

J. & C. L. VALE.

Baker's Oven.

No. 104,083.

Patented June 7, 1870.

Fig. 1,

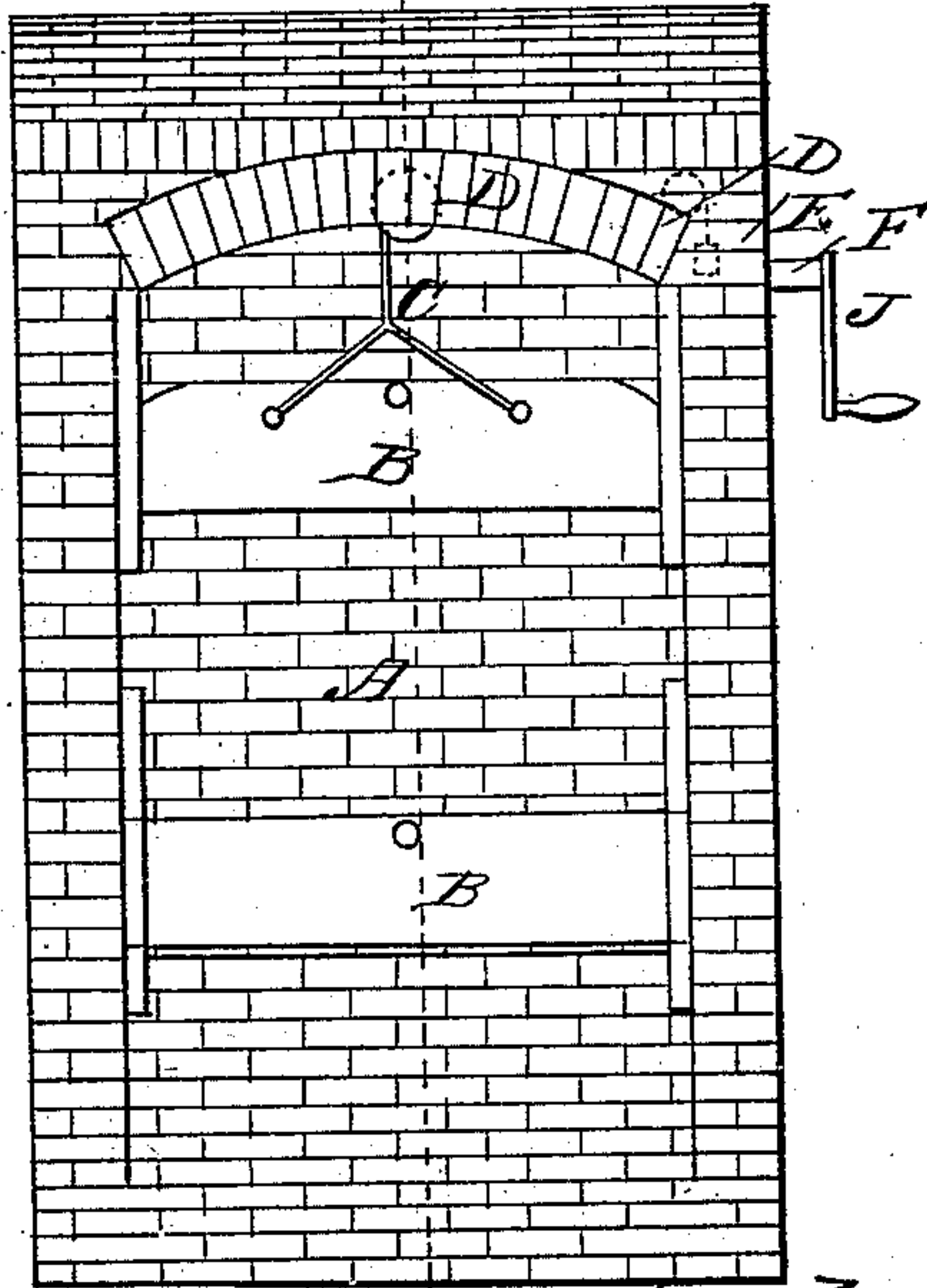


Fig. 2,

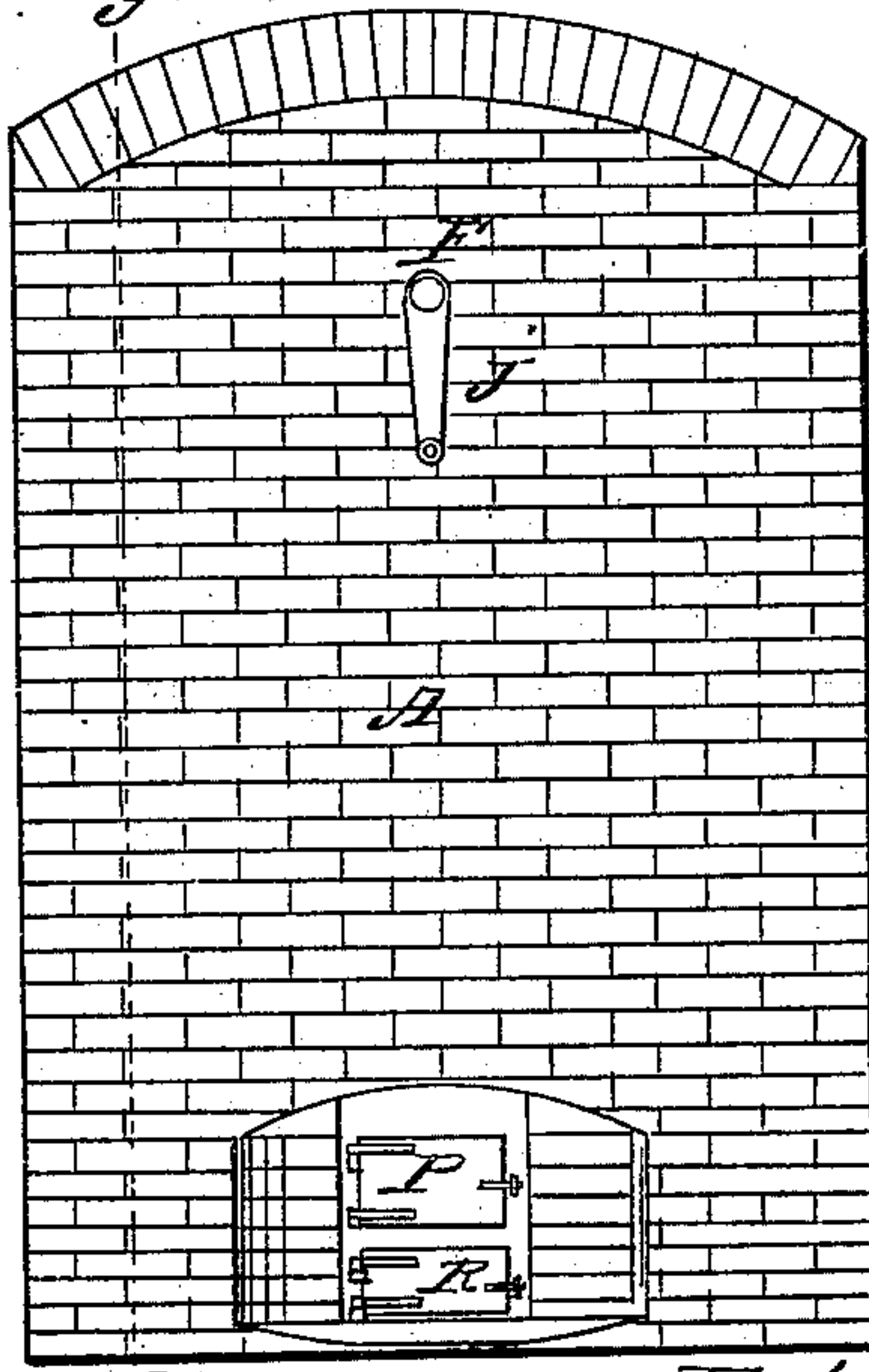


