

No. 730,681.

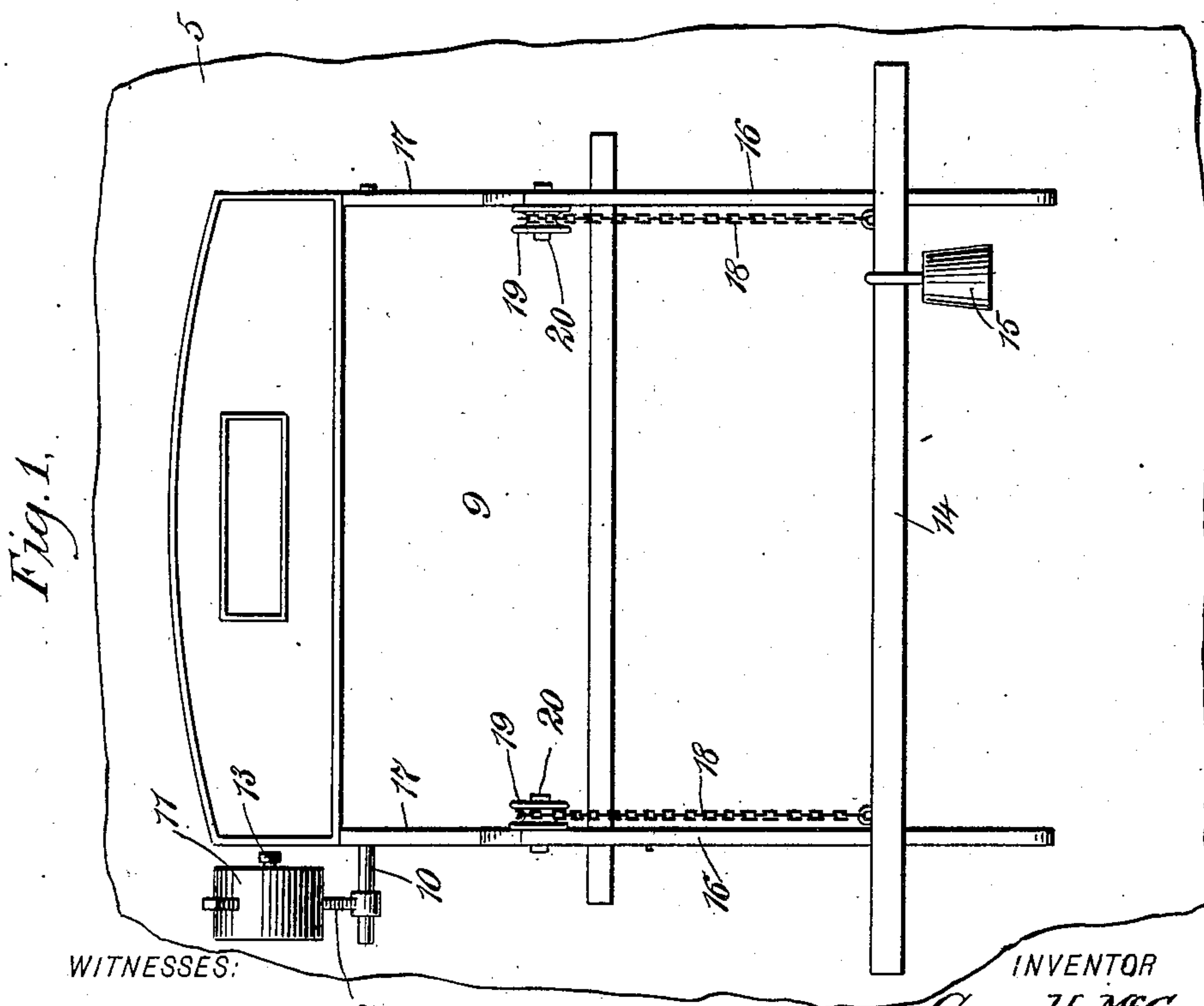
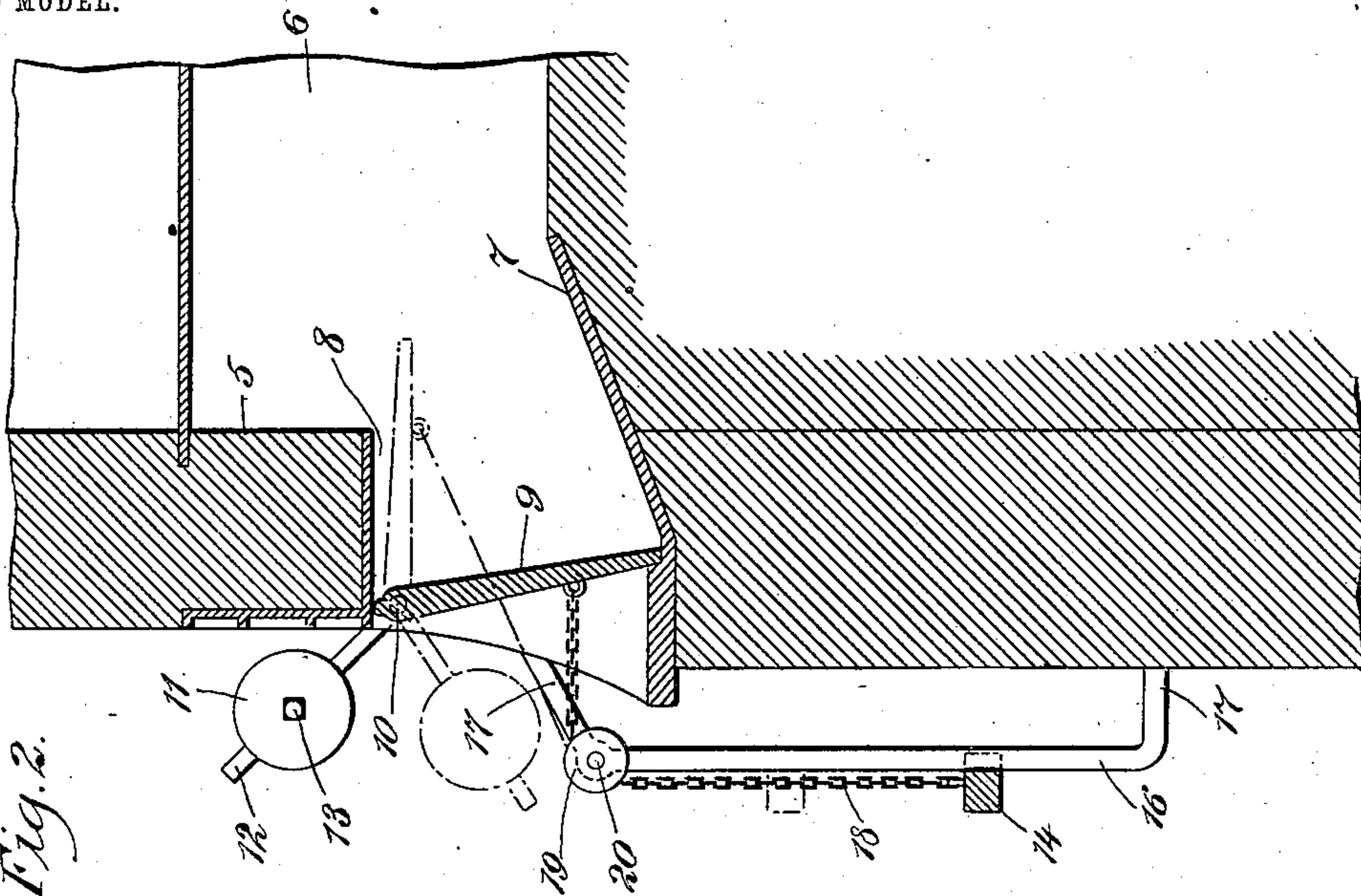
PATENTED JUNE 9, 1903.

