

J. ERSKINE.
HEATING APPARATUS.

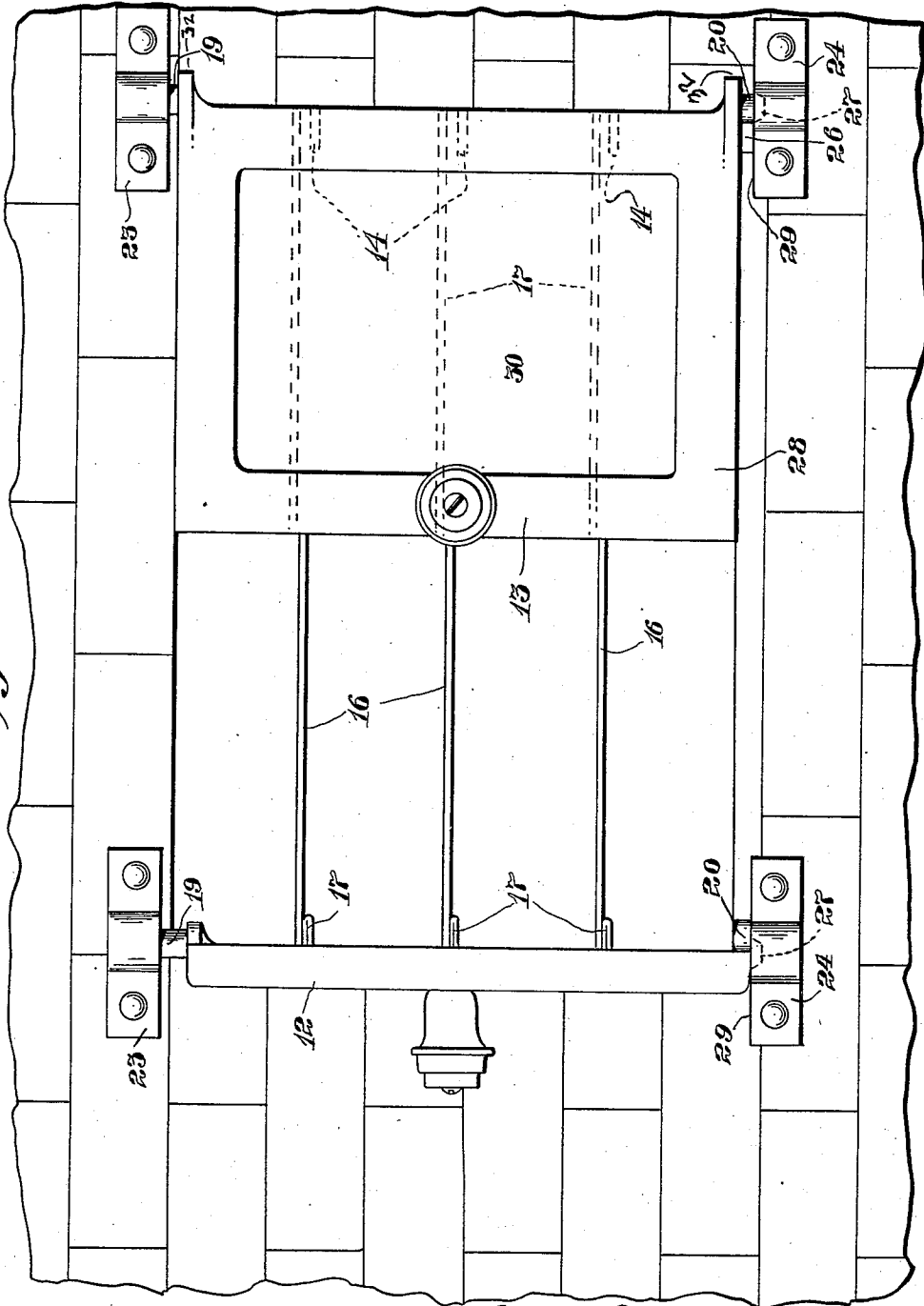
APPLICATION FILED JULY 27, 1912.