Fig. 3,

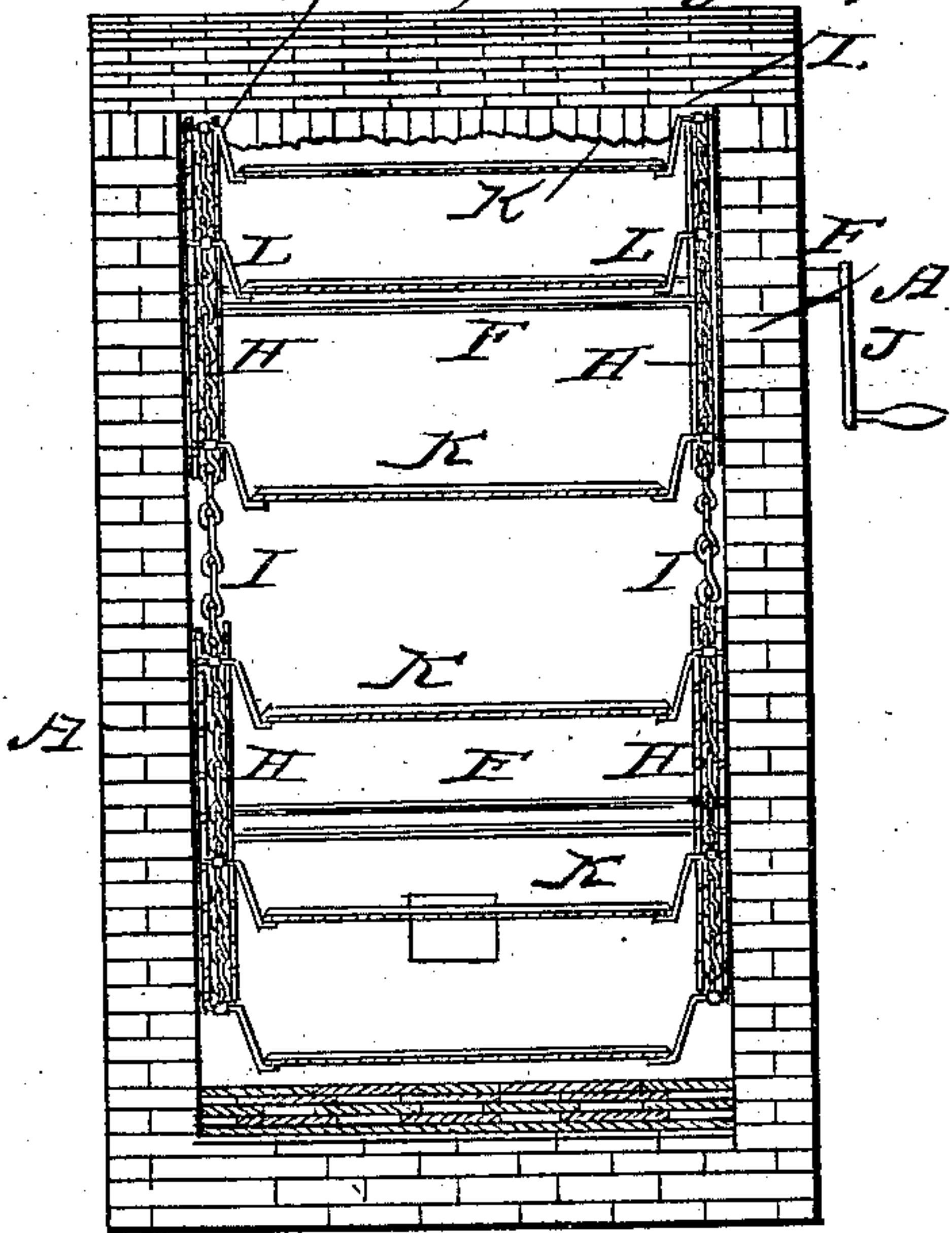
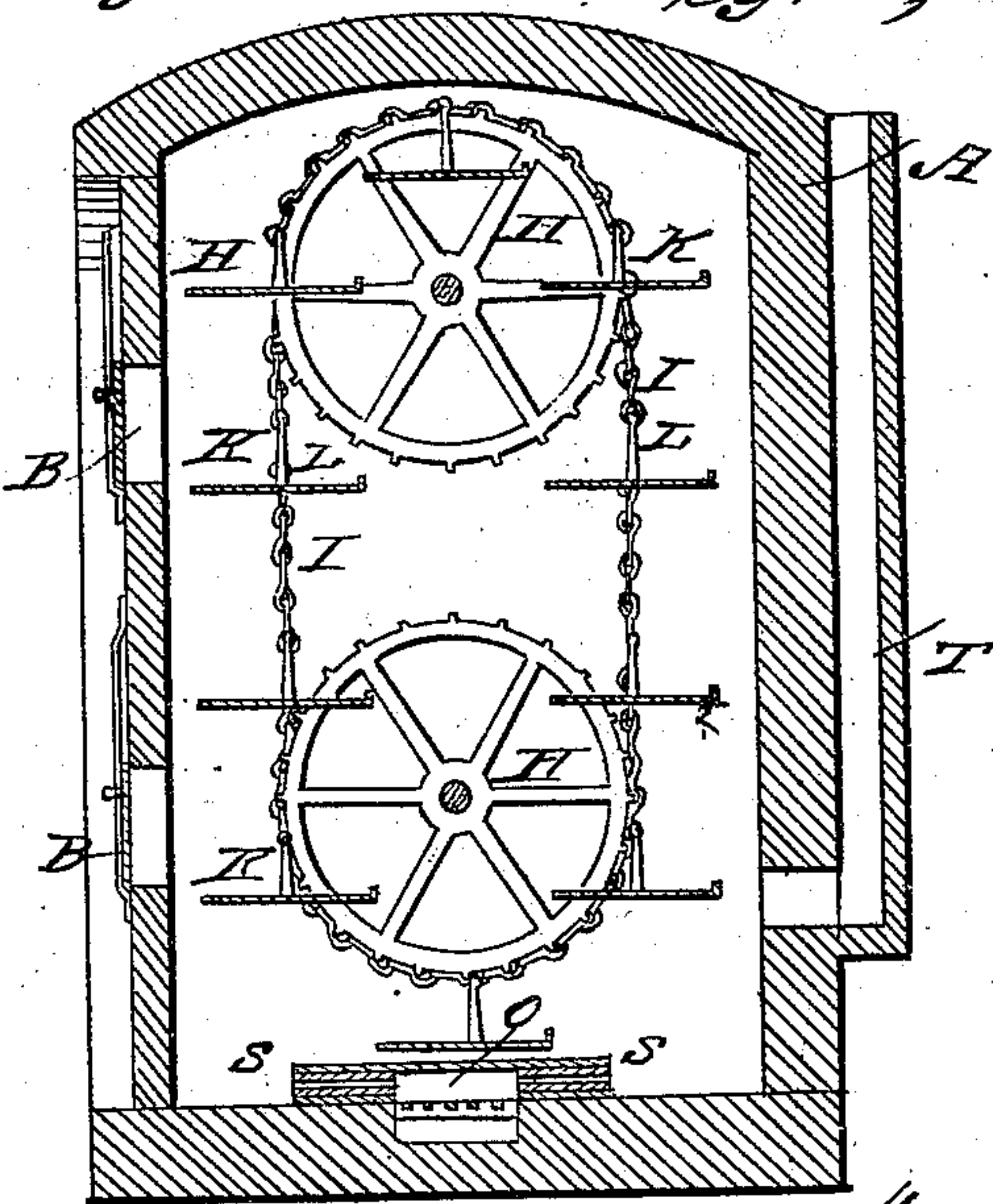


