

No. 872,144

PATENTED NOV. 26, 1907.

M. NUSSER.
OVEN.

APPLICATION FILED JULY 22, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

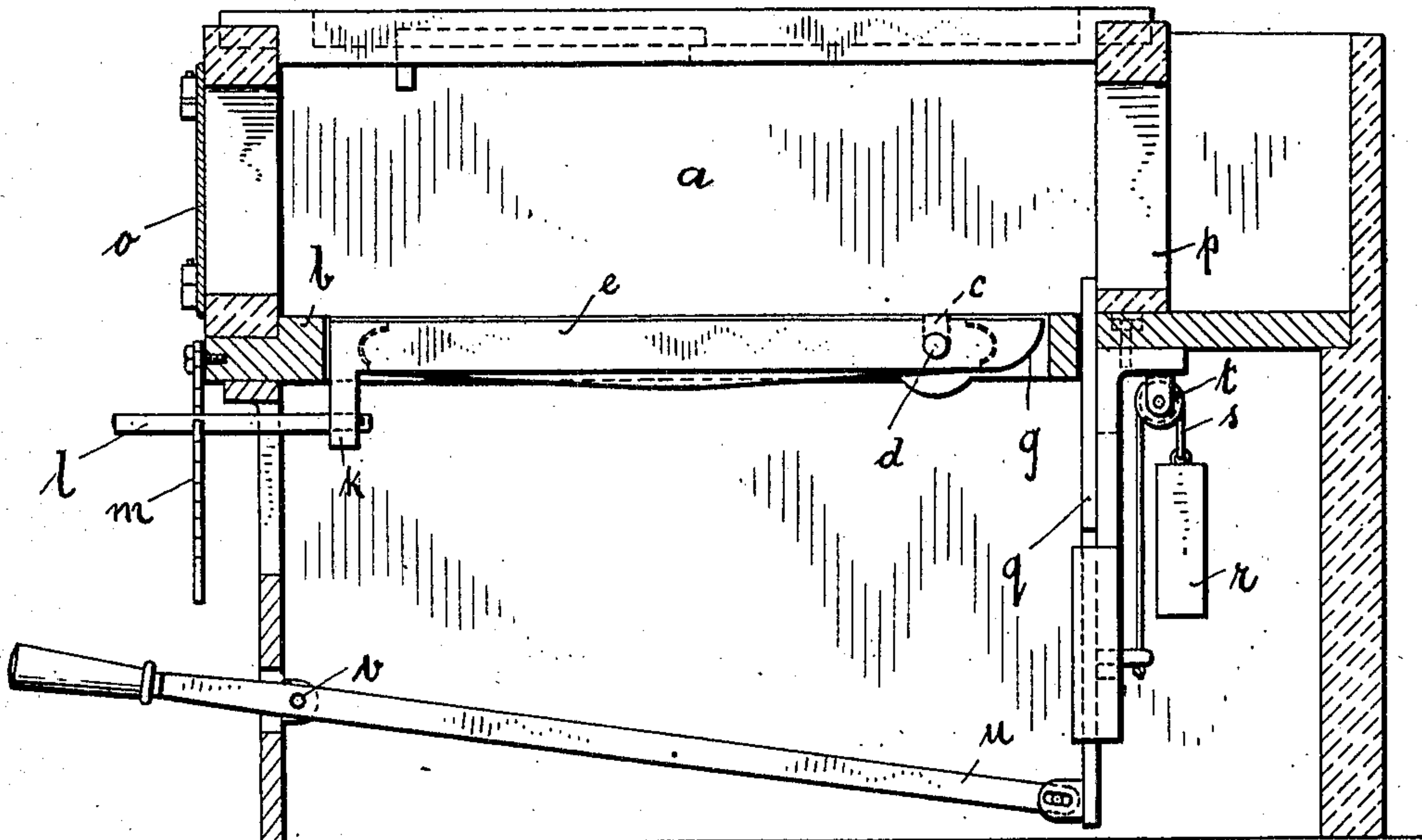
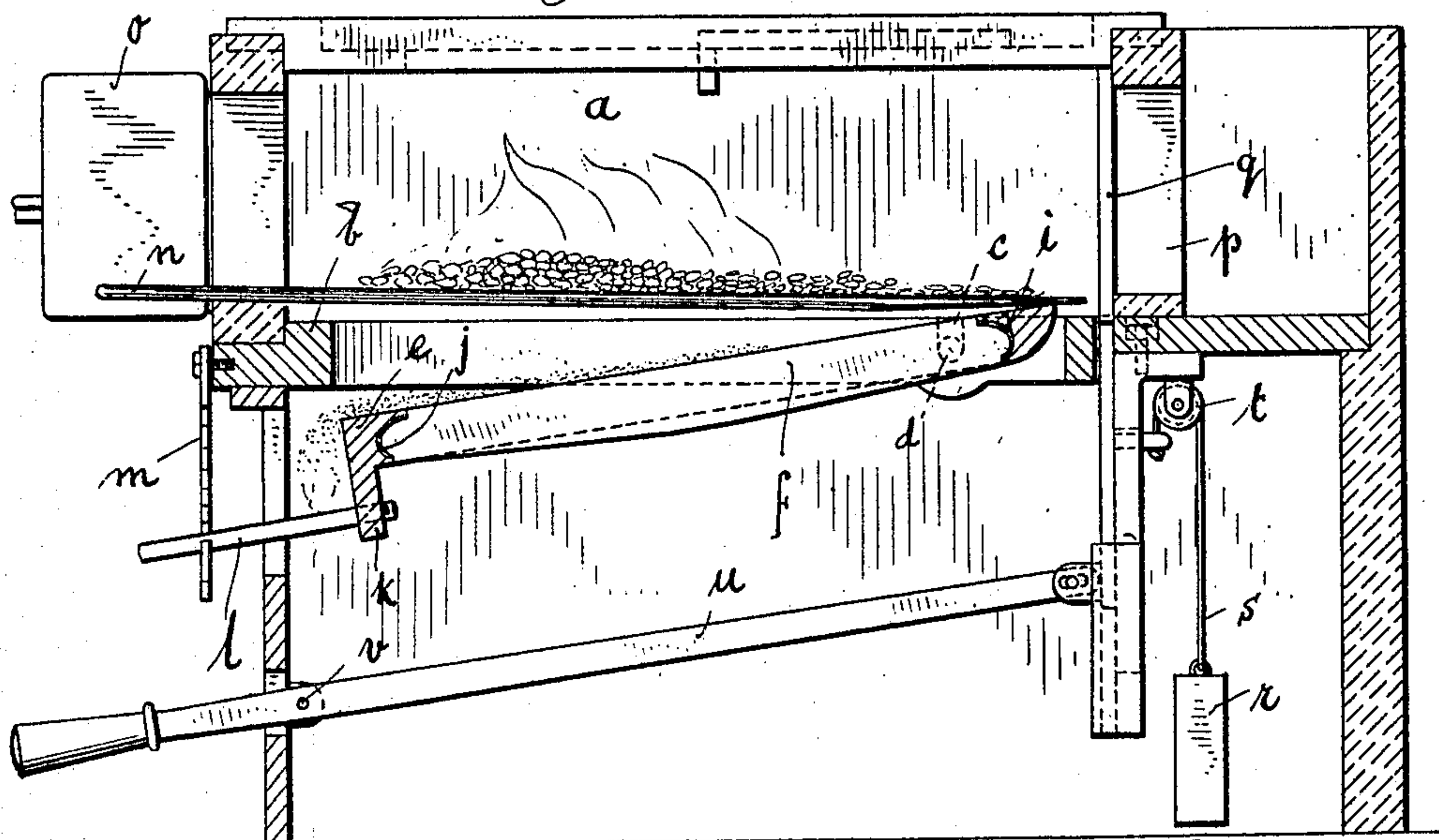


