

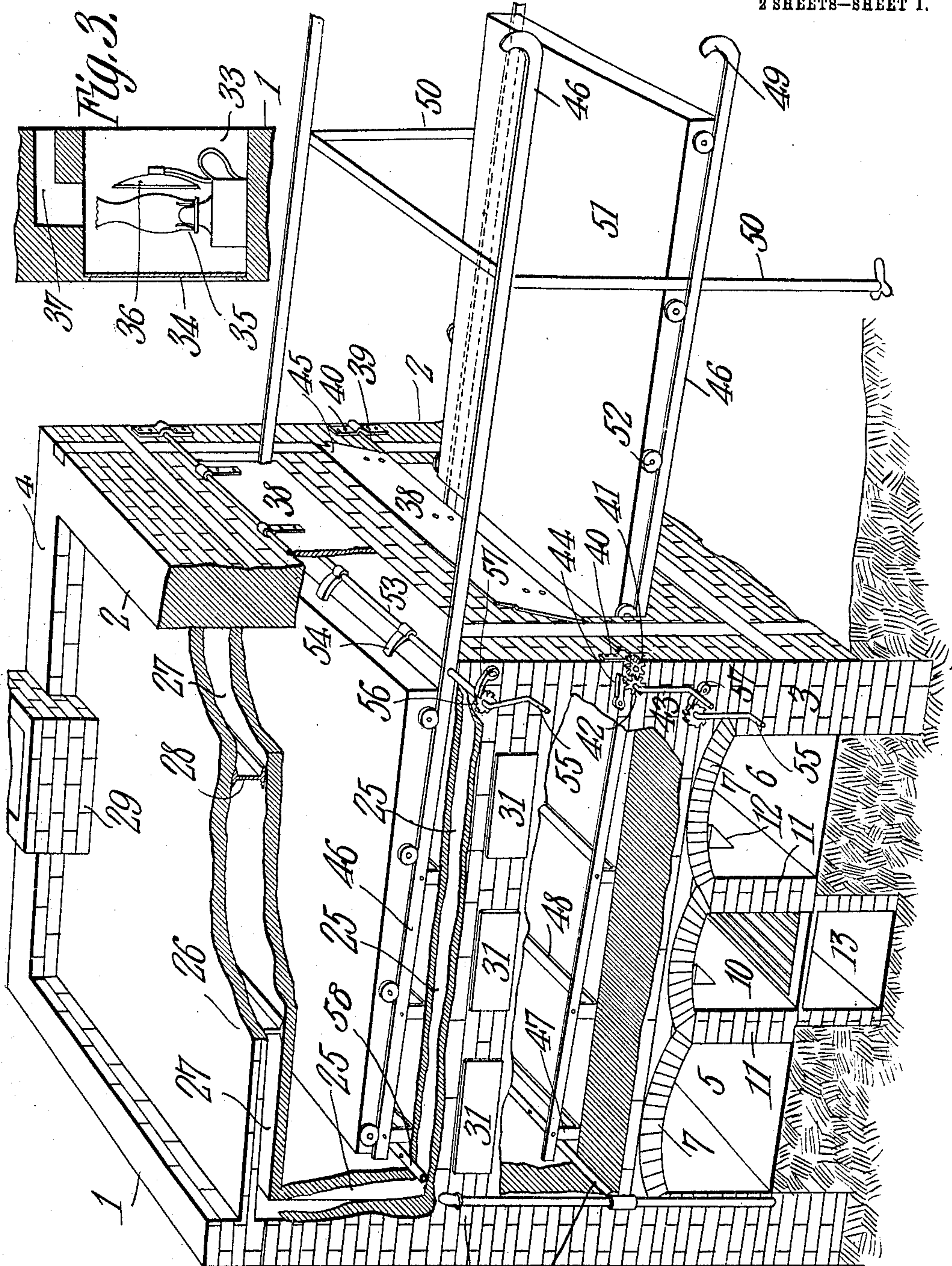
No. 870,977.

PATENTED NOV. 12, 1907.

C. E. LYST.
BAKING OVEN.

APPLICATION FILED MAY 3, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

E. J. Stewart
Albert D. Lawson

Fig. 1

By

Charles E. Lyst,
INVENTOR.
C. A. Snow & Co.

