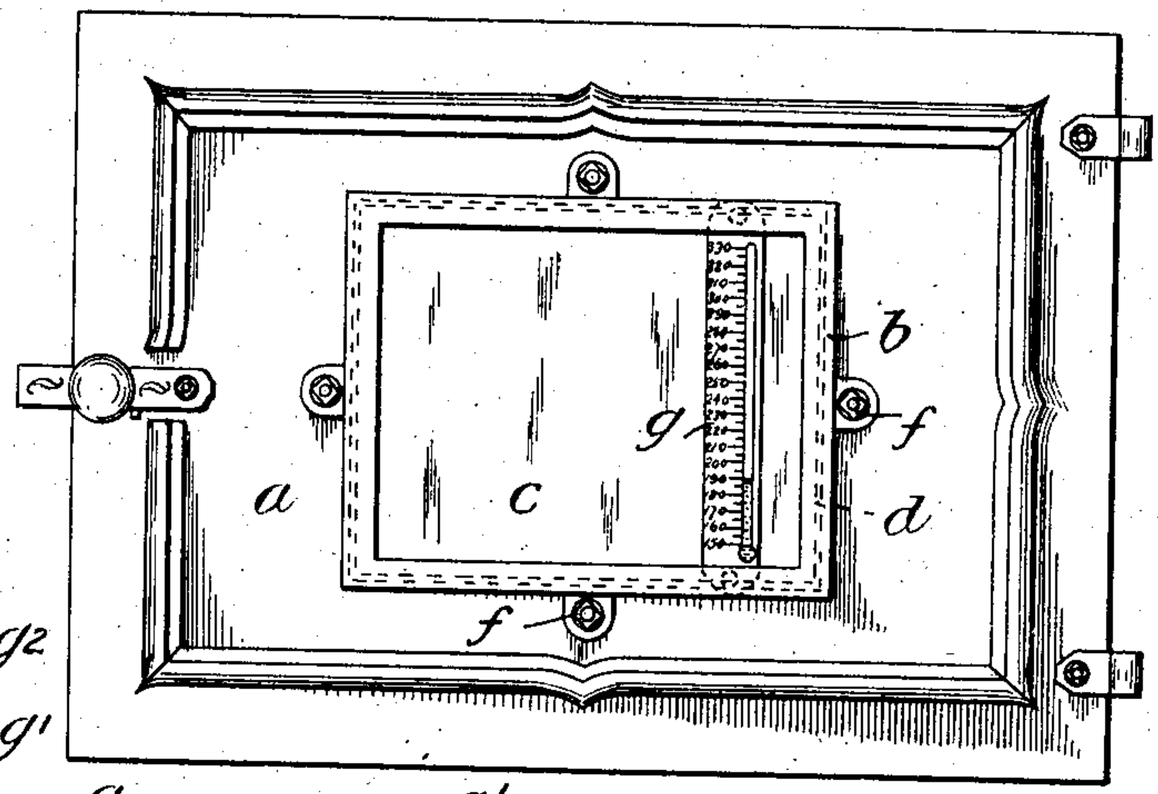
No. 834,159. PATENTED OCT. 23, 1906.

J. McGUIRE.

COOKING OVEN.

APPLICATION FILED MAR. 27, 1906.

Fig. 1.



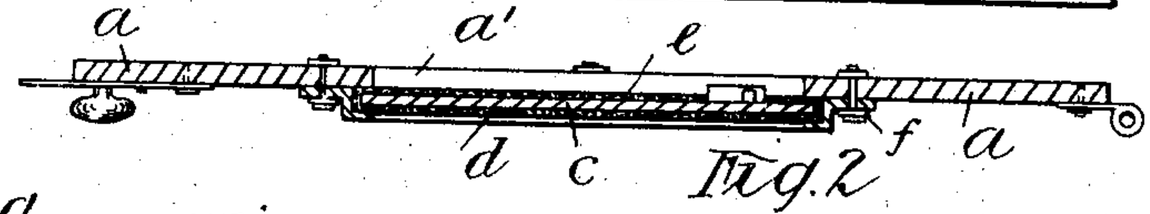


Fig. 2.

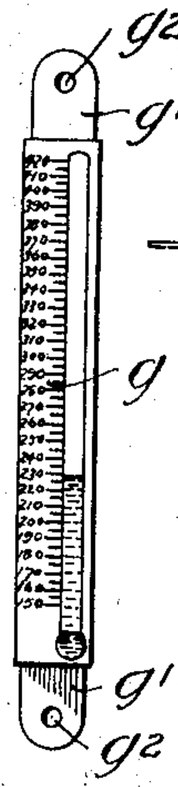


Fig. 6.

Fig. 3.