Fig. 2.



Witnesses
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Joseph Wey

Inventor
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2 SHEETS—SHEET 2.

Fig. 3.

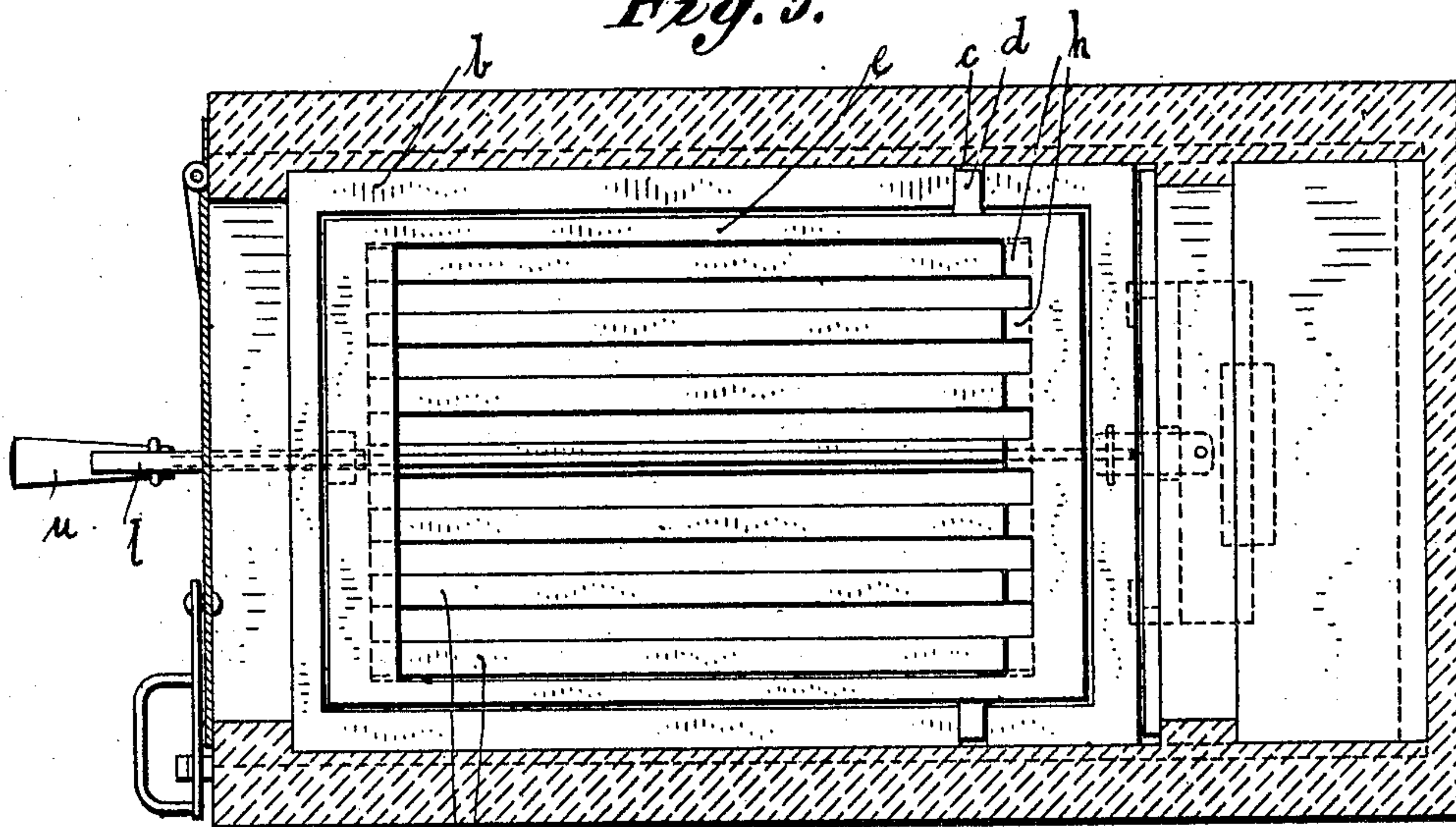
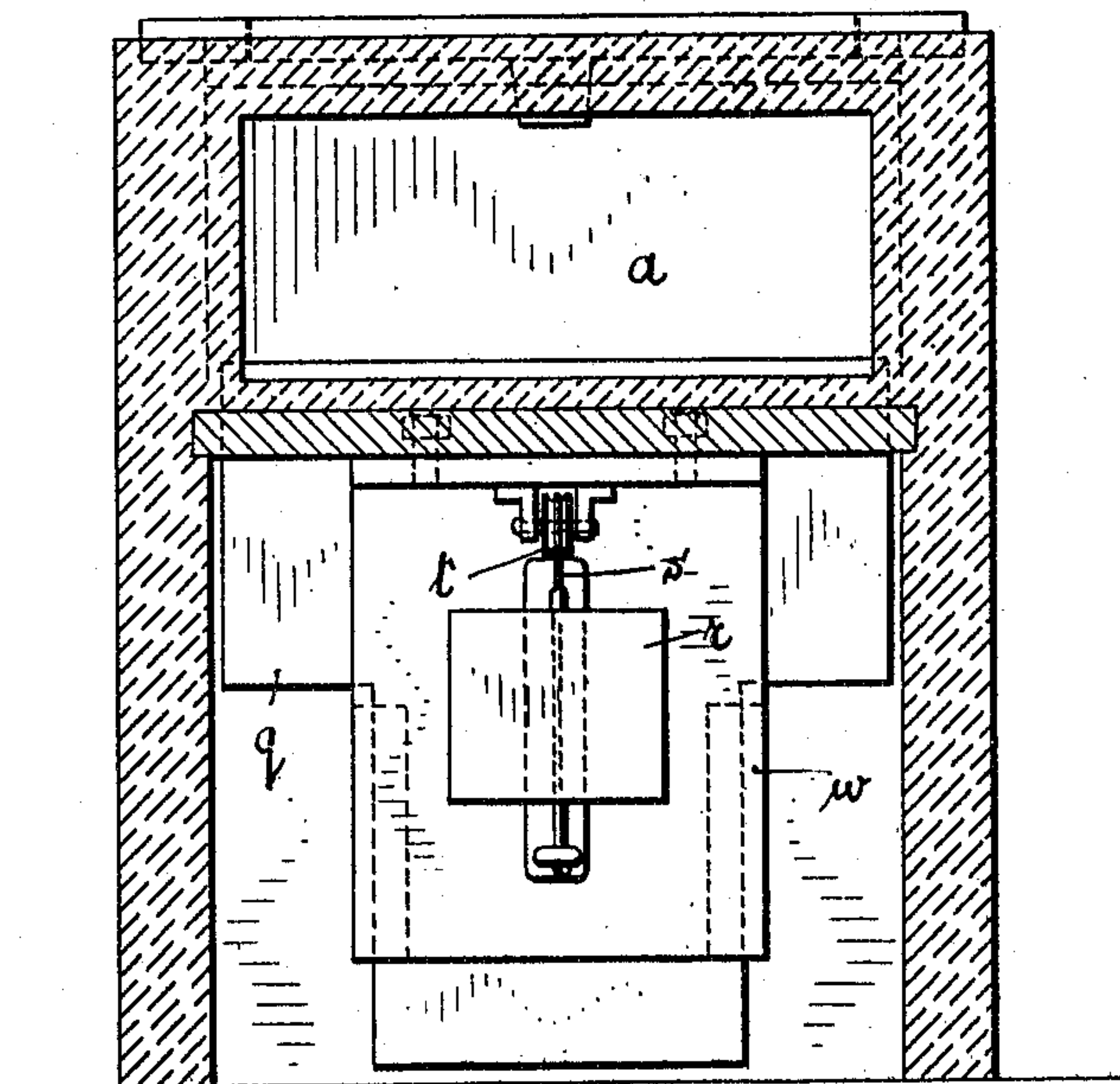


