J. LUEDECKE.

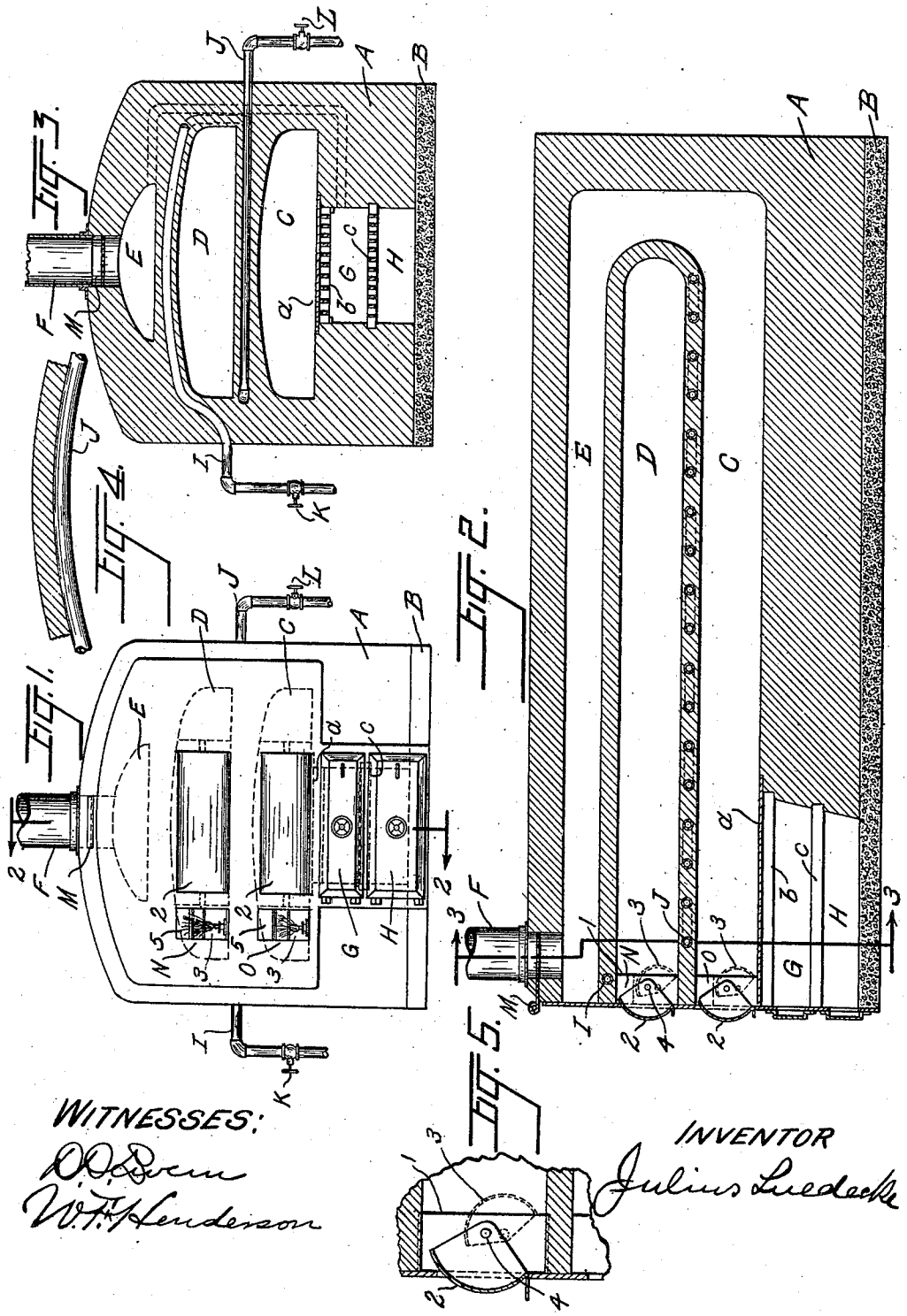
BAKER'S OVEN.

APPLICATION FILED OCT. 9, 1909.

996,495.