ATTORNEYS

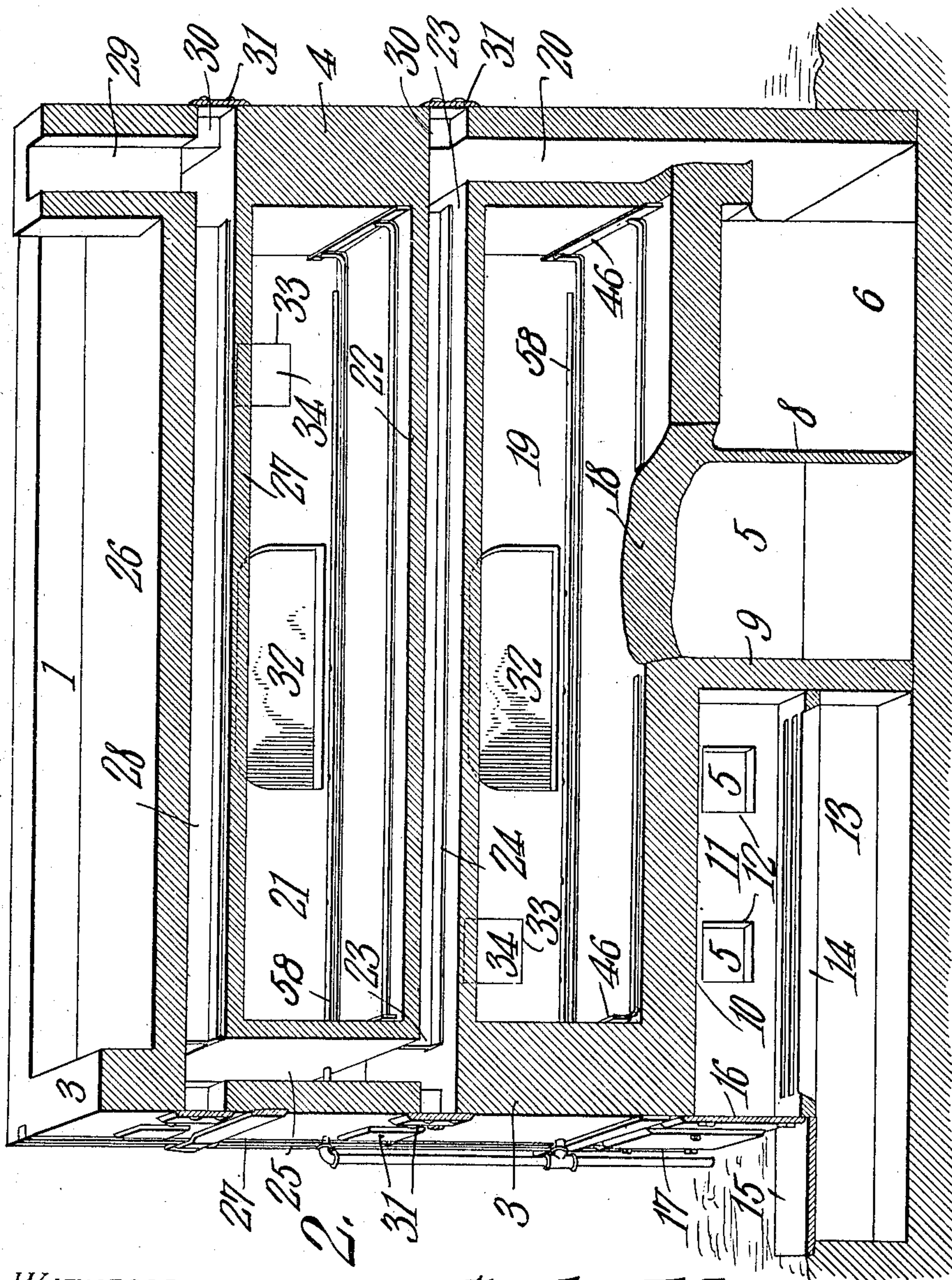
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WITNESSES:

E. J. Stewart
Robert Lawson

Fig. 2.

Charles E. Lyst,

INVENTOR.