Fig. 4.



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UNITED STATES PATENT OFFICE.

MICHAEL NUSSER, OF NEW YORK, N. Y.

OVEN.

No. 872,144.

Specification of Letters Patent.

Patented Nov. 26, 1907.

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To all whom it may concern:

Be it known that I, MICHAEL NUSSER, a citizen of the United States, and a resident of New York, county of New York, State of New York, have invented certain new and useful Improvements in Ovens, of which the following is a specification.

The present invention pertains to ovens and more particularly to bakers' ovens and has for its object to provide a construction which will permit the controlling of the heat therein.

Hitherto after the desired heat in the oven has been obtained the burning coal is covered up with ashes so as to either entirely extinguish the coal or prevent the same from further heating the oven. Instead of this I provide a grate which will permit the removal of the burning coal as soon as the oven has obtained the desired heat and also the feeding thereof with fresh coal.

My invention also relates to an improvement in the construction of the grate and means whereby the fire chamber can be easily closed up against the chimney so as to preserve the heat obtained.

In order to make my invention more clear the same is illustrated in the accompanying drawing in which similar reference letters denote corresponding parts and in which

Figures 1 and 2 are longitudinal vertical sections of the oven showing the grate in different positions, Fig. 3 is a plan view of the grate and Fig. 4 is a vertical cross section of the oven.

