

(No Model.)

2 Sheets—Sheet 1.

J. JUNKER.
BAKING OVEN.

No. 359,789.

Patented Mar. 22, 1887.

FIG - I -

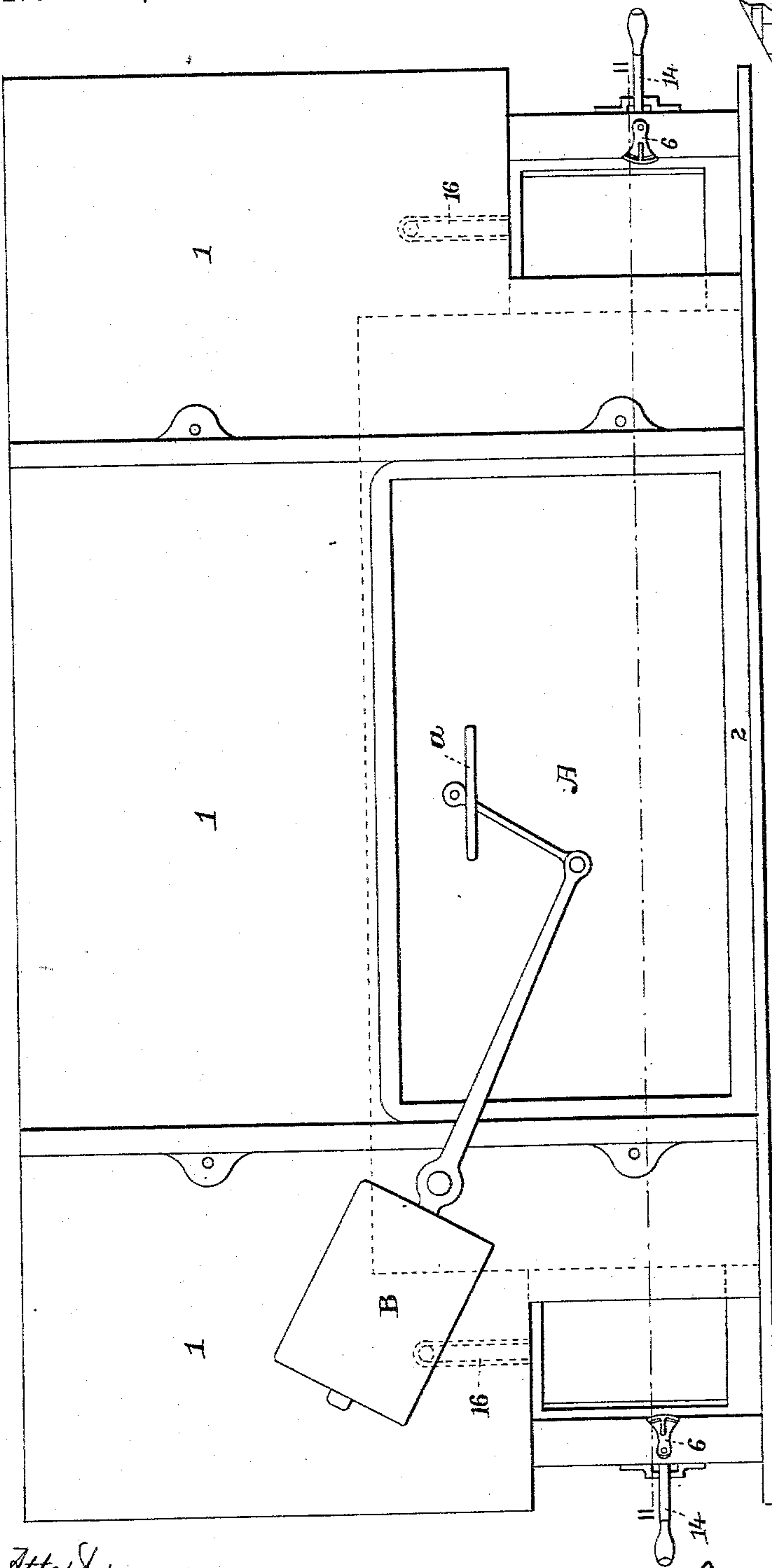
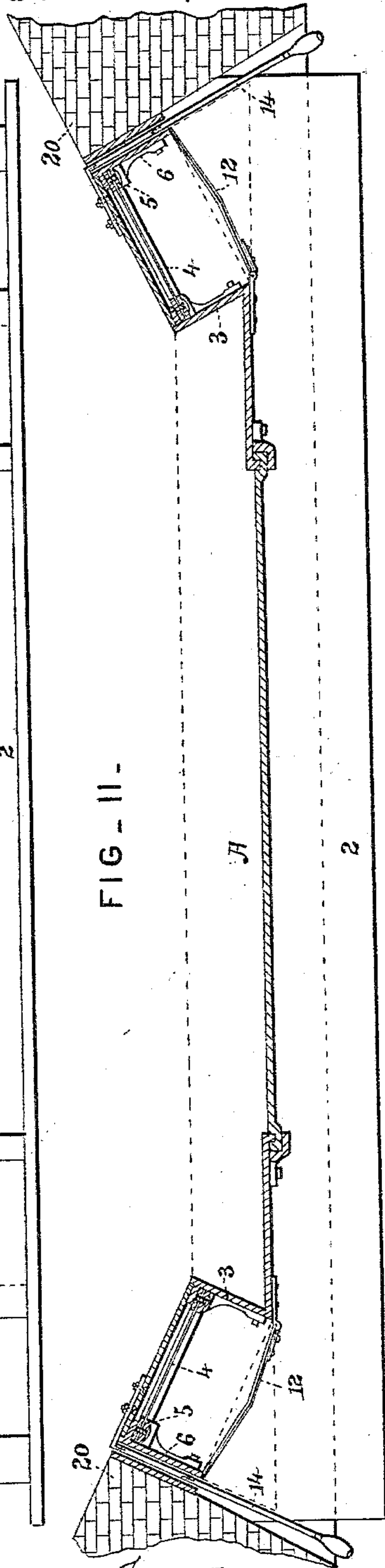


