

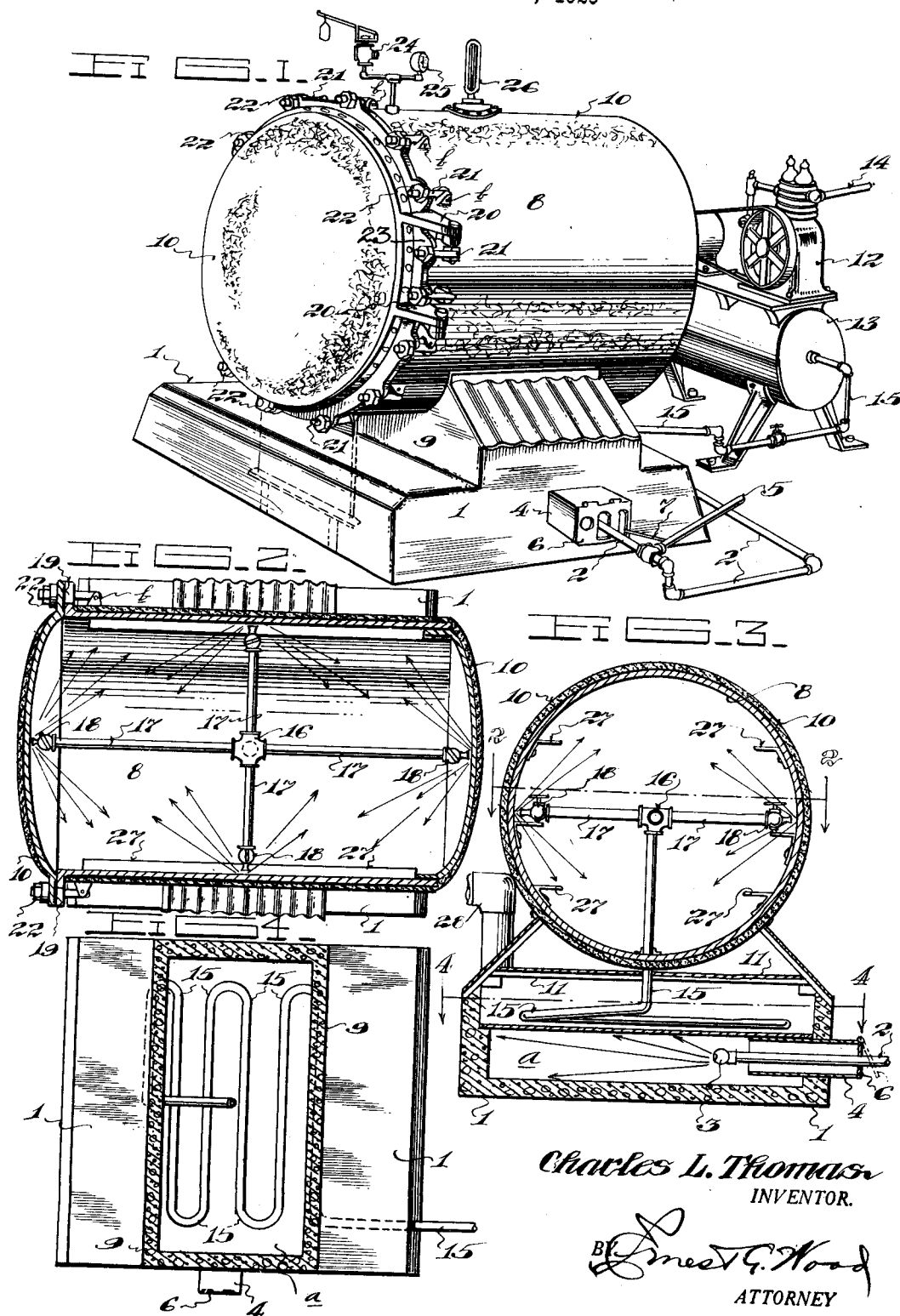
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METHOD OF BAKING

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METHOD OF BAKING

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This invention relates to an improved method of baking and it has for its principal object to provide a new and improved method of cooking, through the medium of which the natural juices are retained within the food during and after the cooking process, not only lending materially to the deliciousness of the flavor of the cooked product, but likewise eliminating shrinkage, due to the driving out of the juices as in the old methods of baking, and which fact enables the consumer to obtain for his use the best grades of cooked products at nominal prices, since the producer is enabled to realize a considerable saving by the prevention of reduction in weight incurred during cooking.

The invention has for another object the provision of an improved apparatus for carrying out the method above referred to and which consists of an air tight, insulated receptacle, into which is introduced heated air under pressure, as well as means for bringing about maximum heating of the air preparatory to its introduction into said receptacle, the insulation enclosing said receptacle being greatly effective in preventing dissemination of the heat and as a consequence cooling of the air inlets is rendered impossible and therefore full effects of the air under pressure is realized. Moreover, the apparatus or oven, to which will be later referred to, is so equipped as to enable the operator to keep an accurate check both as to heat and air pressure and will, with careful tests, be able to determine within a reasonable degree, just what shrinkage will occur in the product during the cooking operation.

A further and important object of the invention resides in the provision of a very effective means for equalizing the heat within the oven by dividing the injected air into a multiplicity of streams and directing each individual stream against the walls of the oven at separated points. The results obtained in so directing the streams of heated air are such that the internal heat and pressure, especially the former, are equalized within the oven and as a consequence the food is uniformly cooked irrespective of its location in the oven, otherwise shrinkage in the product

at one point in the oven would be greater than that in the product at another point.

The invention further comprehends among its objects an oven having preferably curved sides and ends to bring about maximum diffusion of internal heat as the streams of heated air are impinged thereagainst, and so situated as to afford an accessible opening covered by a swinging door having suitable means for preventing any noticeable leakage of internal pressure.