With reference to the drawing *a* denotes the fire chamber in which a horizontal frame *b* is stationarily secured. The latter is provided at its rear end with cylindrical recesses *c* serving as bearings for pivots *d*, *d* that project laterally from the grate frame *e* proper. By virtue of these pivots the frame *e* is capable of swinging in vertical direction. The grate frame carries a plurality of grate bars *f* which in shape substantially correspond with those of an ordinary grate, but contrary to the old arrangement, these bars are removably borne in the frame *e*. For this purpose the latter has at its rear a circularly curved surface *g*. The rear inner surface of the frame *e* is provided with a corresponding number of projections *h* that are formed with curved sockets *i* for the reception of the individual grate bars *f*. The forward inner surface of the frame *e* is provided with a curved groove or socket *j* that ex-

tends throughout the entire width of the frame *e*, and that is adapted to bear the forward ends of the individual grate bars *f*. The latter can be inserted into their sockets *i* and *j* through the free spaces *i'* formed between the neighboring projections *h*.

Owing to the bars *f* being removable, it will be possible to easily repair the grate in case one or more of its bars break, instead of substituting a new grate.

From the forward cross bar of the frame *e* downwardly extends a projection or eye *k* in which a rod or arm *l* is secured, adapted to engage a notched bar or rack *m* secured to the stationary frame *b* and projecting downwards therefrom.

Normally the grate *e* is supported in horizontal position by the engagement of the rod *l* with the upper notch in the bar *m*. When, however, the desired heat in the oven is attained the grate *e* is tilted downward and the arm *l* is permitted to engage a lower notch in the rod or bar *m*. The burning coal upon the grate will thus be removed from within the fire chamber and can be dropped down by releasing the grate to swing further rearwards around its pivots *d*.

Through the door *o* of the oven a number of bars *n* may be inserted to extend above the grate bars *f* and to serve as a temporary grate upon which fresh coal may be placed for subsequently baking a new supply.

To preserve the obtained heat in the oven a suitably guided sliding door *q* is provided at the rear end of the fire chamber by means of which the opening *p* leading to the baking chamber can be closed up. This door carries a counter-weight *r* guided by means of a rope or chain *s* over a pulley *t* and is adapted to be manipulated by means of a lever *u* pivoted at *v* to the structure of the oven.

In working the apparatus the fire is built on the permanent grate bars, and when the oven is sufficiently heated, the outlet *p* at the rear of the fire chamber leading to the baking chamber, is closed up by the manipulation of the lever *u*, that as stated above, operates the sliding door *q*. The draft produced by the chimney up through the grate, and outlet *p*, will be discontinued by the closure of the door *q* which will stop the burning of the coal and prevent the same from further heating the oven. Thereupon the permanent grate bars will be tilted into the position shown in Fig. 2, and the temporary bars *n* will be introduced in the fire

chamber to support the glowing coal upon which a fresh supply of coal can be placed for a subsequent baking. By the lowering of the permanent grate, the ashes will be
5 separated from the coal, and by entirely tilting it rearwards, all ashes will be dropped down.

This construction has the advantage that the temperature of the baking chamber can be easily controlled, since, as soon as the
10 baking chamber has attained the desired heat, its communication with the fire chamber can be rapidly discontinued by the closure of the opening *p*, whereby simultaneously the burning of the coal will be stopped
15 without the necessity of covering the same with ashes as in the hitherto used bakers' ovens. Another advantage is offered by the construction of the permanent grate which
20 allows the introduction of a temporary grate, so that little time will be lost in building up the fire.

What I claim and desire to secure by Letters Patent is:

1. In an oven, the combination with a fire
25 chamber, a counterbalanced sliding door for temporarily closing the exit opening of said chamber, a vertically swinging fire grate, and means for supporting said grate in horizontal
30 position, substantially as and for the purpose set forth.

2. In an oven, the combination with a fire chamber, of a grate composed of a frame capable of swinging in vertical direction, a plurality of bars removably borne in said frame, and means for supporting the grate
35 in horizontal position, substantially as and for the purpose set forth.

3. In an oven, the combination with a fire chamber, of a grate composed of a frame pivoted therein at one end to be capable of
40 swinging in vertical direction, said frame having a plurality of curved sockets projecting from the rear of said frame and a curved groove or socket at the forward end thereof, a number of bars removably borne in
45 said sockets and forming the grate proper, a forwardly projecting rod secured to the said frame and a notched bar secured to the structure of the oven and serving for the engagement of said rod to support the frame
50 in horizontal position and to permit of it being tilted, substantially as and for the purpose set forth.

Signed at New York this 20 day of July 1907.

MICHAEL NUSSER.

Witnesses:

ROBERT STRAHL,
MAX D. ORDMANN.