Patented June 27, 1911.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

FIG. 6

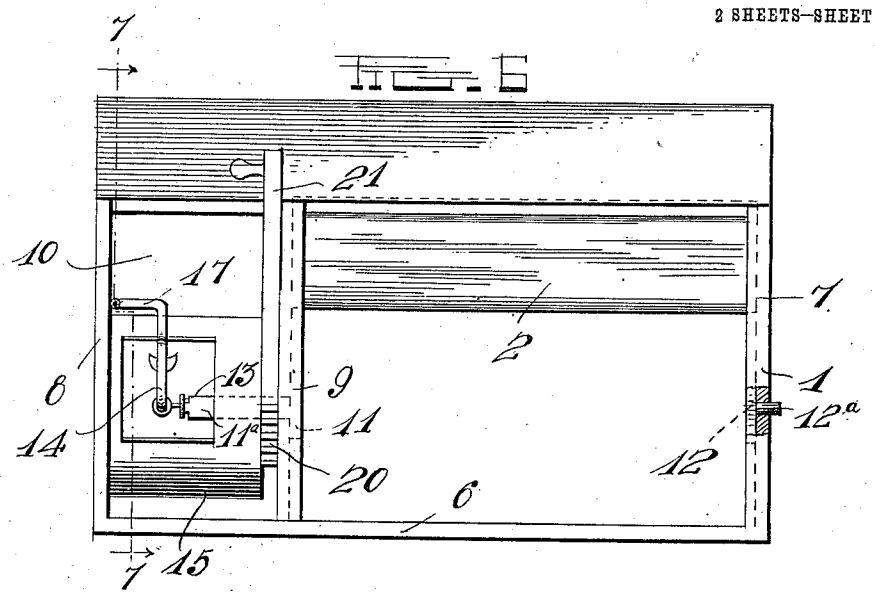
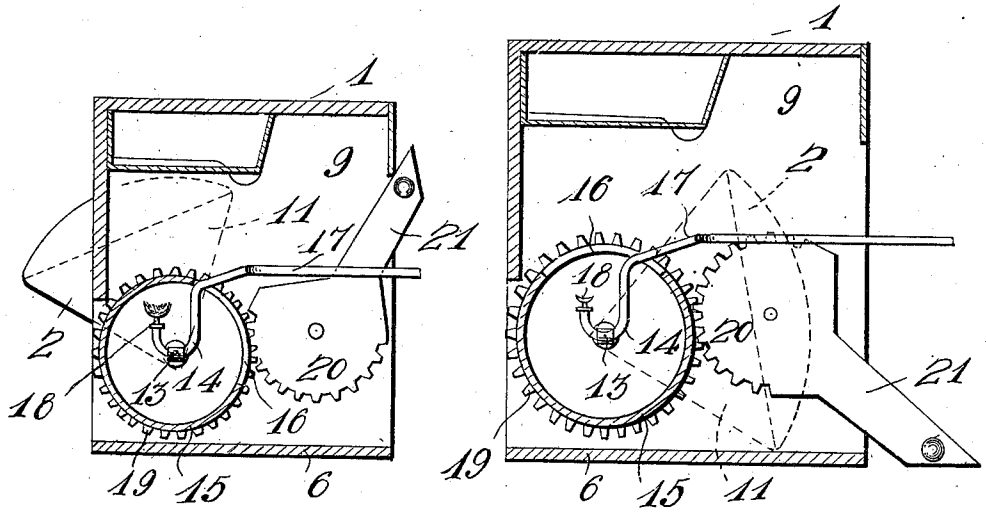


FIG. 8

FIG. 7



Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS LUEDECKE, OF CHICAGO, ILLINOIS.

BAKER'S OVEN.

996,495. Specification of Letters Patent. Patented June 27, 1911.

Application filed October 9, 1909. Serial No. 521,971.

To all whom it may concern:

Be it known that I, JULIUS LUEDECKE, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bakers' Ovens, of which the following is a specification.

This invention relates to bakers' ovens.

The object of the invention is to provide a simple and efficient oven having an improved door operable to control an illuminating device for the oven.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings; Figure 1 is a front elevation of an oven constructed in accordance with this invention; Fig. 2 is a longitudinal vertical section thereof taken on line 2—2 of Fig. 1; Fig. 3 is a transverse vertical section taken on line 3—3 of Fig. 2; Fig. 4 is a detail cross sectional view showing the water pipe which supports the arched tops of the baking compartments; Fig. 5 is a detail vertical sectional view through one of the oven doors; Fig. 6 is a front elevation of the frame in which the door and illuminating device are mounted, with the door shown in open position; Fig. 7 is a transverse vertical section taken on line 7—7 of Fig. 6; Fig. 8 is a similar view taken on line 8—8 of Fig. 6, with the parts in the position which they assume when the door is closed.

In the embodiment illustrated, a fireproof structure A is shown composed of any suitable material and of any desired shape and dimensions, and is preferably mounted on a foundation B. This structure A preferably contains a tier of three compartments, C, D and E, the lower compartment C constituting a baking oven and furnace, the intermediate compartment D an indirectly heated baking oven having its rear end closed. The upper compartment E forms a passage for the products of combustion from the lower compartments C to the flue or stack F. A fire box G is arranged at the front end of the structure A under the compartment C over which is arranged a removable cover *a* arranged above a dumping grate *b* at the top of the fire box and a stationary grate *c* is arranged at the lower end of said box above an ash receptacle H. Water heating pipes I and J are built in zigzag lines in the arches of the compartment C and provide substantial support therefor and means for heating water simultaneously when the ovens are heated with the same fuel. These pipes I and J are provided with regulating cocks K and L for controlling the supply of cold and hot water.

