

No. 655,761.

Patented Aug. 14, 1900.

W. L. CULVER.
VENTILATOR FOR OVENS.

(Application filed Feb. 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1

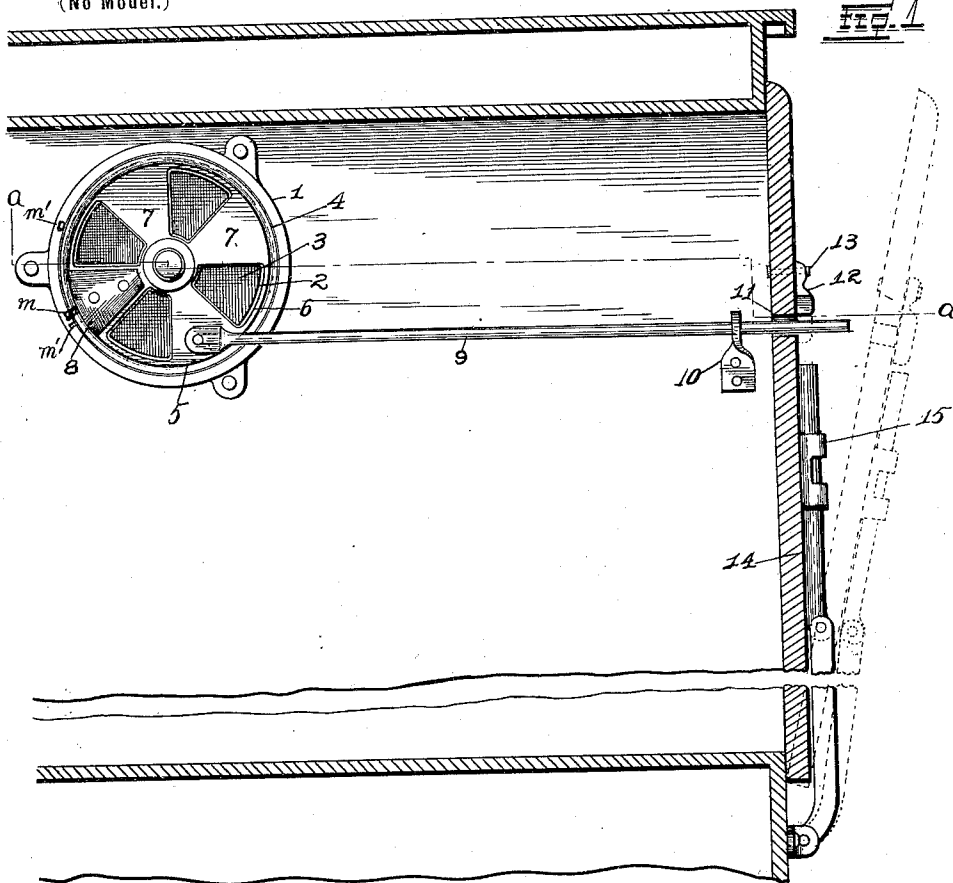
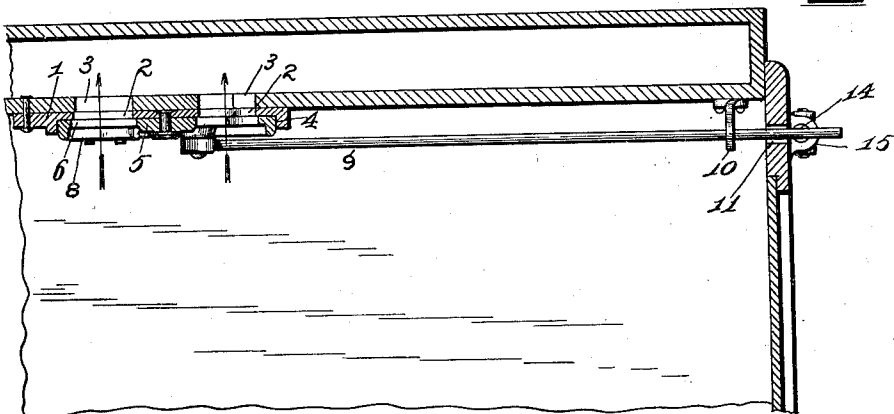


FIG. 2



Witnesses:

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Inventor

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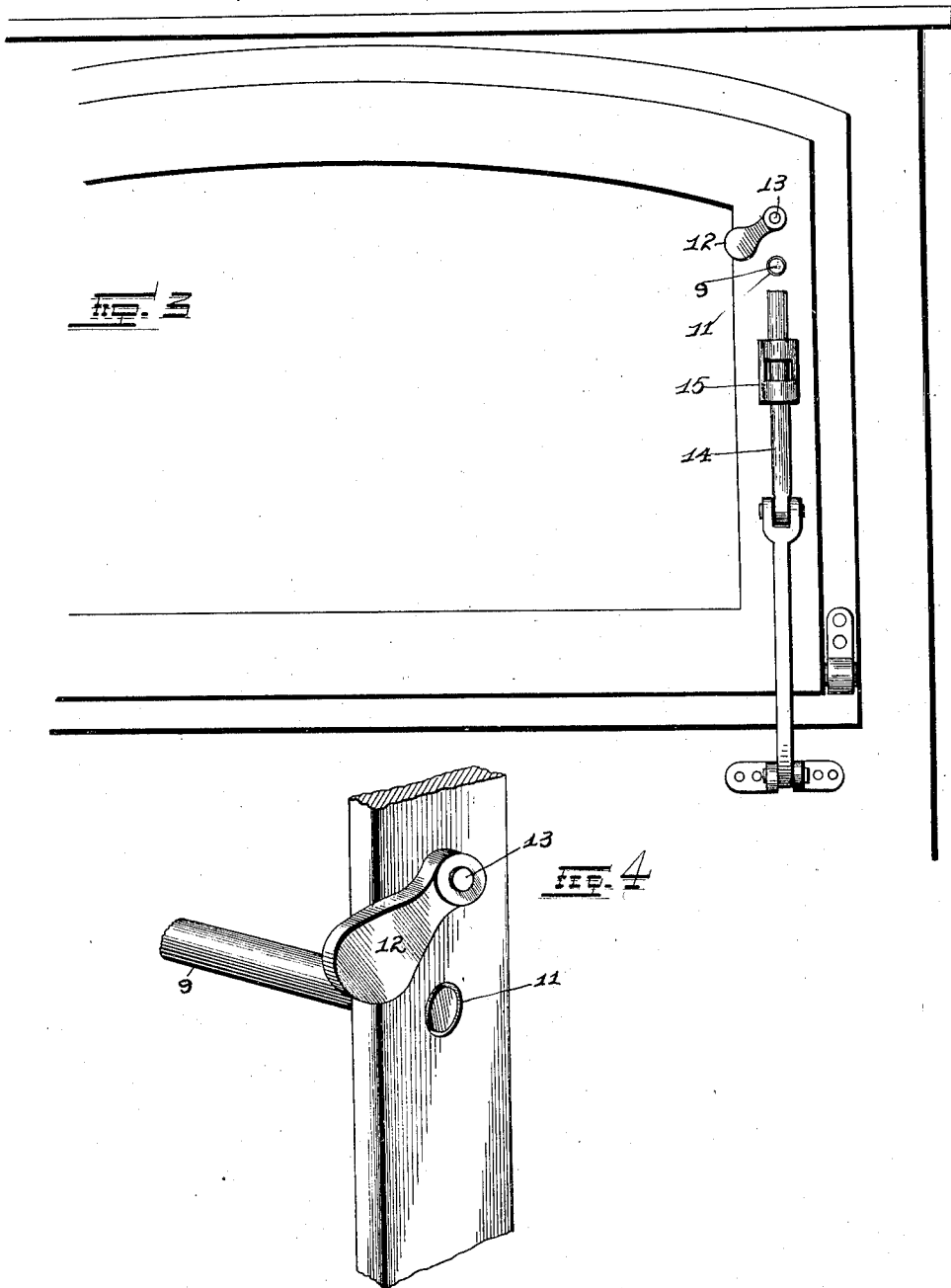
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UNITED STATES PATENT OFFICE.

WALTER L. CULVER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE WROUGHT
IRON RANGE COMPANY, OF SAME PLACE.

VENTILATOR FOR OVENS.

SPECIFICATION forming part of Letters Patent No. 655,761, dated August 14, 1900.

Application filed February 5, 1900. Serial No. 4,089. (No model.)

To all whom it may concern:

Be it known that I, WALTER L. CULVER, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Ventilators for Ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part hereof.

This invention relates to ventilators for ovens; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of this invention is to provide a ventilator in ovens having a means whereby the said ventilator may be opened or closed from without the oven and without opening the oven-door. By such a construction the necessity of opening the oven-door whenever it is desired to regulate the ventilator is obviated and all unpleasant results incident to such an operation are avoided.

In the drawings, Figure 1 is a sectional view of an oven, showing my improved ventilator in use. Fig. 2 is a sectional view taken on the line *a a* of Fig. 1. Fig. 3 is a front view of a portion of an oven in which my improved ventilator is used. Fig. 4 is a view in perspective of a part of the oven-door and shows the means which I employ for regulating the ventilator exteriorly of the oven.

In the construction of the invention I secure the apertured plate 1 rigidly to the inner face of the oven-wall in such manner that the apertures 2 through the said plate register with similar apertures 3 in the oven-wall. On the inner face of the said plate is a suitable annular seat 4, pivotally secured within which is a disk 5, having apertures 6 equal in size to the apertures 2 3. The pieces 7 between the apertures 6 are of a size equal to the size of the said apertures, and when placed before the apertures 2 3 effectually close them, the movement of the piece 7 being limited by the usual stop *m* on one of the pieces and the stops *m'* on the plate 1.