1,060,975.

Patented May 6, 1913.

2 SHEETS-SHEET 1.

Fig. 1.



Attest:
W. M. H. H. H.
Rudolf H. H. H.

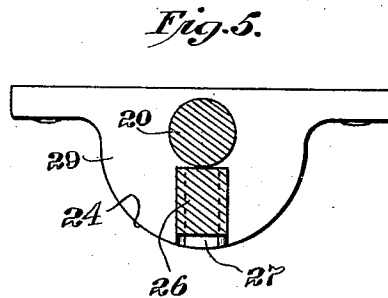
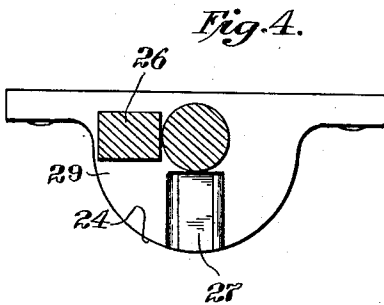
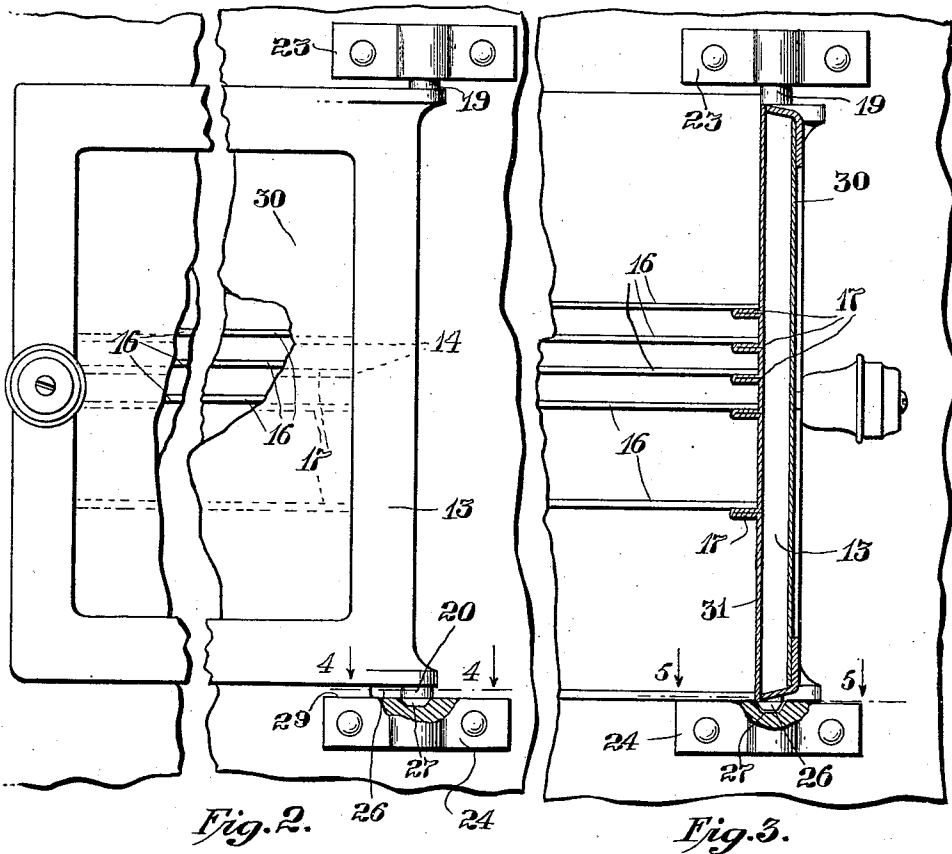
James Erskine Inventor:
by *Jos. H. Freeman* Atty

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Rudolf Hasbrouck

James Erskine Inventor:
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UNITED STATES PATENT OFFICE.

