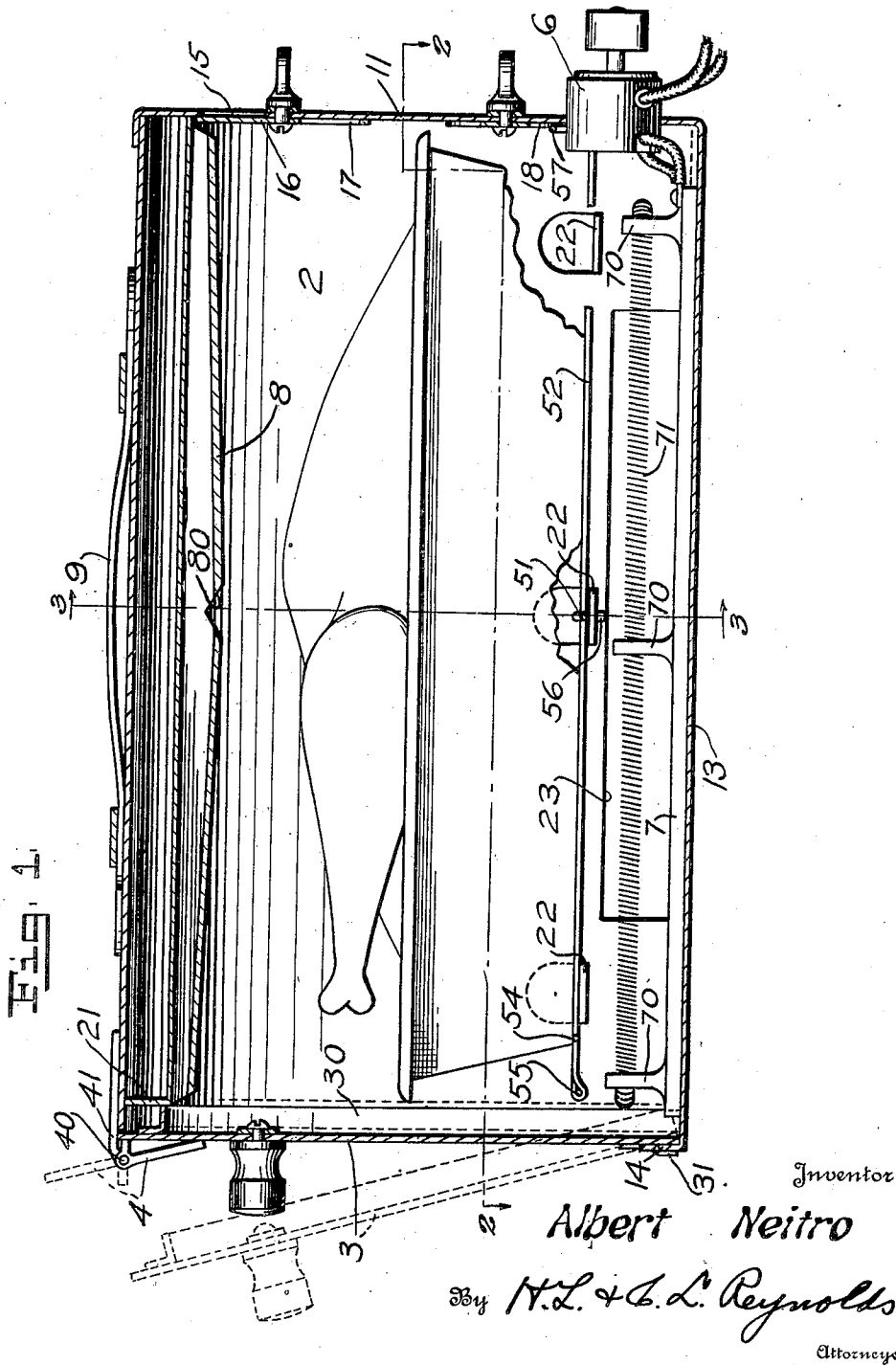


A. NEITRO.
OVEN.

APPLICATION FILED AUG. 26, 1921.

1,434,792.

Patented Nov. 7, 1922.
3 SHEETS—SHEET 1.