A sliding damper M is preferably mounted in the flue or stack F for controlling the draft, as is shown clearly in Fig. 3.

At the front of the ovens C and D door frames as 1 are shown, each of which is preferably rectangular in form and in which doors as 2 are pivotally mounted at opposite ends in the ends of the rectangular frames 1, said frames being preferably composed of iron and made of any suitable size to fit the door openings of the oven to which they are to be applied. Each of these improved frames is preferably constructed as shown in Fig. 6, and comprises a bottom 6 about thirty inches long by eight inches wide, more or less, and with end pieces 7 and 8. An upright partition 9 is arranged near one end of this frame 1 to provide a chamber 10 in which the oven illuminating device is mounted. The door 2 is preferably constructed in the form of a partial cylinder, about one-third, more or less, having segmental ends 11 and 12 provided with outwardly extending trunnions 11^a and 12^a. The trunnion 11^a extends through the vertical partition 9 of the frame 1 into the lighting chamber 10 and is positioned to operate the light 3 arranged in said chamber as hereinafter described. This trunnion 11^a is preferably constructed as shown in Figs. 7 and 8, and extends into the path of the light governing device and is operable to turn on the light when the door 2 is opened and to turn it off when the door is closed, the governing device here shown being in the form of a cock 13 arranged on a gas jet 14.

The illuminating device 3 is here shown in the form of a drum 15 revolubly mounted in the compartment 10 and having one side open as shown at 16 through which a gas pipe 17 extends into said drum and is provided with a burner 18 of ordinary construction having a cock 13 for controlling the light. A portion of the drum is composed of transparent material preferably mica, which is arranged to project through

an opening 10′ at the rear of the chamber 10 when the oven door is opened, whereby the oven door is illuminated. A toothed disk 19 is preferably fixed to the end of the drum 15 adjacent the partition 9 and meshes with a toothed segment 20 formed on one end of a door operating lever 21 fulcrumed on said partition 9 with its front end projecting beyond the front of said chamber in a position within easy reach of the operator. This drum is fixed to the trunnion 11ª of the door 2 and when the drum is turned by the lever 21 through the segment 20 and disk 19 the door 2 is also revolved simultaneously into open or closed position according to the direction in which said lever is moved. Any other means, however, may be used for opening and closing the oven door.

In the operation of this improved oven, the fire is built first directly under the front end of the lower baking compartment C upon the dumping grate *b*, the cover *a* having been first removed, and when the ovens have become sufficiently hot for baking, the fire and embers are dumped into the fire box G on the stationary grate *c* through which the loose ashes pass into the ash pit H. When the fire is thus dumped the removable cover *a* is placed over the fire box G which prevents the escape of the gases therefrom into the baking pans, which are readily slid over said cover into the oven C. When it is desired to open one of the doors 2 to obtain access to the oven to which it is applied, the lever 21 is raised upward into the position shown in Fig. 6, said upward movement causing the teeth of the segment 20, which mesh with the toothed disk 19 to turn the drum 15 and the door 2 connected therewith, into the position shown in Fig. 6 with the transparent portion of said drum projected through the opening 10′ at the rear end of the compartment 10. This turning of the drum also causes the trunnion 11ª to engage the cock 13 and turn on the gas whereby the oven is illuminated. When it is desired to close the door the lever 21 is moved downwardly thereby turning the drum 15 and the door 2, both of which are mounted on the trunnion 11ª, into the position shown in Fig. 8, and the trunnion 11ª simultaneously turns the cock 13 whereby the gas is partially turned off, the opaque portion of the drum being arranged opposite the opening 10′ and at the rear of the casing 10.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principles or sacrificing any of the advantages of the invention as defined in the appended claim.

I claim as my invention:

In a baker's oven, the combination of a fire proof structure, a tier of three compartments built longitudinally therein and constituting a combined baker's oven and furnace, an indirectly and continuously heated baking oven, and a passage for the products of combustion, said ovens having openings at their front ends, a fire box for supplying heat to said compartments, upwardly and inwardly revoluble doors mounted in the front openings of the baking ovens, and means operable by said doors for lighting the interior of the baking compartments automatically when the doors are open and for cutting off the light when the doors are closed.

In witness whereof I have hereunto set my hand and subscribed my signature in the presence of two witnesses.

JULIUS LUEDECKE.

Witnesses:
W. F. HENDERSON,
W. B. STEWART.