Fig. 4,



Witnesses:  
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 Joseph Vale  
 Charles L. Vale  
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 atty



# UNITED STATES PATENT OFFICE.

JOSEPH VALE AND CHARLES L. VALE, OF CHICAGO, ILLINOIS.

## BAKER'S OVEN.

Specification forming part of Letters Patent No. **104,083**, dated June 7, 1870.

We, JOSEPH VALE and CHARLES L. VALE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Ovens, of which the following is a specification, reference being had to the accompanying drawing.

### *The Object and Nature of the Invention.*

The first part of the invention relates to the shelves so suspended from endless chains as to remain the same side up while the endless chains are carried on wheels, as hereafter fully described.

The object of suspending the baking-shelves directly from the chains, and having the chains pass over wheels, as described, is to build the oven in the least possible space, giving it additional height and less ground-room; and also a narrow, tall, or high chamber cooks more economically when the heat is admitted at the bottom of it than a wide and low chamber; and our invention also relates to the arrangement of the two or more doors in the oven, so that it can be operated from either floor of the building, or the oven can be fed from one floor of the building and its baked contents removed through the door on another floor.

### *Description of the Drawing.*

Figure 1 represents a front elevation of our oven; Fig. 2, an end elevation; Fig. 3, a sectional view at the line *x x*; Fig. 4, a sectional view at the line *y y*.

### *General Description.*

A represents the wall of the oven, which we usually make of brick. B are the oven-doors, with a cord, C, extending over the pulleys D to the weight E, which balances the door, so that it can be easily opened and closed. We build the oven extending through two or more stories of the building, and there is a door, B, in each story. This avoids the necessity of feeding and removing the baked material from the oven on the same floor, and then elevating to another floor for packing, as is usually the case. There are two shafts, F, across the interior of the oven, on each of which there are two wheels, H, with teeth or cogs on their periphery, as shown.

I are endless chains, made sufficiently long

to extend over one of the wheels on each shaft, and they are revolved with the wheels as they are turned by means of the teeth thereon. One of the shafts F extends through the wall of the oven, and has a crank, J, or pulley on it, by which it is driven.

K are shelves suspended on arms L, that have bearings in the chains I, on which they turn as the chains are carried around on the wheels, so that the shelves remain suspended the same side up the entire revolution through the oven.

By hanging the shelves K on the chains I they can operate in an oven only twice the width of each shelf, that width giving sufficient space for the shelves to pass each other as they pass over the wheels.

In making the ovens, however, we usually allow a little space, so that the heat will pass up among the shelves without interruption.

Frequently in cities it is desirable to build ovens for baking on narrow lots of ground, and an oven that can be built narrow and high is very desirable; and as the heat has a tendency to rise, a high narrow oven will retain the heat better than a low broad one.

It will also be observed that the shelves are carried through all parts of the oven, so that the baking will be done evenly on all the shelves alike.

O is the furnace, extending across the oven, with a door, P, for admitting fuel at each end. Q are the fire-grates. R are the doors to the ash-pit beneath the grates. S are flues opening directly into the oven, and T is the smoke pipe or flue.

### *Claim.*

What we claim, and desire to secure by Letters Patent, is—

The shelves K, chains I, and wheels H, when the shelves are suspended on the chains, the axis of their suspension being at the periphery of the wheels, and all are constructed and operating in an oven, substantially as and for the purposes specified and shown.

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Witnesses:

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