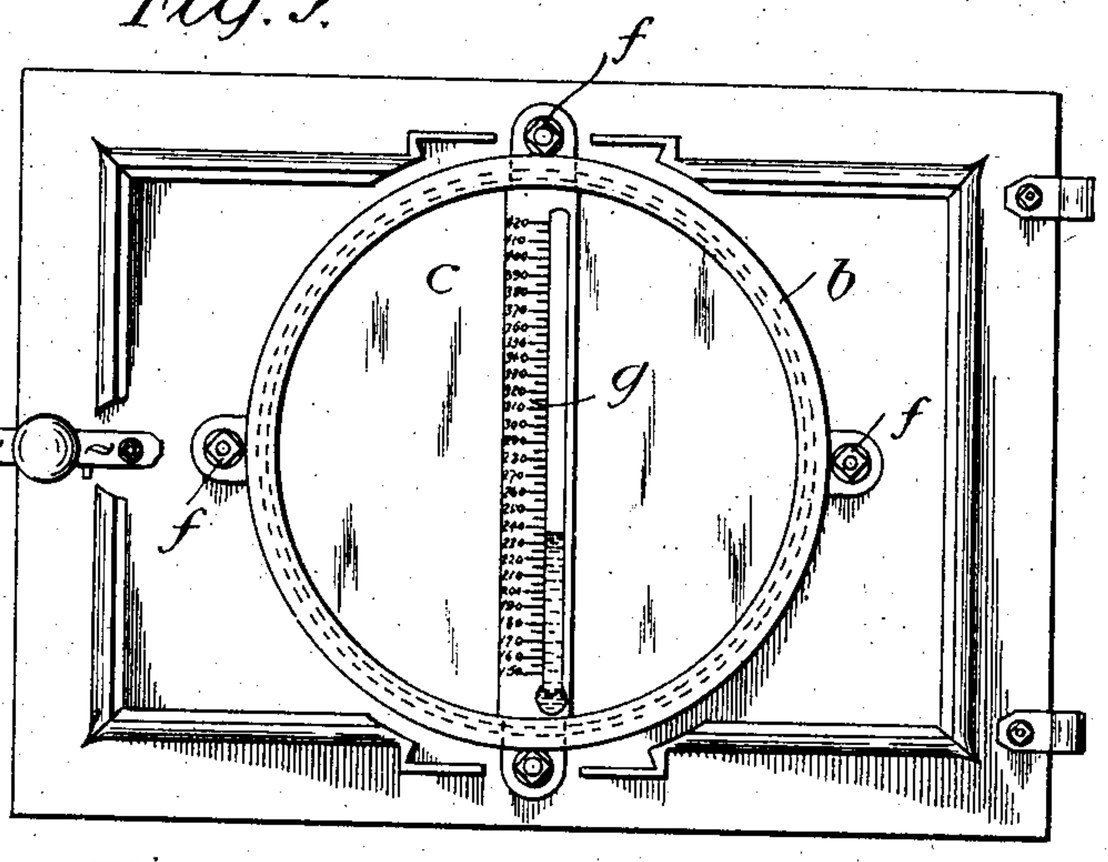


Fig. 4.

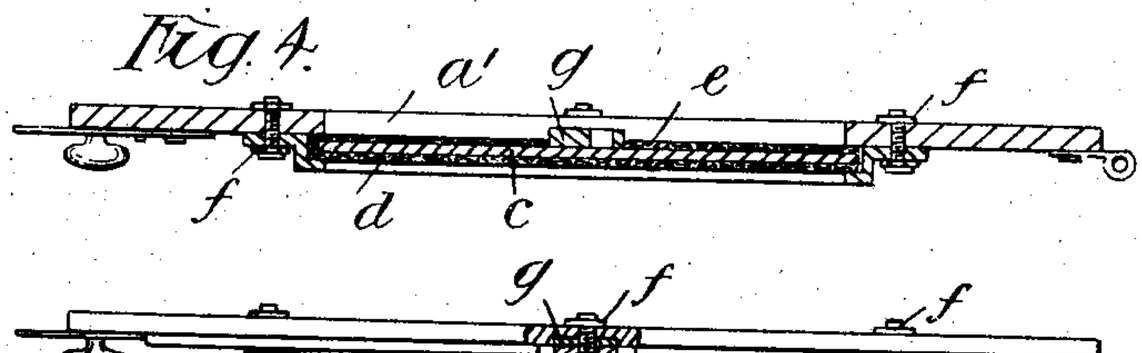


Fig. 5.

WITNESSES

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COOKING-OVEN.

No. 834,159. Specification of Letters Patent. Patented Oct. 23, 1906.

Application filed March 27, 1906. Serial No. 308,251.

To all whom it may concern:

Be it known that I, JOHN McGUIRE, a subject of the King of Great Britain, residing at 82 William street, Melbourne, in the State of Victoria, Australia, have invented certain new and useful Improvements in Cooking-Ovens; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has been devised to provide facilities for observing the cooking operations in ovens—such as ranges, gas-stoves, bakers' ovens, and similar structures—wherein at present it is not possible to note the cooking process at work when the doors are closed.