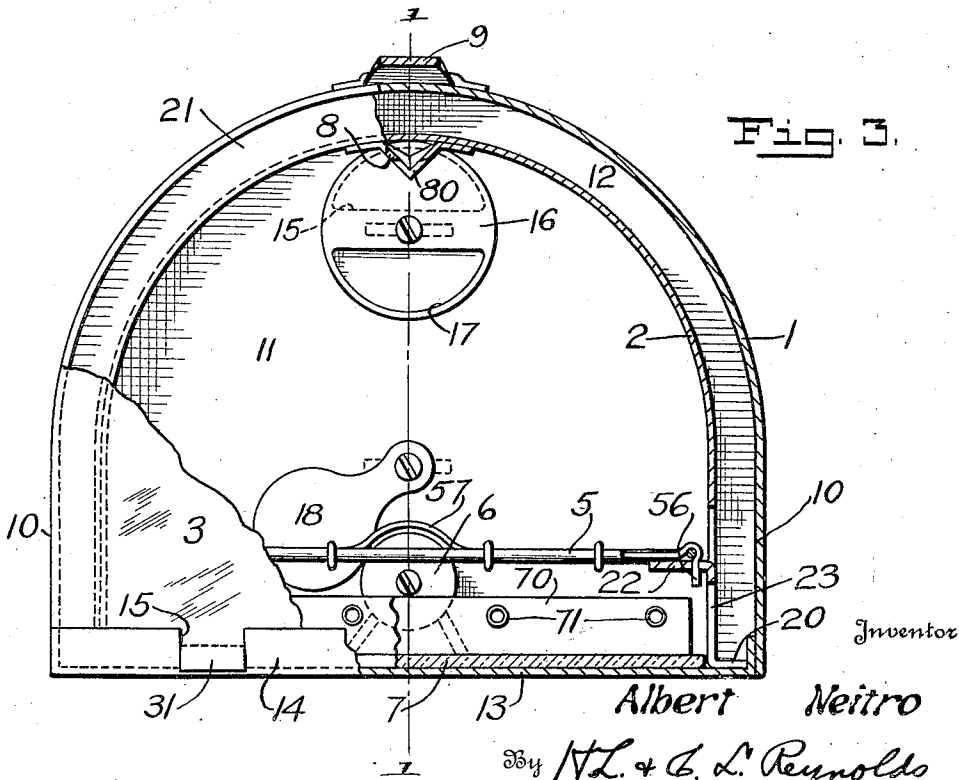
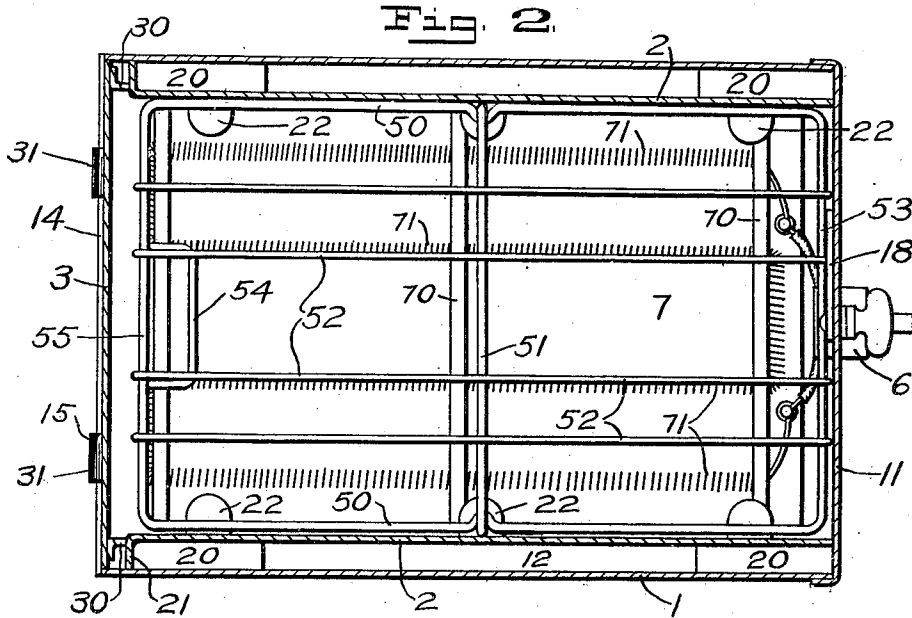
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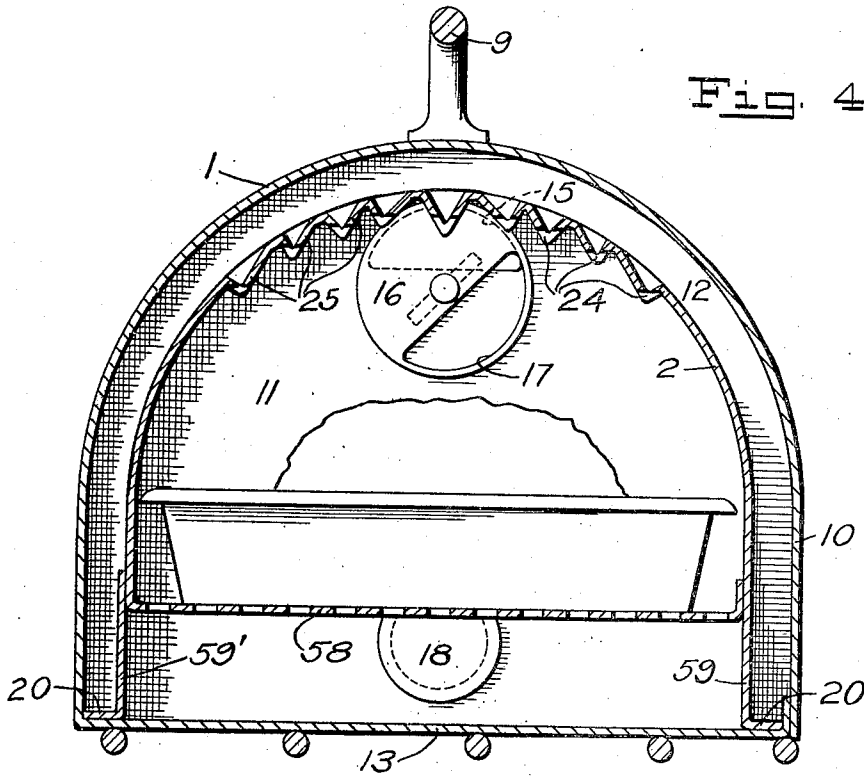