By

C. A. Snow & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES E. LYST, OF ELWOOD, INDIANA, ASSIGNOR OF ONE-HALF TO JOE G. FIELD, OF ELWOOD, INDIANA.

BAKING-OVEN.

No. 870,977.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed May 3, 1907. Serial No. 371,655.

To all whom it may concern:

Be it known that I, CHARLES E. LYST, a citizen of the United States, residing at Elwood, in the county of Madison and State of Indiana, have invented a new and useful Baking-Oven, of which the following is a specification.

This invention relates to ovens and is particularly designed for use in large bakeries.

The object of the invention is to provide a structure having two baking compartments or ovens both of which are heated from a single fire box, there being novel means for distributing the products of combustion around the ovens so as to economize the heat to the greatest extent.

Another object is to provide simple and effective means whereby the contents of either oven can be readily removed whenever desired and whereby either oven can be as easily re-charged.

A still further object is to provide simple and efficient means for operating the doors of the oven and for holding the carriers within the oven against movement if so desired.

Another object is to provide simple and efficient means for illuminating the interior of each oven so that the contents thereof can be viewed whenever desired.

Another object is to provide a device of this character all parts of which are readily accessible for the purpose of cleaning or repairing them.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a perspective view of the device, the walls and top being broken away to show the interior construction and the doors of the firebox and heat distributing conduits being removed, one of the ovens being open and the carrier withdrawn therefrom; Fig. 2 is a sectional perspective view taken from side to side of the device, the partition in rear of the fire box and between the conduits being partly broken away; and Fig. 3 is an enlarged section through a portion of one of the walls and showing the illuminating device therein.

Referring to the figures by characters of reference, 1 and 2 designate the front and rear walls respectively of the device and 3 and 4 designate the side walls thereof. Interposed between and parallel with the front and rear walls are heat distributing conduits 5 and 6 formed by arches 7 which are supported along the cen-

ter of the structure for a portion of their lengths by a partition 8. This partition extends to the rear wall 9 of a fire box 10 separated from the conduits 5 and 6 by walls 11 in which are formed outlet ports 12. An ash pit 13 extends under the fire box and below a grate 14 which is supported in the bottom of the fire box in any desired manner. The ash pit preferably extends beyond the side wall 3 and has a removable closure 15. A door 16 closes the outer end of the fire box 10 and doors 17 are disposed adjacent opposite sides of the door 16 and constitute closures for the conduits 5 and 6. Only one of these doors has been shown but it will be understood that the door 17 disclosed in Fig. 2 is to be duplicated for the conduit 6.

The floor 18 of the lower oven 19 is formed of masonry supported by the arches 7 and the top of the fire box 10 and that portion of wall 4 at one side of oven 19 has a flue 20 therein which extends downward across the ends of conduits 5 and 6 and opens thereinto. Another oven 21 is disposed above the oven 19 and its floor 22 has flues 23 extending from side to side of the structure and is preferably spaced apart by metallic beams 24. These flues 23 open at one end into the upper portion of flue 20 while the other end of the flues 23 open into the lower portion of a flue 25 formed within that portion of wall 3 at one side of oven 21. The top of the structure also has flues 27 extending therethrough from side to side and separated by metallic beams 28. These flues 27 open at one end into the upper portion of flue 25 while they communicate at their other end with a chimney 29. Openings 30 are formed in the walls 3 and 4 at the ends of flues 23 and 27 and each of these openings has a closure 31.

A door 32 is formed in the front wall 1 of each oven 19 and 21 and by opening these doors the contents of the ovens can be viewed. In order that the ovens may be illuminated an opening 33 is formed in the wall 1 of each oven and the inner end of this opening is closed by a panel 34 of mica. Disposed within the opening and outside of the mica panel is a lamp 35 having a reflector 36 for directing the light rays into the oven. A passage 37 is formed in the wall 1 above each lamp so as to carry off the products of combustion therefrom and permit a circulation of air through opening 33 and passage 37 and thereby prevent the lamp from becoming overheated.

