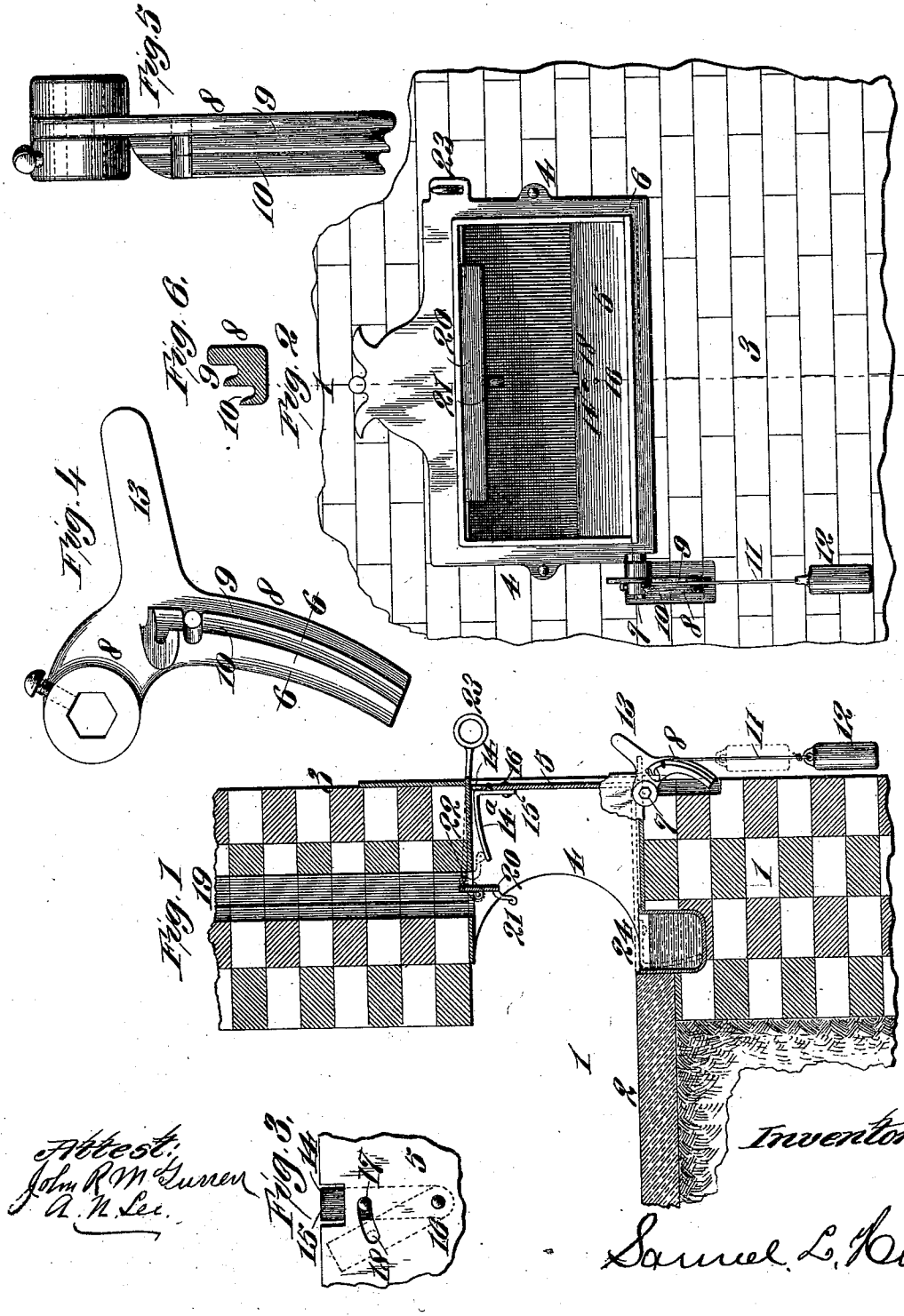
(No Model.)

S. L. HALL.

BAKER'S OVEN.

No. 549,718. Patented Nov. 12, 1895.



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BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 549,718, dated November 12, 1895.

Application filed July 18, 1895. Serial No. 556,366. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL L. HALL, a citizen of the United States, residing at the city of Chicago, county of Cook, and State of Illinois, have invented certain Improvements in Bakers' Ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to improvements in bakers' ovens of any form of construction, and more particularly to the mechanism employed to control access to the interior and means whereby the gases generated within the baking-chamber may escape and means whereby moisture may be imparted to the heated air within the baking-chamber.