My invention also provides a thermometric indicator for the assistance of the cook or baker to enable such operator to judge whether the oven is properly heated before committing to it the food or similar material to be cooked and also to permit the cook or baker to note during the cooking or baking process whether the heat is being properly maintained or is not excessive for the satisfactory preparation of the article under treatment.

In order that my invention may be the more easily understood, reference may be made to the accompanying drawings, in which—

Figure 1 is a front elevation, while Fig. 2 is a sectional plan. Fig. 3 is a front elevation similar to Fig. 1, but showing the invention when applied in a circular form; Fig. 4, a sectional plan of Fig. 3; Fig. 5, a similar plan to Fig. 4, but with a detail only in section, while Fig. 6 illustrates the thermometer and lugs for securing it to the frame in Figs. 1 and 3.

Into the door *a* of the oven or analogous structure is cut an aperture *a'*. Around the edge of this aperture (preferably the outer one) I place a rim-plate *b*, and in this plate I place a closely-fitting sheet of glass *c*, of preferably about three-sixteenths of an inch in thickness and making a special provision that at the top and bottom and at the two sides a small space at *d* shall be left to allow for the expansion of the glass *c* in its length and width. The cavity at *d* thus allowed around the edge of the glass *c* is filled in with a fillet *e* of pulpy asbestos cloth or the like incombustible fibrous or compressible material. The outer or rim plate *b* is screwed to the metal of the oven-door *a* by screw-pins *f*. Directly behind a portion of the sheet of glass *c* and preferably at one side I place a high-degree thermometer *g*, its tabulated column being hermetically secured to the glass plate *c*, so that steam, smoke, or splashings may not get between the said glass plate and the indicator-numbers of the thermometer *g*. I provide the latter with terminating lug-plates *g'*, having therein perforations, as g^2, through which (in the case of rectangular form in Fig. 1) rivets or screws may pass to secure such lugs to the door-plate *a* or in case of the circular form in Fig. 3 the screw-bolts *f* at top and bottom may pass through said lugs to hold the thermometer, as shown. The thermometer *g* may have placed upon its face certain indicator-words to inform the cook of the most suitable heights of temperature for the various kinds of food to be cooked or baked. Alternatively a tabulated card may be kept in the kitchen or like place and upon which the most suitable relative degrees of heat to the particular foods could be simply and correctly shown, so that should the cook desire to roast a piece of beef a perusal of the card will show to what degree the oven should be heated.

Where it is more desirable or some special reason may exist for not placing the glass plate *c* and thermometer *g* in the door *a* of the oven, I may place the same in the side or back of that part of the oven wherein the cooking or baking is to take place.

In operation the cook or baker will see by a glance at the thermometer *g* whether the temperature in the oven is correct before placing the food therein and can without opening the door *a* of the oven clearly perceive the condition from time to time of the article being cooked. Thus the cooling down of the oven (caused by frequent openings of the door in present systems) is obviated and scientific cooking can be attained with considerable benefit, economy, and convenience.

Meats, pies, scones, bread, puddings, and the like food can thus be cooked to the exact extent and to the proper appearance on surface as may be required in ideal cookery.

I would have it understood that glass hav-

ing special heat-resisting properties is desirable for use in my invention and that where obtainable and economical I might in some cases employ sheet talc or mica in lieu thereof.

I would have it understood and it is obvious that where my invention is to be part of a new oven-door I may, in lieu of laying the parts *b* and *c* onto the surface of the outside of the door *a*, cast or construct the latter so as to have an internal recess for the reception of the glass plate *c* and its fillets *e* and in which case the rim-plate *b* may be either inside or outside the door *a* in keeping with the position of such internal recess.

It is important that the fillet *e* should be of such a material that while it is incombustible it will be sufficiently elastic and compressible as to keep the cavity at *d* well filled around the edge of the glass *c* and prevent heat from escaping thereat and at the same time will allow of the expansion and contraction of the glass, owing to its changes of temperature. At night-time a small lamp or other light can be placed at a short distance away in front of the glass *c*, so that its light will be thrown into the oven when required.

What I claim as my invention, and desire to secure by Letters Patent, is—

In cooking-ovens: in combination, an oven-door having an aperture cut therein a sheet of glass covering such aperture and enabling articles in the interior of the oven to be seen through same a fillet of non-combustible compressible material surrounding the edges of such glass a graduated thermometer placed behind such glass and exposed to the heat of the oven said thermometer having its graduated face hermetically secured to the sheet of glass a rim-plate to keep the glass and thermometer in position and means for securing the whole of the parts together substantially as and for the purposes set forth.

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

JOHN McGUIRE.

Witnesses:

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A. T. MADDEN.