JAMES ERSKINE, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO WILLIAM M. CRANE COMPANY, A CORPORATION OF NEW YORK.

HEATING APPARATUS.

1,060,975.

Specification of Letters Patent.

Patented May 6, 1913.

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To all whom it may concern:

Be it known that I, JAMES ERSKINE, a citizen of the United States, and a resident of Jersey City, Hudson county, State of New Jersey, have invented certain new and useful Improvements in Heating Apparatus, of which the following is a specification.

The invention relates to heating apparatus, and is more particularly applicable to ovens and doors therefor.

Objects of the invention are to provide an oven of such construction that the materials being cooked can be easily handled, while cooking, and at the same time such construction shall be simple, cheap, and efficient. These and other objects of the invention will in part be obvious and in part fully explained in the following description.

The invention consists in the novel improvements, parts, combinations, and features of construction herein shown and described.

In the accompanying drawings is illustrated an embodiment of the invention, the same serving in connection with the description herein to explain the principles of the invention.

Of the drawings: Figure 1 is a front view of an embodiment of the invention in which an oven is shown with a pair of doors, one in open position and the other closed; Fig. 2 is a front view of a portion of an oven having a door closed, parts being broken away; Fig. 3 is a similar view, showing the door in open position; Fig. 4 is a plan view of a detail, taken on the line 4—4 of Fig. 2 and showing a certain part in one position; and Fig. 5 is a similar view, taken on the line 5—5 of Fig. 3 and showing the part in another position.

A heating apparatus constructed in accordance with certain features of the invention comprises in combination, an oven having racks arranged on each of its inner sides, and a door having racks thereon arranged to register with racks in the oven when said door is in open position, and said door being mounted to throw its racks out of said register when the door is in closed position.

In accordance with certain other features

of the invention, the oven is provided with a pair of doors, and each door has racks thereon arranged each above a corresponding rack in the oven when the door is in closed position, and said door being mounted to drop when in open position whereby its racks are brought into register with racks in the oven.

Certain other features of the invention consist in providing each door with an outer panel, and an inner lining on which the racks are arranged, and spacing the panel and lining apart so as to provide an insulating air space or chamber, whereby the efficiency of the oven is increased.

Referring now in detail to the drawings, the embodiment of the invention illustrated comprises an oven provided, preferably, with a pair of doors 12 and 13 which are mounted on the casing forming the oven in a manner presently to be described.

A feature of the invention consists in the provision of means whereby the material being treated, as the food being cooked, may be conveniently and safely withdrawn from the oven, as for observation, while in the process of heating or cooking. To this end, therefore, preferably and as shown, racks 14 are fastened preferably on both of the inner sides of the oven in suitable positions and in desired numbers. Upon these racks are slidably mounted supports 16 for the vessels containing the material to be treated, as the food to be cooked. It will be noted that if a vessel containing cooking food, for example, is pulled outwardly for observation of its contents, it must be supported while in such withdrawn position, and to support it by hand is an inconvenient method often attended with liability to injury both of the vessel and its contents and of the person handling the same.

In the preferred embodiment of the invention illustrated, therefore, the doors 12 and 13 are provided with racks 17 so arranged on the inner faces of the doors that when the doors are open and at right angles to the casing of the oven, as shown in Figs. 1 and 3, said racks 17 will register with the racks 14 fastened to the inner sides of the

oven. As the racks 17 extend suitable distances along the inner faces of the doors, as shown the entire distance across each door, the vessel containing the cooking food may be drawn out upon the racks 17 any desired distance and be supported in such position by said racks 17. It will be noted, however, that as the racks 17 extend entirely across the faces upon which they are mounted and the racks 14 upon the sides of the oven extend out to the edge of the casing, and as the racks 14 and racks 17 register, when the doors are at right angles to the oven, in order that the doors may be closed means must be provided for bringing said racks 14 and 17 out of register so that the doors may be closed. Preferably and as shown, the door 13, for example, is mounted by means of pins 19, 20 in recesses formed in the lugs 23, 24 suitably fastened to the face of the casing. The door is so hung by means of the said pins and recesses than when in the closed position, as shown in Figs. 1 and 2, the racks 17 upon the door are out of register with the racks 14 of the oven and the inner ends of the racks 17 extend over the outer ends of said racks 14. Means are provided for bringing the door into such position vertically, when it is brought into position at right angles to the casing of the oven, that the racks 17 will register with the racks 14, as heretofore explained.