With the foregoing objects as paramount, the invention has further objects and advantages as well as certain salient features of construction, instrumental in bringing about the objects aforesaid and to which reference will be made after a brief description of the appended drawings wherein;—

Figure 1 is a perspective view of an air pressure oven constructed according to the present invention.

Figure 2 is a view on lines 2—2 of Figure 3.

Figure 3 is a vertical sectional view of the invention, and

Figure 4 is a sectional view of the base on lines 4—4 of Figure 3.

The present invention is an improvement upon an application for patent filed by me on May 6, 1929, Ser. No. 360,977.

Proceeding with a detailed description of the invention, 1 designates a base enclosing a fire box *a* into which latter is extended a fuel line 2, which may convey natural or artificial gas or fuel oil as desired. A suitable burner 3 is provided on the end of the line 2, as shown in Figure 3, showing directed therefrom a series of arrows to denote the distribution of the flame. The fuel line 2, as will be noted also in Figure 3 passes through a housing 4, the inner end of which is open while the outer end may be opened or closed by manipulating a lever 5, shown in Figure 1, to control the action of the draught door 6, through the medium of the link 7. It is apparent that the opening and closing of the door 6 will respectively increase or diminish the intensity of the flame emitted from the burner 3.

It will be noted in the drawings that the oven 8 is a barrel-like receptacle supported

upon a sub-base 9, and as apparent in Figure 3, is not only insulated exteriorly by a plastic asbestos coating 10, but is likewise insulated from the fire box *a* by means of a plate 11, consisting also of a heat resisting composition. This feature prevents the flame from coming into actual contact with the oven and concentrating the heat at one point and thereby defeating the purpose of the disseminating effects of the elements to be later described.

Situated adjacent the oven is an air compression tank 13 of a conventional build, with an attendant compressor 12, as exemplified in Figure 1. An intake pipe 14 enters the compressor 12, while an air line 15 leads from the compression tank 13 and enters the fire box *a* in which it is coiled or convoluted, as shown in Figure 4 in order that the air passing therethrough will be subjected to the maximum degree of heat from the burners 3. From the fire box *a*, the pipe 15 extends upwardly through the approximate middle of the oven 8, at which point a positive seal is made to insure against the escape of air. The pipe 15 terminates preferably midway between the upper and lower walls of the oven and has applied thereto a connection 16 having four lateral leads into each of which is threaded pipes 17, as apparent in Figures 2 and 3. These latter pipes extend radially from the center of the oven and terminate a short distance from the ends and sides of the oven, each being provided upon its free end with a cock 18, adapted to maintain uniform discharge.

The closure for the oven is provided with annular packing at 19, as shown in Figure 2 and is hinged at 20 to the oven. A multiplicity of bolts 21 are employed for firmly holding the closure in closed position, the bolts being pivoted at *b* and provided with threaded nuts 22, which, when the bolts repose between the ears 23, disposed in spaced relationship around the periphery of the closure are threadedly urged against the ears to securely lock the closure.

An adjustable relief valve 24, with pressure gauge 25 is provided on top of the oven, as well as a temperature indicator 26.

Accordingly and in operation when the food, such as hams or the like are placed for cooking on shelves supported upon brackets 27 affixed to the walls of the oven, the closure or door of the oven is swung to, and locked by means of the bolts 21, whereupon the fuel is ignited in the fire box. When the pipe 15 is heated to a suitable degree, air from the compression tank 13 is turned into the pipe 15, which air is heated to a high degree before its introduction into the oven by passing through the heated convoluted portion of the pipe in the fire chamber.

As the air is discharged into the oven at the cocks 18 it impinges the walls, and due to the

curvature of the latter disseminates and is instantly distributed throughout the oven to bring about a uniform degree of heat and pressure.

The present invention is particularly used in baking hams and it has been found that with an air pressure maintained around or about 40 pounds, by setting of the relief valve 24, and with the air maintained at a temperature around or about 175 degrees F., the best and quickest results are produced. The air pressure and the temperature above given are by way of example and vary according to the nature of the food being baked and are determined by experiment, as noted in the second paragraph of this specification.

It has been found advisable under some conditions to allow the pipes to heat before closing the oven in order that a uniform temperature may be had before the cooking is started but since different foods require different degrees in heat and pressure, there are no precise requirements to follow in this connection. A suitable flue or vent carries off the gas fumes accumulating within the fire chamber *a* and which may be directed out-of-doors.

A very desirable feature of the present invention in addition to the saving in weight, the loss sometimes exceeding one third of the entire weight of the product when placed in the oven for cooking under old methods, resides in a means for introducing a flavor such as hickory into the meat, simply by a commingling of wood smoke or the like with the air introduced into the oven. To so commingle the smoke and air the latter may be drawn through a suitable furnace through the pipe 14 entering the compressor 12, and thereby receive and pass the smoke from the furnace into the oven. Since any suitable means may be employed for creating sufficient smoke for the purpose, no means is herein shown for burning wood.

Manifestly, the construction shown is capable of considerable modification and such modification as is considered within the scope and meaning of the appended claims is also considered within the spirit and intent of the invention.

What is claimed is:

1. The hereindescribed method of baking foods solely by the heat of compressed air, which consists in confining the food in an air tight and heat insulated chamber, compressing air and storing same at a point remote from the chamber, conducting the compressed air from the point of storage into the chamber, and distributing same so that a uniform pressure of air exists throughout the chamber, and applying heat to the air between said storage point and the chamber and at a point insulated from the chamber whereby to bake the food solely by the heat of the compressed air.

2. The hereindescribed method of baking

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10 In testimony whereof I affix my signature.
CHARLES L. THOMAS.