

F. J. ALBRECHT.
 BAKE OVEN ILLUMINATOR.
 APPLICATION FILED MAR. 2, 1912.

1,048,024.

Patented Dec. 24, 1912.

2 SHEETS-SHEET 1.

FIG. 1.

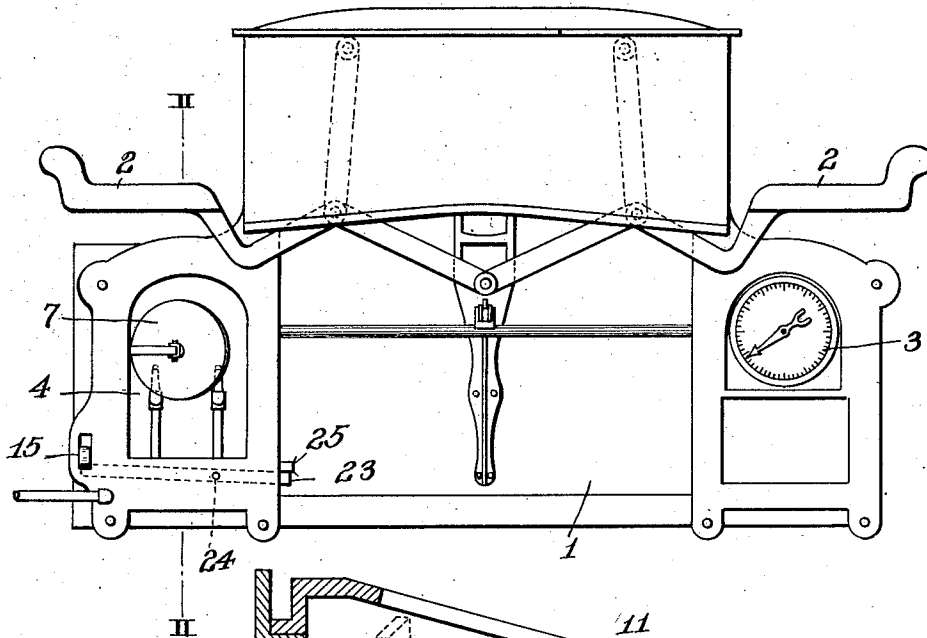
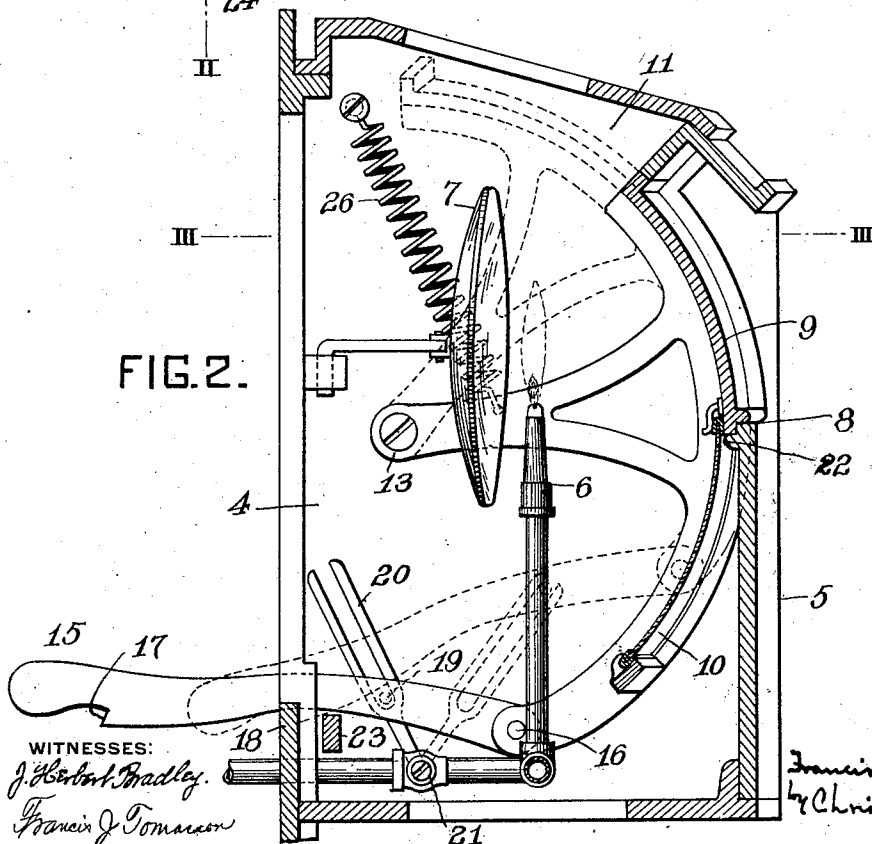


FIG. 2.