FIG - II -



Attest:
Geo. T. Smallwood.
H. B. Knight

Inventor:
Jules Junker
by A. H. H. his attorney

(No Model.)

2 Sheets—Sheet 2.

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BAKING OVEN.

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FIG. III.

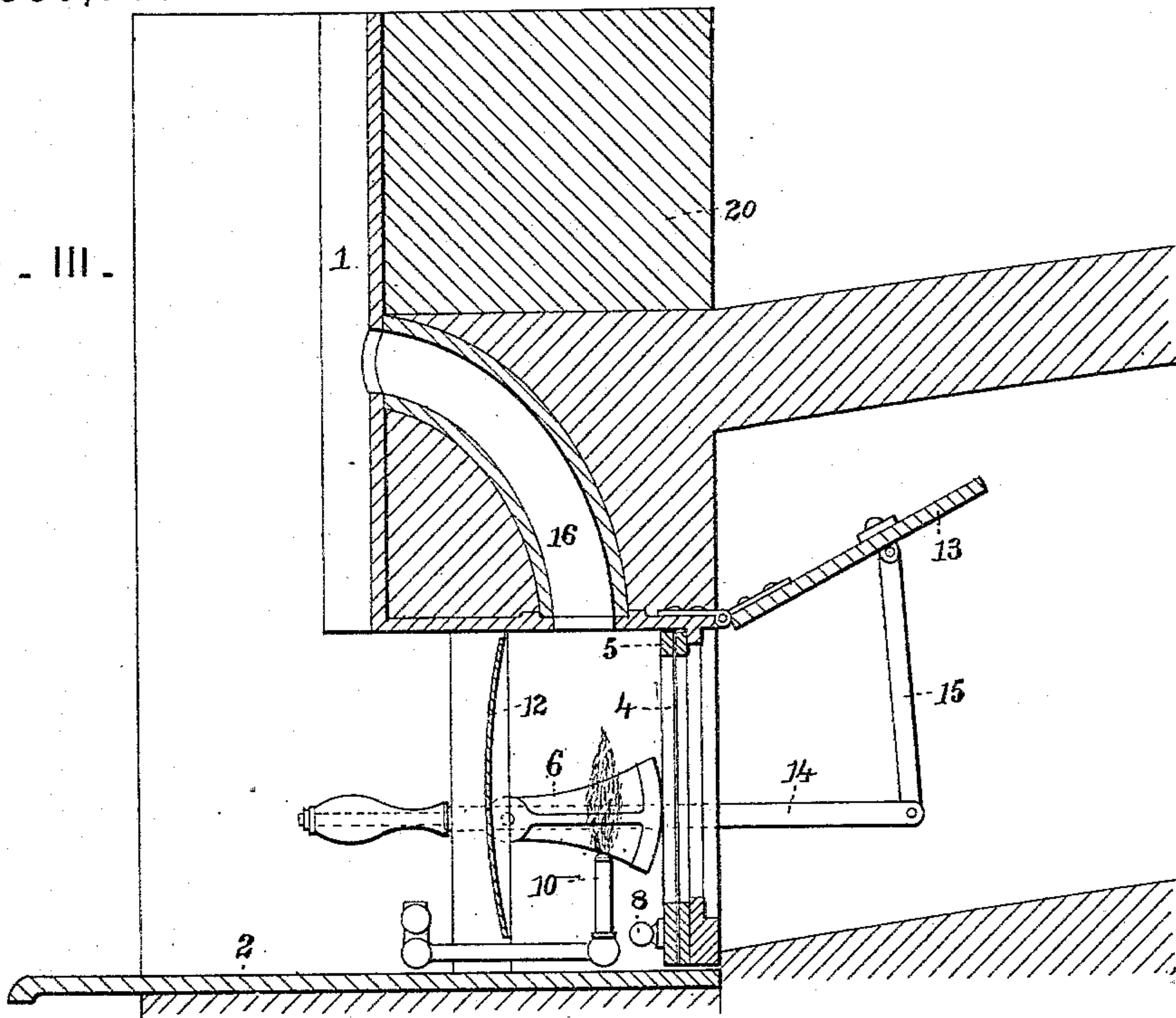
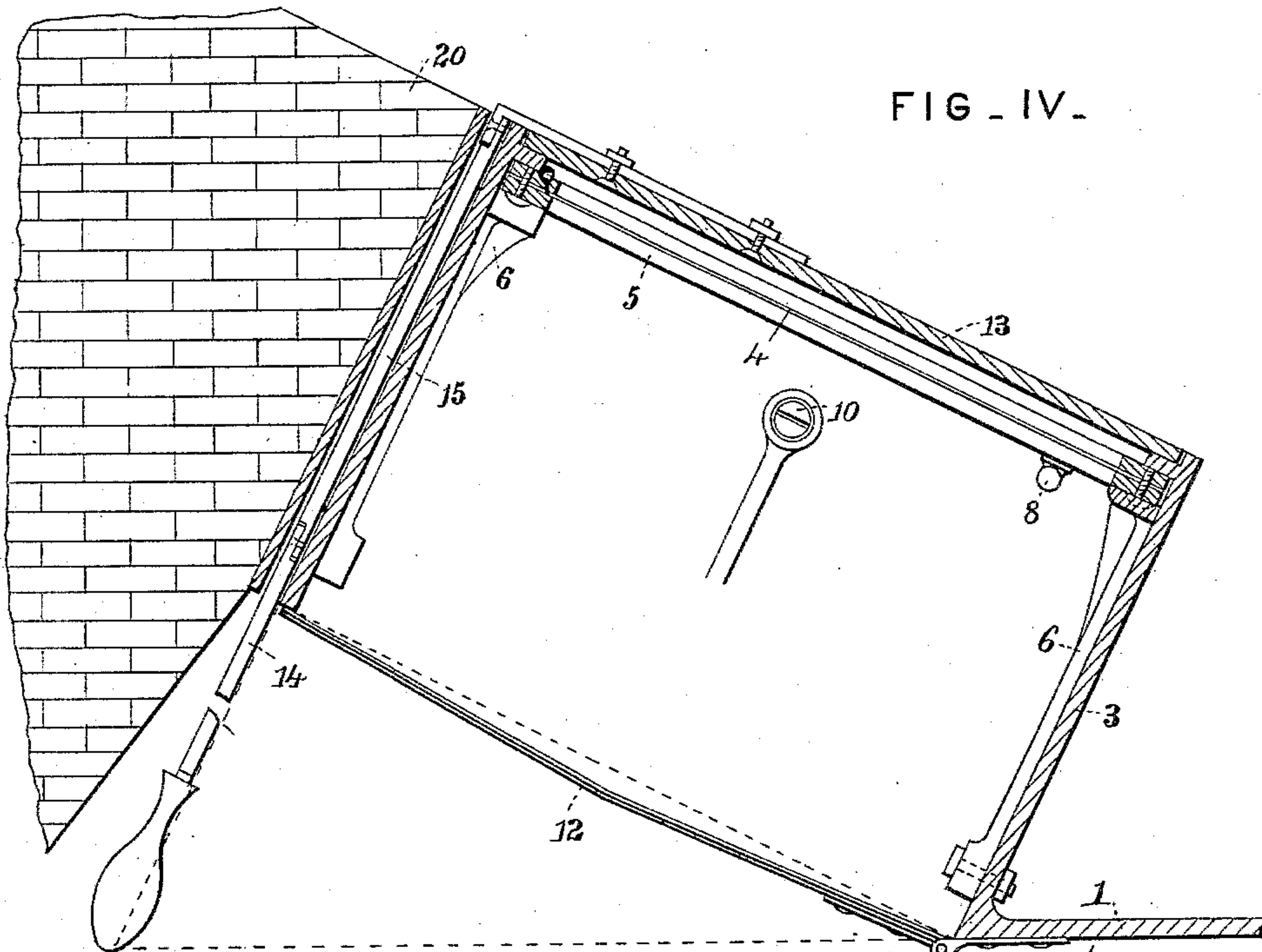