Integral with or suitably secured to one of the pieces 7 is a weight 8, the purpose of which is to draw the pieces 7 away from the apertures 2, or, in other words, to hold the ventilator open. In order to close the ventilator, it is necessary to retain the disk 5

out of its open position under influence of weight 8 and to bring the pieces 7 over the apertures 2 3. I provide a means for so doing, comprising the rod 9 pivotally secured to one of the pieces 7, the free end of said rod being supported in a guide 10, beyond which it projects a suitable distance and extends through an aperture 11 in the oven-door, and through which aperture the said rod is free to operate. The said rod is of such length that when pushed inwardly until its outer end is even with the outer surface of the oven-door the pieces 7 are over the apertures 2 3 and the ventilator is entirely closed. The rod and ventilator may be held in this adjustment by the curtain 12, pivotally secured to the oven-door, and the normal position of which would be over the aperture 11, and when so placed the outer end of the rod 9 contacts therewith and holds the ventilator in a closed position. The said curtain 12, however, is retained by the pin 13 in such manner that when placed in any position it will remain there, its weight not being sufficient to draw it out of the desired adjustment. The curtain 12 acts as an abutment for the end of rod 9 to turn the ventilator, so as to close the same—that is, so that the pieces 7 will overlies the openings 2 and 3 in the oven-wall.

It may be readily seen that the oven-door is free to open at any time and in whatever adjustment the ventilator may be. When this is done, the sliding bracket 14 used in connection with the oven-door slides upwardly in the guide 15 and contacts with the lower end of the curtain 12 and pushes the same laterally, when the said curtain is in a position over the aperture 11, and because of the manner in which it is mounted on the pin 13 the said curtain will retain the lateral adjustment. As soon as the door is opened the weight 8 draws the ventilator around and opens the same, and when the door is again closed, the curtain 12 being removed from over the aperture 11, the rod 9 projects through the said aperture and the ventilator remains open until the rod is again pushed inwardly, Fig. 1.

It is desirable that the ventilator shall open when the oven-door opens in order to provide

for the escape of the heated air, which would otherwise come into the operator's face, be inconvenient, and perhaps cause injury. It is also desirable that the curtain 12 be moved from over the opening 11 in the oven-door when the latter is open, for the reason that otherwise on closing the oven-door the curtain will be forcibly struck by the rod 9 and eventually broken.

10 It will be noticed that the pivotal point of the sliding bracket is not on the same center as the pivotal connection of the door with the opening, but is to one side of such pivotal connection. Therefore when the door opens and closes the bracket, by this eccentric action of the pivot of the bracket with respect to that of the door, causes the bracket to move toward and from the opening 11 across the front of the oven-door.

20 A ventilator constructed in accordance with the above principles possesses superior advantages over those of ordinary construction in that it may be opened and closed without opening the oven-door and allowing the fumes from the oven to escape into the room. By this improved construction the ventilator may be regulated by operating the rod 9 and all the above-mentioned inconveniences are obviated. In these and other respects the device possesses superior advantages over those of ordinary construction, and it is simple, convenient, and easily operated.

I claim—

1. In an oven, a ventilator comprising an apertured plate, the apertures of which register with similar apertures in the oven-wall, an apertured disk pivotally secured to the front face of the plate, a rod pivotally secured to said disk for adjusting the same, and means for holding the rod in position to maintain the ventilator closed, said means being carried by the oven-door and adapted to permit the ventilator to be operated when the oven-door is closed.

2. In an oven, a ventilator comprising an apertured plate, having an annular valve-seat on its outer face, an apertured disk pivotally secured within said valve-seat, a weight

integral with one side of said disk which normally holds the ventilator open, a rod pivotally secured to the said disk, the free end of which rod projects through an aperture in the oven-door, and a curtain pivotally secured to the said door for holding the said rod inwardly, thereby closing the ventilator, substantially as specified.

3. In an oven, a ventilator, comprising an apertured plate, the apertures of which register with like apertures in the oven-wall, an apertured disk pivotally secured to the said plate, a weight integral with said disk whereby the ventilator is held in open position, a rod pivotally secured to said disk for adjusting the same, a door for said oven adapted to move said rod endwise to close the ventilator as the oven-door is moved to closed position, said door carrying a curtain or stop to permit the ventilator to be moved to its open position by the action of the weight while the oven-door remains closed, substantially as specified.

4. The combination with an oven provided with a door, of a ventilator secured to a wall of said oven, means carried by said ventilator adapted to be actuated by the closing of the door for closing said ventilator and actuated when the door is opened by gravity for opening said ventilator, and a stop on the door for holding the ventilator closed, substantially as specified.

5. The combination with an oven provided with a door with an aperture formed therein, of a ventilator secured to one wall of said oven, an actuating-rod carried by said ventilator and projecting through the aperture in said door, a curtain adapted to cover said aperture, whereby said ventilator may be opened when the door is closed, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER L. CULVER.

Witnesses:

JOHN C. HIGDON,
JOHN D. RIPPEY.