G. H. McCAUSLAND.

BAKER'S OVEN.

APPLICATION FILED JUNE 3, 1902.

NO MODEL.



WITNESSES:

Edward Thorpe. 12
A. J. Bernhard

INVENTOR

George H. McCausland

BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE HENDERSON McCAUSLAND, OF PHILADELPHIA, PENNSYLVANIA.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 730,681, dated June 9, 1903.

Application filed June 3, 1902. Serial No. 110,070. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HENDERSON McCAUSLAND, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Baker's Oven, of which the following is a full, clear, and exact description.

My invention relates to improvements in bakers' ovens; and the object that I have in view is the provision of simple and cheap means by which the oven-door may be quickly opened when it is desired to introduce or remove loaves of bread or the like into or from the oven-chamber, the door being closed in a similar manner in order to confine the heat in said oven-chamber, the whole operation being done more quickly with less labor and with less loss of the heat than by the common method, which requires the door to be operated by hand.

With these ends in view the invention consists in the construction, combination, and arrangement of parts, which will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a part of a baker's oven equipped with door-operating means embodying my invention, the door being shown in its closed position; and Fig. 2 is a vertical transverse central sectional elevation through the front part of the oven and the door, together with its operating mechanism, the door being shown in its closed position by full lines and in an open position by dotted lines.

5 designates a portion of the front of a baker's oven; 6, a part of the oven-chamber; 7, the sole or hearth of said oven-chamber, and 8 the door-opening in the front wall of the oven. All these parts are similar to those of ordinary bakers' ovens, and it will be understood that no novelty therefor is claimed herein.

