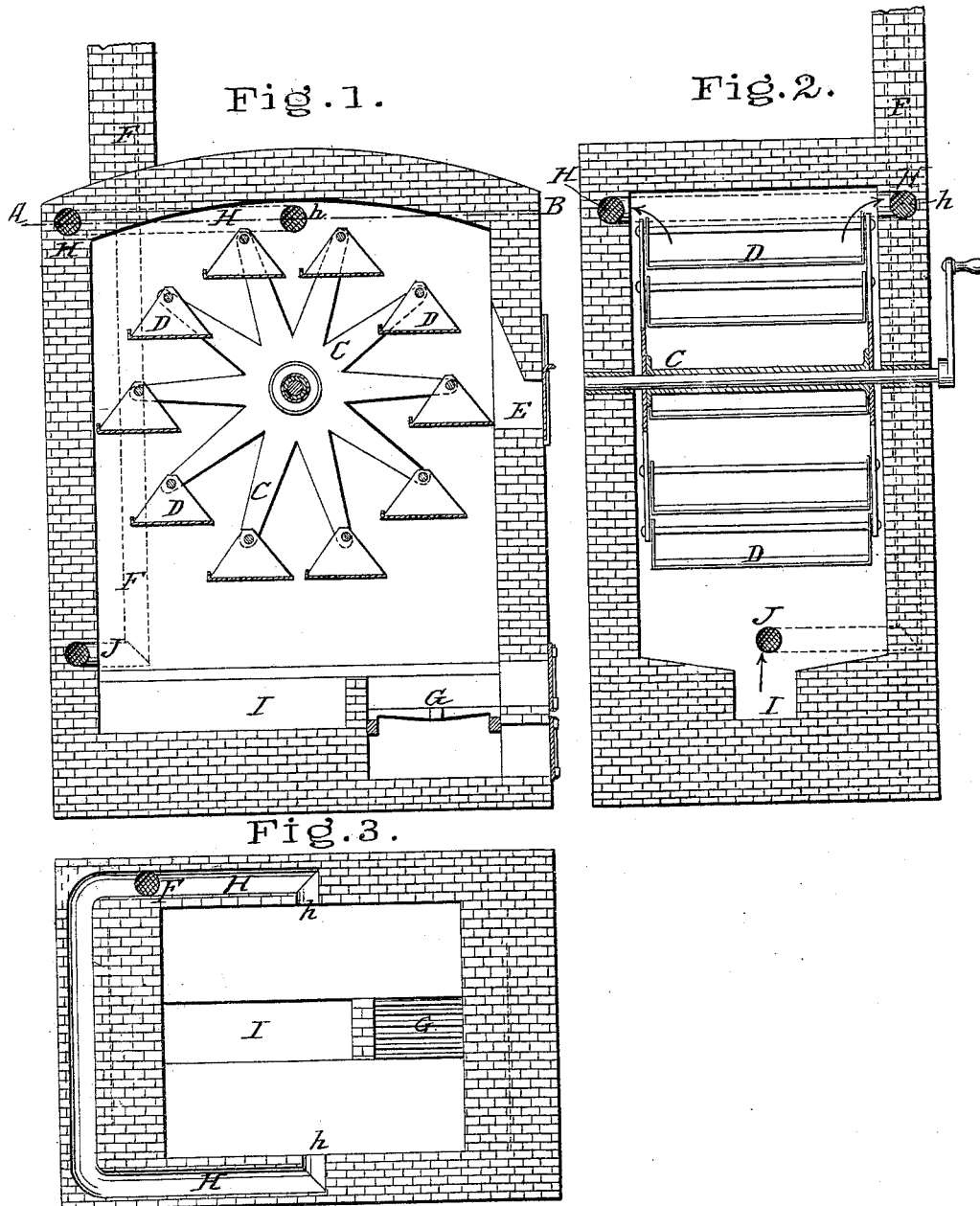


J. HALL.
Bakers' Oven.

No. 108,258.

Patented Oct. 11, 1870.



Witnesses.
E. H. Layman.
Harry Millward.

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UNITED STATES PATENT OFFICE.

JAMES HALL, OF CINCINNATI, OHIO.

IMPROVEMENT IN BAKE-OVENS.

Specification forming part of Letters Patent No. **108,258**, dated October 11, 1870.

To all whom it may concern:

Be it known that I, JAMES HALL, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Revolving Reel Bake-Ovens; and I hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing, making part of this specification.

My invention relates to the class of bake-ovens which are fitted with revolving reels carrying swinging or gravitating trays, upon which the bread to be baked is placed; and consists in the provision of an open furnace for the oven, which, in connection with peculiarly-arranged flues, will heat the oven without permitting the smoke, dirt, or ash-dust to rise among the trays, and enables the oven to bake with increased rapidity and economy of fuel, as compared with the furnaces with closed arched tops or covers heretofore used in this class of bake-ovens.

Figure 1 is a vertical section, from front to rear, of a revolving reel bake-oven embodying my invention. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a sectional plan through line A B, Fig. 1.

The revolving reel C is journaled on the walls of the oven, as shown, and is provided with the customary swinging trays D. E is the opening through which the bread to be baked is inserted, and withdrawn when baked. F is the rising flue or chimney. G is the furnace or fire-chamber. It is entirely open on top, the gases emitted from it being permitted to pass freely around and among the trays of the reel, and escape by way of the side open-

ings *h* of the horizontal flues H H, leading and discharging into the chimney F. At the back of the furnace G is a pit, I, for the collection of ashes, dirt, and other heavy particles, which are carried for a short distance by the current, which rapidly passes through the grate-bars when the fire is stirred up. At the back of the furnace I provide a horizontal flue, J, which communicates with the chimney F. This flue, being low, and having a powerful draft, entirely prevents the smoke, ash-dust, &c., from rising among the trays, and carries it into the chimney. This dust, &c., on its way to the chimney J from the fire, may in part fall into the pit I, provided for it. This provision of flue J entirely prevents anything but pure light gases from rising into the baking-chamber.

Gas-coke is used preferably as fuel for this bake-oven, and it will be seen that, in consequence of the products of combustion being permitted to escape directly into the baking-chamber from the fire, and not confined by an inclosed chamber and flues, this oven can be heated more rapidly, and kept at the required temperature at much less expense of fuel, than any revolving reel bake-oven heretofore in use.

I claim—

A revolving reel bake-oven constructed with an open fire-place or furnace, G, back flue J, top flues H H *h*, and chimney F, constructed and arranged substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

JAMES HALL.

Witnesses:

FRANK MILLWARD,
J. L. WARTMANN.