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Inventor

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UNITED STATES PATENT OFFICE.

ALBERT NEITRO, OF SEATTLE, WASHINGTON.

OVEN.

Application filed August 26, 1921. Serial No. 495,708.

To all whom it may concern:

Be it known that I, ALBERT NEITRO, a citizen of the United States of America, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Ovens, of which the following is a specification.

My invention relates to ovens and consists of an oven of a simple type of construction which has been especially designed so that it may be portable and also for the use of electric heating means which are to be placed inside of the oven. My invention is, however, not limited to a portable type of construction or to the use of electric heating elements as the means for heating the same.

The features of my invention upon which I desire to obtain a patent will be first described and then particularly pointed out in the claims terminating this specification.

The accompanying drawings show my invention in the type of construction which is now preferred by me.

Figure 1 is a longitudinal vertical section through the oven, on line 1—1 of Figure 3.

Figure 2 is a horizontal section taken just above the grate, on line 2—2 of Figure 1.

Figure 3 is an end elevation and partial section of the oven on line 3—3 of Figure 1.

Figure 4 is a cross section showing a type of construction which emphasizes the self basting feature.

This oven includes an outer casing and a lining therefor which is spaced away from the outer casing a distance to provide an efficient heat insulating layer of air between the two. The outer casing 1 in the type of construction shown, is of arch shape in cross section, having a flat bottom and a rounded top which is joined to the bottom by straight side sections 10. The body thus outlined is closed at one end by an end wall 11. The other end of the casing is open.