In the door-opening 8 is arranged the door 9, and this door is mounted on or is attached to a horizontal rock-shaft 10, the latter having suitable bearings in the framework surrounding the door-opening 8. This rock-shaft

is preferably arranged at the upper part of the door-opening, and one end of said shaft is extended or prolonged outside of the oven-wall and the door-framework, said extended end of the rock-shaft being shown by Fig. 1.

A counterpoise 11 is secured adjustably to an arm 12 by means of a clamping-screw 13, and the counterpoise-carrying arm 12 is firmly secured to the extended end of the rock-shaft 10, whereby the counterpoise is adapted to quickly turn the shaft and open the oven-door, as will hereinafter more fully appear. The inertia of the counterpoise 11 is normally counterbalanced by the provision of a peel-rod 14, which is operatively connected with the pivoted door 9 and is adapted to be weighted either by placing the baker's peel on the rod or by suspending a weight thereon, as shown by Fig. 1. This peel-rod is arranged in a horizontal position across the front wall of the oven and below the door 9 and the opening 8. In order to keep the peel-rod in the proper horizontal position and allow it to move freely in a vertical direction on the opening and closing of the door, I employ suitable guides, to which the peel-rod is slidably fitted. These guides are shown in the drawings in the form of vertical rods 16, which are provided with inwardly-extending arms 17, and these rods are disposed in vertical parallel positions on the front wall 5. The rods preferably lie at the end portions of the door-opening 8, and said rods are secured firmly to the oven-wall 5 by embedding the arms 17 therein, although said arms may be fastened to the oven-wall in any desired way.

The peel-rod 14 may be perforated or notched, so as to loosely fit on the guide-rods 16, and to this peel-rod are secured the lower ends of chains or cables 18, the latter being disposed, preferably, within the guide-rods and passing upwardly from the peel-rod to and over the guide sheaves or rollers 19. The upper ends of the chains or cables 18 are carried inwardly and attached to the counterbalanced pivoted door 9, and these chains or cables serve to operatively connect the door and the peel-rod, so that the latter will move upwardly when the door is pressed inwardly to an open position. The sheaves or rollers 19 may be mounted on the front of the oven

by any suitable means; but, as shown by the drawings, I prefer to loosely support these sheaves on the arbors or spindles 20, which are fastened to the upper portions of the guide-rods 16, thus locating the sheaves or rollers at a point between the pivoted door and the peel-rod. The weight of the peel-rod and the chains is not sufficient to overcome the inertia of the counterpoise 11, and this counterpoise is adapted to quickly turn the shaft and open the oven-door when a suitable weight is removed from the peel-rod, whereby the opening of the door will lift the peel-rod to the dotted-line position shown in Fig. 2, and the door will be kept in the open position, also indicated by dotted lines in Fig. 2. Ordinarily, however, the peel-rod is pressed downwardly, and the door is closed by placing the baker's peel on the rod 14; but if it is desired to use the peel the balance-weight 15 should be suspended from the rod 14, as shown in Fig. 1. When it is desired to introduce loaves of bread into the oven, the baker removes the peel from the vertical slidable rod 14, and the weight 15 thus becomes active in opening the door 9 and raising the chains and the peel-rod. The peel may be loaded with loaves of dough and thrust into the oven-chamber 6. The dough may be removed from the peel in the usual way, and the said peel may then be manipulated to remove the baked loaves from the oven-chamber, after which the baked loaves are discharged from the peel and the latter is again placed on or suspended from the peel-rod, whereby the weight of the peel added to the weight of the rod and the chains overcomes the counterpoise 11, and the oven-door 9 is quickly lowered to the closed position. (Shown by full lines in the drawings.)

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination with a baker's oven-door, of a shaft on which said door is hung, a counterbalance-weight carried by said shaft, and a rest having connection to said shaft and adapted to receive a baker's peel.

2. The combination with a baker's oven-door, of a shaft on which the door is hung, a weight-carrying arm connected to said shaft, a counterbalance-weight carried by said arm, a vertically-movable peel-rest, and means connecting said rest to said shaft.

3. The combination with a counterpoised oven-door, of a vertically-movable peel-rod, and connections between said door and the peel-rod for closing the door by imposing weight on said peel-rod.

4. In a baker's oven, the combination of an oven-door having a counterpoise which tends to normally move the door to the open position, a peel-rod disposed below the door and having flexible connections therewith, and means for guiding the peel-rod in a vertical path below said door.

5. In a baker's oven, the combination of a pivoted oven-door having a counterpoise which tends to normally move the door to the open position, upright guides depending below said door, a horizontal peel-rod slidably fitted to the guides, chains or cables attached to the peel-rod and pivoted door, and suitable guides for directing the chains or cables.

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

GEORGE HENDERSON MCCAUSLAND.

Witnesses:

J. C. FOWLER,
T. J. PARROTT.