FIG. IV.



Attest
Geo. T. Smallwood,
H. C. Knight.

Inventor.
Julius Junker
By A. P. Ploker
his attorney

UNITED STATES PATENT OFFICE.

JULES JUNKER, OF PHILADELPHIA, PENNSYLVANIA.

BAKING-OVEN.

SPECIFICATION forming part of Letters Patent No. 359,789, dated March 22, 1887.

Application filed August 20, 1886. Serial No. 211,409. (No model.)

To all whom it may concern:

Be it known that I, JULES JUNKER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Baking-Ovens, which improvement is fully set forth in the following specification.

This invention has reference to ovens for baking bread, and relates more particularly to the construction of the frame for the oven-door and the means for illuminating the interior of the oven.

Heretofore ovens have been provided with a large light built into the wall on the side opposite the fire, (when the fire-place was constructed to open into the oven,) and a special frame-work for the light was of course necessary, the brick-work being built around it. In building ovens after this plan great difficulty was experienced in fitting the separate frames for the doors and illuminators into the masonry so as to make the joints tight all around and sufficiently strong to stand wear and tear and rough usage. Moreover, with a single large light (usually a twelve-foot burner) the mica sheet soon became blackened with the smoke, the aperture was too large to make a tight joint with the mica sheet, and, besides, the side of the oven away from the light was poorly illuminated.

The present invention is designed to overcome these difficulties and otherwise to improve the construction of the oven and the illuminators therefor.

According to this invention the frame for the light or lights, instead of being separate and separately bricked in, is made part of the frame-work surrounding and supporting the oven-door, so that the whole constitutes one structure. It is a comparatively simple and easy matter to build the masonry around this single frame, and a much better work is produced. Preferably there are two lights—one on each side of the oven-door—whereby with much smaller burners the oven is better illuminated than heretofore and the size of the opening can be reduced one-half, so that a single sheet of mica can be used and a tight joint made. The windows require frequent cleaning and the lights have to be often handled. When the light was set into the wall, it was difficult and

inconvenient of access. By the construction herein described access to the lights and windows is easily had.