That end of each oven which is farthest removed from door 32 is closed solely by a door 38 secured to and supported by a shaft 39 journaled in brackets 40 on the wall 2. This shaft has a gear 41 at one end which meshes with the gear 42 designed to be rotated by means of a crank 43 and a dog 44 is pivotally mounted

upon the wall 3 and is designed to engage gear 42 so as to lock the two gears against rotation. It is therefore obvious that by disengagng the dog from gear 42 shaft 39 can be turned so as to raise the door 38 any desired distance and the door can be locked in adjusted position by returning the door into engagement with the gear. The lower corners of each door 38 are cut away as shown at 45 so as to fit around inclined rails 46 extending from front to rear of each oven close to the side walls thereof. These rails are supported in the ovens by arms 47 upstanding from metallic cross strips 48 secured in any suitable manner upon the floors of the ovens. The inclined rails 46 are extended through the openings of doors 38 and terminate in hooked ends 49. These outwardly projecting rails are preferably provided with supporting standards 50. A carrier 51 is mounted on each pair of rails 46 and has rollers 52 mounted to travel on the rails. The carriers are designed when located within the ovens to practically cover the floors thereof and the upper surface of each carrier is horizontal.

Each carrier is designed to be held against movement in the oven by means of a shaft 53 which extends transversely within each oven adjacent the door 38 and has fingers 54 extending therefrom and designed to press against the front end of the carrier. Each shaft has a crank 55 at one end and a ratchet wheel 56 designed to be engaged and held by a pawl 57. It is therefore obvious that the fingers 54 can be secured against the carrier and will hold it within the oven when the door 38 is opened. By releasing the ratchet wheel 56, however, the fingers 54 will swing downward out of the path of the carrier and the same will be free to ride downward upon the rails 46 and until it is stopped by the hooks 49.

It is of course understood that the products of combustion upon leaving the fire box 10 will pass through the ports 12 and into the conduits 5 and 6. From these conduits said products will pass into the flue 20 and thence through flues 23 to flue 25 and flues 27 from which they will escape through chimney 29. It is therefore apparent that each oven will be thoroughly heated at the top and bottom. All parts of each oven are evenly heated and the uniform baking of the contents of the ovens is therefore insured. These contents can be viewed at any time through the doors 32 and by the light of the lamps 35. In order that the moisture may be supplied to the contents of the ovens steam pipes 58 extend thereinto and are provided with minute

outlets through which a small percentage of steam can discharge into each oven.

What is claimed is:

1. A structure of the character described having a fire box therein, non-communicating heat distributing conduits at opposite sides of the fire box and extending in rear thereof, said fire box opening at its sides into the conduits, superposed baking chambers above the conduits and fire box, flues above and below the upper baking chamber, said upper and lower flues communicating at one end through an end flue and said lower flues communicating at their other end with one end of the conduits, the longitudinal centers of said upper and lower flues and the conduits being disposed along planes extending transversely of the baking chambers, a carrier within each baking chamber, and means for directing each carrier into position outside of the baking chamber.

2. In a structure of the character described the combination with a baking chamber, and means for heating the same; of a door normally disposed by gravity in shut position, mechanism for swinging the door to open it, means for locking said mechanism to hold the door in raised or partly raised position, inclined rails within the baking chamber and extending through and beyond the door, a carrier mounted to travel by gravity upon the rails, a shaft extending through the rails, means for rotating the shaft, means upon the shaft for holding the carrier against movement, and means for locking the shaft.

3. In a structure of the character described the combination with a baking chamber, and means for heating the same; of a door normally disposed by gravity in shut position, a gear carried by the pivot of said door, revoluble manually actuated means for operating said gear, and means for locking the gear against rotation to lock the door in raised or partly raised position.

4. In a structure of the character described the combination with an oven having an open end and a closure for said end; of inclined rails within the oven and extending through and beyond said end, a wheel supported carrier mounted upon the rails, means in the path of the carrier for holding it against movement upon the rails, and manually operated means for removing said holding means from the path of the carrier.

5. In a structure of the character described the combination with an oven having an open end and a closure for said end; of inclined rails within the oven and extending through and beyond said end, a wheel supported carrier mounted upon the rails, a shaft revolubly mounted within the oven, holding fingers extending therefrom, manually operated means for swinging said holding means into or out of the path of the carrier, and a locking device for said means.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHAS. E. LYST.

Witnesses:

JOE G. FIELD,
ANNA B. FIELD.