The lining 2 is a similar shape in cross section but sufficiently smaller than the casing so that when inserted it leaves an insulating space 12 between the two. The lining is, however, not given any bottom but rests upon the bottom 13 of the outer casing. The lining is also lacking in any end closure. It thus consists, or may con-

sist, of a single sheet which extends parallel to and just within the side and top portions of the outer casing.

At its lower edge the lining 2 is given outwardly extending flanges 20 which form feet resting upon the bottom 13 of the outer casing and extending outward to contact with the side walls of the outer casing. These serve to properly space the lower parts or sides of the lining from the outer casing. The end of the lining which is towards the open end of the casing is also given an outward flange 21 which is of such dimensions as to fit snugly against the inner surface of the outer casing 1. The lining is also made slightly shorter than the length of the casing so that when inserted in the casing and forced back so as to engage its inner end with the closed end of the wall 11 of the casing, its outer end will be recessed back from the front end of the casing, as is illustrated clearly in Figures 1 and 2.

The open end of the casing is provided with a closure which, as illustrated, consists of a plate 3 of such size as to close the opening, which plate is also provided with an inwardly extending flange 30 located somewhat inward from the outer edge of the plate but not far enough inward but that when put in place it will bear against the outer face of the flange 21 of the lining. This relation is clearly shown in Figures 1 and 2.

The bottom of the casing, at its front or open end, is also provided with an upturned flange 14, this being located in such position that the lower edge of the door or closure 3 may be placed just inside of this flange when it is put in place. This flange 14 is also provided with notches, as 15, cut therein and the lower edge of the plate 3 which closes the casing has tongues, as 31, cut therefrom and offset outwardly so that when placing this plate in position the tongue 31 may be placed outside of the flange 14. The plate is thus held securely against any movement lengthwise thereof. The upper part of the door or closing plate 3 is held in position by any suitable form of locking means or catch, such, for instance, as the lever 4 which is pivoted at 40 to an arm 41 carried by the casing.

A grate 5 is provided of such size as to fit within the oven. To support this, ears, as 22, are cut from the lining 2 and bent in-

wardly. The grate is designed to rest upon these ears. The grate 5 as shown is composed of wire, this consisting of the marginal wire or rod, as 50, a central cross rod as 51 and longitudinally extending rods 52. The end section 53 of the outer or marginal wire 50 is bent up at the center of the width of the grate, as shown at 57. This is done to accommodate the switch fixture 6 which is inserted through the rear end of the casing.

The two longitudinal wires 52, lying at each side of the center of the grate, are bent as a loop 54 about the end wire of the grate in such a way that the transversely extending central part of the group lies inside of the end wire 55 and preferably below the wires 52. This construction makes it possible to lift the grate by placing a fork, or the handle of any kitchen implement, over the end wire 55 and under the transverse portion 54 of the loop. In this way the grate may be lifted when hot without any danger of burning the hands.

I prefer also to tie the lower portion of the lining 2 together by means of the grate. This may be done by having the central cross wire 51 provided with a downwardly extending end 56 and providing one of the tongues 22 cut from the casing with a hole of such size as to receive this downwardly projecting end. In this way the side portions of the lining are secured in their proper spacing. The grate is also held against accidental movement lengthwise of the oven. I also prefer to cut an opening, as 23, in the bottom edge of the lining so as to form free communication at the bottom of the space 12 between said space and the interior of the oven.

The type of construction shown in Figure 4 differs from that of the preceding figures in having the grate 58 composed of the perforated end of the metal sheet which forms the lining. One end of this sheet is shown as forming one supporting foot 59, the like foot at the other side being formed by a strip 59' which is secured thereto.

As illustrated an electrical heating element is shown as in place in the oven. This consists of a plate 7 having cross ribs 70 which support electric resistance coils, as 71. This is, however, given merely as an illustration of one manner of heating the oven. Any other type of electric heating element found suitable may be substituted. Also the oven may be used without electric heating, as by placing it on top of a stove or other sufficiently heated object.