In the accompanying drawings, Figure 1 is a vertical longitudinal section on line 1 1 of Fig. 2. Fig. 2 is a detail elevation of the oven, showing the cam and balance-weights, the oven-door being partially elevated. Fig. 3 is a detail elevation of the top center of the oven-door. Fig. 4 is a detail side elevation of the balancing-cam. Fig. 5 is a front elevation of Fig. 4. Fig. 6 is a cross-section on line 6 6 of Fig. 4.

1 is the baking-chamber, 2 the hearth, and 3 the front wall.

4 is a frame of the configuration of the oven-mouth, in which is pivoted at the lower front side the door 5, having the journal 6 at one end and 7 at the other, to which is secured the stepped cam 8, having grooves 9 10, in which rests the cord 11, one end secured to the upper end of the cam and the other secured to the balance-weight 12. Secured to and forming part of the cam are the handles 13, by which means the cam is operated by hand in either direction.

14 is an opening in the center or approximating the center of the upper edge of the oven-door. Upon the inside of the door and in line with the opening 14 is a switch-bar 15, pivoted at 16 and having an operating-pin 17 traversing in the slot 18 in the door 5, the purpose of this switch-bar being to operate a damper.

19 is a flue communicating at one end with the usual exit-flue from the furnaces of the oven, the other end opening into the throat to the oven.

20 is a damper pivoted at its ends in the oven-mouth frame, the normal position being shown in Fig. 1, such position being maintained by the overbalancing of the damper, as one side is longer than the other.

21 is a projection on one side of and extending beneath the damper, its purpose being to engage the extension 14^a on the switch 14 to close and maintain closed the damper at the time the door is closed and allow the damper to open when the oven-door is open, at which time the gases from the baking-chamber will escape through the flue 19 instead of into the room surrounding the oven.

22 is a crank secured to the shaft of damper 20 at one end, to which is loosely connected the rod 23, projecting forward and out through the draft-wall of the oven, by which the damper may be opened a limited distance when the oven-door is closed or to manipulate the damper when the oven-door is open. I show this arrangement merely as a precautionary measure, but do not consider it essential.

24 is a water-receptacle built in the oven-mouth, the contents of which are evaporated by the heat from the oven, the vapor from which passes into the baking-chamber giving moisture to the gases contained therein. When the door to the oven is open for the insertion of goods into the baking-chamber, it covers the water-receptacle, by which operation goods cannot fall into the receptacle.

Having thus described the construction, the operation of the several parts is as follows: The door 5 being in the position as shown in Fig. 1, the baker's peel, carrying the goods, is placed against the door, when the same will recede, and raising the weight carried by the cam the door will fall to the position shown by dotted lines, Fig. 1, covering the water-receptacle and falling to a line with the hearth. The extension 14^a on the switch 14 will then pass from beneath the projection 21 on the damper 20, allowing the same to open, when such gases as may be in the oven-mouth will escape to the atmosphere through the flue 19. When the peel is removed, the door will again assume an upright position. During such movement the switch will encounter the projection 21, close the damper 20, and maintain it in that position until the door is again opened, or until manipulated by the crank-

and-rod connection. The damper 20 may remain permanently in the position shown in Fig. 1 by merely shifting the switch to one side, as shown in Fig. 3, when the extension on the switch will be out of line with the projection 21 on the damper 20. The purpose of the steps on the cam are to compensate for the difference in weight between the door 5 and balance-weight 12 or to balance the door opened or closed, whichever may de desired.

The well 19 is so arranged that when the door 5 is down or the oven-mouth open it shall be closed and prevent anything falling into it either from the baker's peel or drawn into it from the baking-chamber.

Having thus described my invention, what I wish to claim is—

1. In a baker's oven having a frame, in which is journaled a door, at the lower corners of the frame, to one of the shafts of the said door, is secured a stepped cam, to the smaller diameter of said cam is secured an operating cord, said cord following the line of one of the steps of said cam, and to the opposite end of said cord is secured a balance weight.

2. In a baker's oven having a frame in which is located a water well or receptacle, adapted to be opened and closed by the door to the oven, for the purpose described.

3. In a baker's oven a gas flue and damper for same, arranged to be operated by the movement of the door to the oven mouth, to open or close the same, for the purpose described.

4. In a baker's oven a pivoted door to the oven mouth, provided with a switch to operate a damper arranged to close a communication to a gas flue, for the purpose described.

5. In a baker's oven a pivoted door arranged to operate a damper to open or close a communication to a gas flue, and means whereby said damper to gas flue may be manipulated independent of the pivoted door, for the purpose described.

6. In a baker's oven having a door provided with a pivoted switch, a gas flue having a damper located and arranged to be operated by the switch on the oven door, for the purpose described.

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Witnesses:
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