Preferably and as shown, to the under side of the door 13 a cam 26 is fastened, which cam, when the door is closed, fits into a recess 27 in the lug 24, see Fig. 5, and, as the door is closed, the cam 26 is gradually drawn up out of the recess 27 and rests upon the face 29 of the lug 24, see Fig. 4, these movements of the cam 26 slipping into and being drawn out of the recess being facilitated by the beveled sides of said cam and recess. The other door 12 is similarly mounted upon the casing and is provided with similar racks, which also register with the racks on its side of the oven. Preferably, also, the upper and lower ends 32 of each door are so shaped and proportioned that they will abut against the casing and thus stop further movement of the door, when the door is brought to a position at right angles to the casing and oven, the racks 14 and 17 being at this time in register.

To promote the heating efficiency of the oven each door, preferably and as shown, is formed of a frame part 28 in which is set a front panel 30 and to which a lining 31 is attached, the racks 17 being attached to said lining. Between the lining and the front panel is an air space forming an insulating chamber to prevent the escape of heat from the oven.

It will be seen that an oven constructed in accordance with the invention carries out the

objects of the invention, as heretofore referred to, and possesses advantages besides those noted, all which will be apparent to those skilled in the art.

The invention in its broader aspects is not limited to the precise construction shown and described, as many changes may be made in the details thereof without departing from the main principles of the invention or sacrificing its chief advantages.

I claim:

1. The combination of an oven having racks arranged on opposite inner sides, and a door having racks thereon arranged to register with racks in the oven, when said door is in open position, and said door being mounted to throw its racks out of said register when the door is brought into closed position.

2. The combination of an oven having racks arranged on opposite inner sides, and a door having racks thereon arranged each above a corresponding rack in the oven when the door is in closed position, and said door being mounted to drop when brought into open position, whereby its racks are brought into register with racks in the oven.

3. The combination of an oven having racks arranged on opposite inner sides, and a pair of doors, each door having racks thereon arranged to register with racks on a side of the oven when said door is in open position, and each said door being mounted to throw its racks out of register when the said door is brought into closed position.

4. The combination of an oven having racks arranged on opposite inner sides, and a door comprising an outer panel and a lining spaced apart to form an insulating chamber and said door having racks thereon arranged to register with racks in the oven when said door is in open position, and said door being mounted to throw its racks out of said register when the door is in closed position.

5. The combination of an oven having racks arranged on opposite inner sides, and a pair of doors, each door comprising an outer panel and a lining spaced apart to form an insulating chamber and having racks arranged on said lining to register with racks on a side of the oven when said door is in open position and each said door being mounted to throw its racks out of said register when the door is brought into closed position.

6. The combination of an oven having racks arranged on an inner side, and a door having racks thereon arranged to register with racks in the oven when said door is in open position, and said door being mounted to throw its racks out of said register when the door is brought into closed position.

7. The combination of an oven having

- racks arranged on an inner side, and a door having racks thereon arranged to register with racks in the oven when said door is in open position, said door being mounted to throw its racks out of said register when the door is brought into closed position, and means for preventing the open movement of the door beyond a position at right angles with the casing.
- 5 8. The combination of an oven having racks arranged on opposite inner sides, a door having racks thereon arranged to register with racks in the oven when said door is in open position, and means for throwing said racks out of register when the door is brought into closed position. 15
- In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JAMES ERSKINE.

Witnesses:

RICHARD L. BOGART,

EUGENE M. CHAPMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."