I have provided a ventilation opening 15 in the inner or rear end of the oven casing. To control this opening I have provided a disk, as 16, which is provided with an opening, as 17, of a size and so positioned as to register with the opening 15 when the plate 16 is properly turned. Also when

properly turned the body of the plate 16 will entirely close the opening 15. The opening 15 may be partially opened by proper positioning of the plate 16. I have also provided a plate 18 mounted to be swung so as to close the opening through which the electric switch 6 is inserted when the electric current is not used to heat the oven.

Secured to the top of the lining 2 centrally of the length thereof and at its under side, is a trough 8. This has a gentle slope from each end towards the center and at the center is provided with a drip opening 80. Steam rising from the food being cooked in the oven will become condensed on the wall of the lining. That part which is condensed within the limits of the trough 8 will be led by this trough to the opening 80 and be discharged upon the article being baked. The device thus serves as an automatic baster. While I have shown the trough 8 as being narrow, it is evident that it may be made very much wider if this be desired.

In the construction shown in Figure 4 the self-basting feature has been emphasized. The roof of the liner 2 is provided with corrugations 25 extending lengthwise thereof, of such proportions that any moisture condensing thereon will drip upon the meat being roasted instead of trickling down the smooth side of the lining. Other forms of roughened surfaces which will cause dripping of condensed moisture rather than trickling down the inner surface, may be used. In connection with this I may also provide perforations 24 which will permit moisture collected in the corrugations on the outer surface of the lining to pass within the lining and drip upon the roast.

I have provided a handle 9 secured to the top of the casing by which the oven may be conveniently carried. This oven is adapted to be heated by an electric current in the manner illustrated, or it may be placed upon a hot body such as a stove or be placed within the oven of an ordinary stove, in which case it, however, will function much after the manner of an ordinary roaster. It may also be used in connection with an outdoor fire on somewhat the same principle as that employed in a dutch oven. The design of this oven is such that it may be cheaply constructed and yet be durable and efficient in use.

What I claim as my invention is:

1. A portable oven comprising a casing having an arched top and flat bottom and one closed end, a lining having a similar arched top and no bottom, a grate supported from the lining above the bottom, and a removable closure for the open end.

2. A portable oven comprising an outer casing having one open end, a lining spaced

inward therefrom having no ends or bottom and at its bottom edge being flanged outward to form a spacing flange and at its outer end having an outwardly extending flange fitting closely against the casing, said lining having tongues cut therefrom and projecting inwardly and a grating resting upon said tongues. 35

3. A portable oven comprising an outer sheet metal casing, a sheet metal lining for the sides and top having grate-supporting tongues cut therefrom and turned inwardly and a grate having pins adapted to enter holes in certain of said lugs to hold the two in fixed relation. 40

4. A portable oven comprising an outer sheet metal casing open at one end, the bottom at the open end having a narrow up-turned flange provided with notches cut therein, a lining of sheet metal spaced inwardly from the casing and slightly shorter than the casing, said lining at the open end of the casing and along its bottom side edges having outwardly projecting flanges spacing it from the casing, and a closure for the open end of the casing comprising a plate adapted to fit within the casing end and having offset tongues entering the notches in the flange of the casing bottom and at the opposite side of said flange from the body of said closure plate, and a catch engaging the upper part of said closure plate. 55

5. An oven comprising an outer casing, a

lining spaced inwardly from the casing, a wire grate supported from the lining above the bottom, said grate having centrally disposed wires bent about an end wire to form a loop inwardly from said end wires, whereby the grate may be lifted by any convenient implement. 60

6. An automatic basting device for ovens comprising a trough secured to the oven top and freely communicating with the oven interior, said trough having a drip opening towards its central part and being inclined towards the same from both ends. 65

7. An oven having grate supports at its sides, a grate adapted to rest upon said supports, said supports having holes and the grate having pins to enter said holes, whereby the grate is held in position. 70

8. An oven having an outer casing open at one end and a flange turned up at the bottom side of the open end, a removable lining having flanges spacing it away from the casing and a closure comprising a plate having a flange on its inner face adapted to engage the end of the lining and notched on its lower edge to form tongues adapted to embrace the flange of the casing bottom and a catch engaging the upper part of said plate. 75

Signed at Seattle, King County, Washington, this 19th day of August, 1921.

ALBERT NEITRO.