WITNESSES:

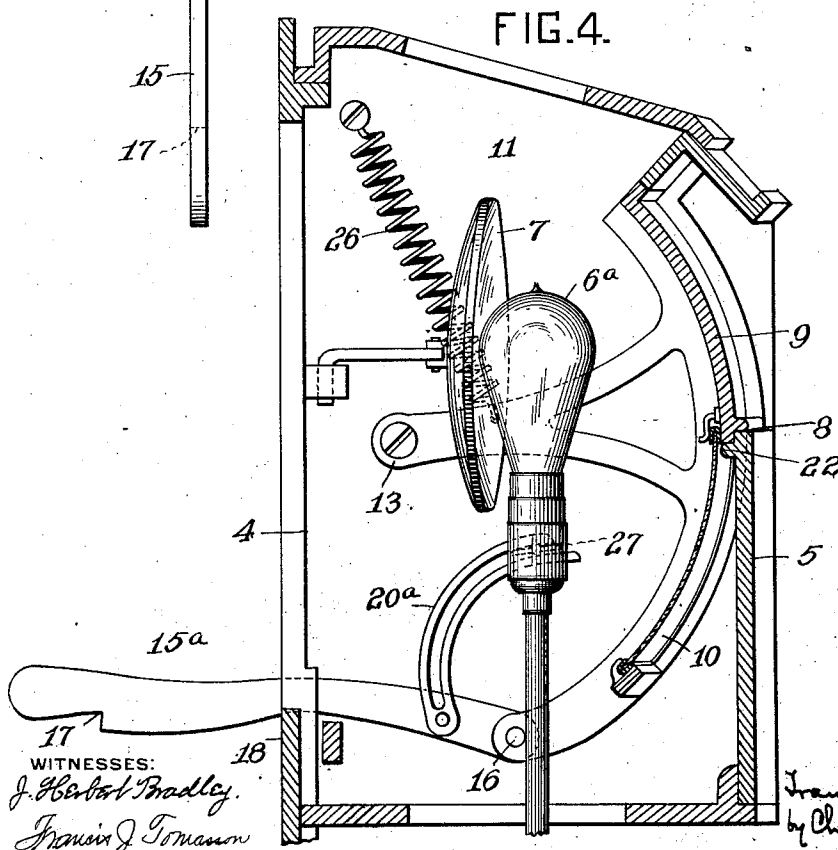
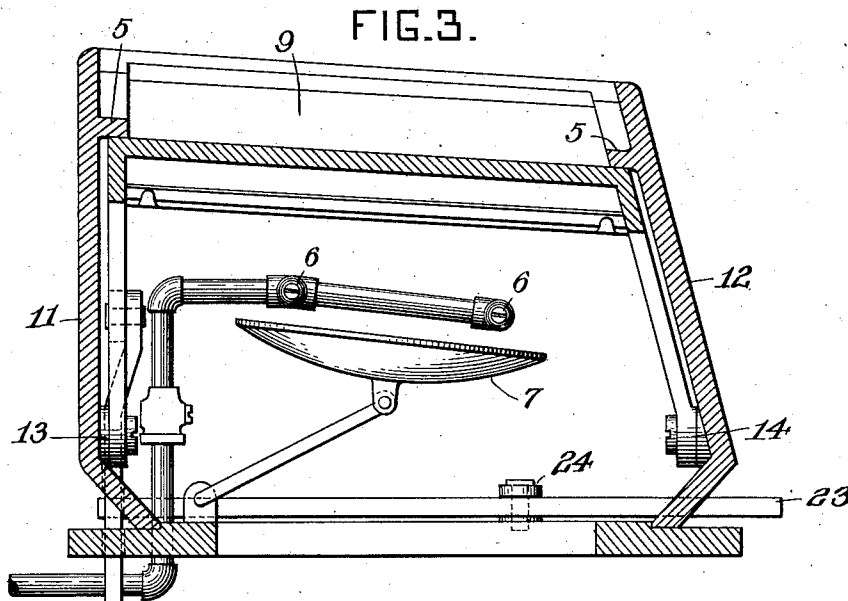
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

FRANCIS J. ALBRECHT, OF PITTSBURGH, PENNSYLVANIA.

BAKE-OVEN ILLUMINATOR.

1,048,024.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed March 2, 1912. Serial No. 681,203.

To all whom it may concern:

Be it known that I, FRANCIS J. ALBRECHT, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Bake-Oven Illuminators, of which improvement the following is a specification.

In United States Letters Patent, No. 858,132, granted to me June 25, 1907, I have shown certain improvements in the construction of bake oven doors and illuminators.

My present invention relates to such a construction, and has particularly to do with the illuminator.

Briefly stated, the illuminator, shown in my above named patent, consists of a gas lamp placed in front of a reflector and within a compartment separated by an iron wall from the bake oven proper. An opening in the said wall and in front of the lamp is closed by translucent material, such as mica; and, to protect the mica from becoming coated or otherwise injured by the oven gases, a hinged door covers the opening, and is provided with a lever to operate it and hold it in open position when desired. The lever is also effective, when operating the door, to open and close a valve in the gas pipe.

It has been found that, in the actual use of the illuminator above described, the hinged door does not, even when in closed position, form an adequate protection for the mica closure. And furthermore, it has been found that the workman, after closing the oven door frequently neglects to close the hinged illuminator door, with the result that the mica is soon rendered opaque, and the gas light is needlessly burned.

The object of my present invention is to provide an illuminator, which will be efficient and easily operated, and in which the above stated undesirable features of my earlier illuminator will be eliminated.