The present invention includes certain details of construction and combinations and arrangements of parts, as hereinafter pointed out.

In the accompanying drawings, which form a part of this specification, Figure I is a front elevation of the furnace-door and iron frame-work. Fig. II is a horizontal section of the same on line II. Fig. III is a vertical section through the box or casing of one of the illuminators; and Fig. IV is a horizontal section of the same, Figs. III and IV being on a larger scale than Figs. I and II.

A represents the furnace-door, *a* the handle for lifting the same, and B a counter-weight, these parts being of any ordinary or suitable construction.

The iron frame-work forming the front of the oven is shown in Fig. I. It consists of vertical plates 1 and a horizontal plate or sill, 2, these parts being bolted together. The illuminator-boxes 3—one on each side of the door A—form part of the frame-work, the walls of the boxes being at an angle with the vertical plates 1. As shown, the whole frame-work for the door and two lights form one structure, which can be easily and solidly walled in by the brick-work 20. The inner end of each box 3 is closed by a mica window. This consists of a sheet of mica, 4, held between the two parts of a frame, 5, said parts being tightly screwed together. The window, being put in place, is pressed firmly against the turned-in edges of the iron box or casing by dogs 6, pivoted at 7 to the sides of the box 3. The ends of these dogs which bear against the edges of the window-frame are slightly eccentric, so that they can be made to bear with the degree of pressure required to make a tight joint. Thus there is no likelihood of a leak at this point. At the same time the window can be readily removed for cleaning or for other purpose, it being only necessary to turn aside the dogs 6 and remove the frame 5 by taking hold of the button 8, which is provided for that purpose. To insert a fresh sheet of mica, when this is necessary, the screws holding together the two parts of the frame 5 are removed.

The gas-burner 10 is preferably carried by a

jointed bracket, 11, so that it can be adjusted from place to place and removed when desired. Back of the light is a reflector, 12, which serves also to shade the light from the eyes of the workman or attendant. The reflector is hinged to the frame-work. It extends not quite to the bottom of the box 3, leaving an opening below for the entrance of the gas-pipe and for admission of air to support combustion at the burner 10. The reflectors are omitted from Fig. I.

Behind the mica window is a shutter, 13, which can be opened and closed, as desired, by the lever 14, connected with the shutter through a link, 15. Above the box is a small iron pipe, 16, which curves forward to the front of the plate 1 and constitutes a flue to carry off smoke from the burner.

It will of course be understood that where two or more lights are used the additional ones will be constructed as above described.

In the accompanying drawings a furnace-door with two lights—one on each side—is shown in Figs. I and II. This is the preferred construction, and, as shown, the boxes are preferably set in the wall obliquely, so that the mica windows are somewhat inclined to the plane of the door. (See Fig. II.)

It has been found that by the construction herein described and shown in the drawings the oven is much better illuminated with two four-foot burners than with a large twelve-foot light.

I do not limit myself to the precise details of construction described and shown, since

modifications may be made therein without departing from the spirit of my invention. It is obvious that parts of the said invention are susceptible of use without others.

I claim—

1. In a baking-oven, the door-frame combined in one structure with one or more illuminator boxes or cases, provided with windows of mica or like material, for lighting the interior of the oven, substantially as described.

2. A baking-oven having the door-frame and two boxes for lights—one on each side of the door—the whole constituting one structure set into the brick-work of the oven, substantially as described.

3. The combination, with the oven-door, of the two boxes for lights—one on each side of the door—said boxes being oblique to the plane of the door, substantially as described.

4. In a baking-oven, the combination, with the illuminator-box having an opening in the side toward the oven, said opening being surrounded by a flange, of a frame holding a mica sheet, and pivoted dogs for pressing said frame firmly against said flange, making a tight joint, but permitting removal of the window when desired, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JULES JUNKER.

Witnesses:

FREDK. BREITINGER,
J. CARROLL MCCAFFRAY.