn out and reintroduced after a new arch

has been constructed, so that the repairs can be made by any person of ordinary skill. The rear end of the arch is preferably entirely open, the vapors passing freely into the baking-chamber and being led therefrom by a smoke-flue 38, located at any desired position. The grates may be removed for repairs without disturbing the combustion-chamber, the plate 32 being first removed.

10 While I have described the invention as applied to portable ovens, it is obvious that the form of the casing and oven-supports do not affect it and that it may therefore be applied to any type of bake-oven. Its value is

15 found not only in the means it provides for repair without disturbing other parts of the casing, but also in that such repair can be easily made while the oven is actually in use.

I claim as my invention—

- 20 1. In a bake-oven, in combination, a suitable shell, a fire-grate, slideways flanking the grate, a slide running on the ways, and an arch seated on the slides.
2. In a bake-oven the combination of a
- 25 suitable shell, the fire-grate therein, slideways flanking the grate, a U-shaped chair slidable on the ways into and out of the shell, and having its cross member at the front of the grate, and an arch seated on the side
- 30 members of the chair.

3. In a bake-oven, in combination, a suit-

able shell, a furnace located within the shell and a grate and an arch both independently movable into and out of the shell.

4. In a bake-oven, in combination, a suitable shell, a pair of independently-slidable frames located in the shell, a grate carried by one frame, and an arch covering the grate carried by the other frame. 35

5. In a bake-oven, in combination, a suitable shell, a U-shaped frame slidably supported in the shell and having its cross member at the front of the fire-box and being movable into and out of the shell, a fire-box arch seated on the side members of the frame, a 40 tile seated on the cross member of the frame and a grate located between the members of the frame. 45

6. In a bake-oven, in combination, a suitable shell containing a baking-chamber, a 50 furnace located within the baking-chamber and having walls independent of the walls of the shell, its front plate forming a part of the wall of the shell and being detachable therefrom independently of the walls of the 55 furnace, and a sliding plate carrying the walls of the furnace, movable into and out of the shell.

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Witnesses:

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