My invention is illustrated in the accompanying drawings, which form part of my specification, and in which—

Figure 1 is an elevation of the front of a bake oven, showing the oven door, and at opposite sides thereof a pyrometer and an illuminator; Fig. 2 is a sectional view taken through the illuminator on the line II—II, Fig. 1; Fig. 3 is a sectional view taken on

the line III—III, Fig. 2; and Fig. 4 is a sectional view similar to Fig. 2, but showing the use of electric lights rather than gas lamps as a source of illumination.

In the several figures like numerals are used to designate like parts.

Referring particularly to Fig. 1, the vertically movable oven door 1 may be opened by means of the hand lever 2, substantially in the same manner as described in my aforesaid patent. At the right side of the door 1 a pyrometer 3 may be placed; and at the left of the said door, or in any other suitable place, an illuminator compartment 4 may be provided. The illuminator compartment 4, which may be of any desired form, may be separated from the oven by a wall 5, preferably of cast-iron. Within the said compartment 4 a suitable source of light, such as gas lamps 6, may be provided; and a reflector 7 may be suitably placed to the rear thereof. In front of the lights 6, the wall 5 is provided with a suitable opening 8 preferably located some distance above the floor of the oven. To the end that the said opening may be constantly kept closed, and that the closure may, when desirable, be translucent, and to the further end that the translucent closure may not be rendered opaque, I preferably form a single movable closure, one portion of which consists of a translucent body. And I so construct the closure that in its range of movement, the translucent portion thereof may, when not in operative use, be entirely within the illuminating chamber, and therefore not exposed to the oven gases. As particularly illustrated in Figs. 2 and 3, the closure 9 preferably consists of a cylindrically shaped shell, having a mica closed opening 10 in the lower part thereof; and the closure is preferably pivotally mounted on the walls 11 and 12 as at 13 and 14 respectively. It will be understood of this construction that the rim of the opening 8 is shaped to correspond with that of the said shell, so that the opening 8 will be closed in all operative positions of the said shell. An operating handle 15 may be pivoted as at 16 to the said closure, so that when the said handle is moved inwardly the closure will move upwardly, and the translucent portion thereof will be brought to register with the opening 8. And the said handle 15 may be provided with a notch 17, adapted to be engaged by an abutment or wall portion 18

when the closure has been shifted. Furthermore, the said handle may be provided with a pin 19, adapted to operatively engage a forked lever 20, operatively connected to the gas-controlling valve 21. The movements of the closure 9 may be limited by a suitable abutment 22, formed on the wall 5 adjacent to the opening 8, and in such a position as to engage, in the alternate positions of the closure 9, the upper and lower edges of the mica-provided opening 10.

To the end that the closure 9 may not be held in its upward position when the oven door is closed, I preferably provide a trip lever 23, pivoted as at 24, and I provide the oven door 1 with a lug 25, the entire arrangement being such that, when the door 1 is closed, the lug 25 will engage the lever 23 and cause it to release the handle 15 from its engagement by the abutment 18, so that the closure may fall, preferably of its own weight. And in order to relieve the fall of the closure I preferably provide a counter balancing spring 26, as shown.

In Fig. 4 I have shown an illuminator construction similar in most respects to that shown in Figs. 2 and 3 and described above, but different therefrom in that the source of illumination is an incandescent lamp 6^a. In this construction the forked lever 20^a is curved so as to open and close the switch 27 as the arm 15^a is moved to its alternate positions.

The operation of my improved illuminator is apparent from the foregoing description and from the drawings. When the oven door is closed, the closure will be in the position indicated in full lines in Fig. 2.

When it is desirable to look into the oven, the door 1 may be opened, and the handle 15 may be thrust inwardly and in such position the closure will be in the position indicated by dotted lines in Fig. 2, the translucent portion thereof covering the opening 8 in the wall 5, and when the door

is closed the lever 23 will be tripped so that the closure will, as described above, fall to the full line position.

I claim herein as my invention:

1. The combination with an oven, of an illuminator compartment mounted adjacent thereto, a wall between the oven and the compartment and provided with an opening above the oven floor, a light in substantial horizontal alinement with the said opening, and a vertically slidable closure for said opening, the lower portion of said closure being formed of translucent material, located below the level of said light when the oven is not illuminated.

2. The combination with an oven having a movable door, and an illuminator compartment separated from said oven by a wall having an opening therethrough, of a closure for said opening, and means for holding said closure in light transmitting position, said holding means being rendered ineffective on and by the closing of the oven door.

3. The combination with an oven having a movable door, and an illuminator compartment separated from said oven by a wall having an opening therethrough, of a curved pivotally mounted closure for said opening provided with an area of translucent material, a notched arm pivotally secured to the lower portion of said closure and effective when thrust inwardly to move said closure and by its notched engagement with an abutment to hold said closure in moved position, a trip lever mounted adjacent to said arm, and a lug on said oven door effective to engage and move the said lever when the door is closing.

In testimony whereof I have hereunto set my hand.

FRANCIS J. ALBRECHT.

Witnesses:

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FRANCIS J. TOMASSON.