(No Model.)

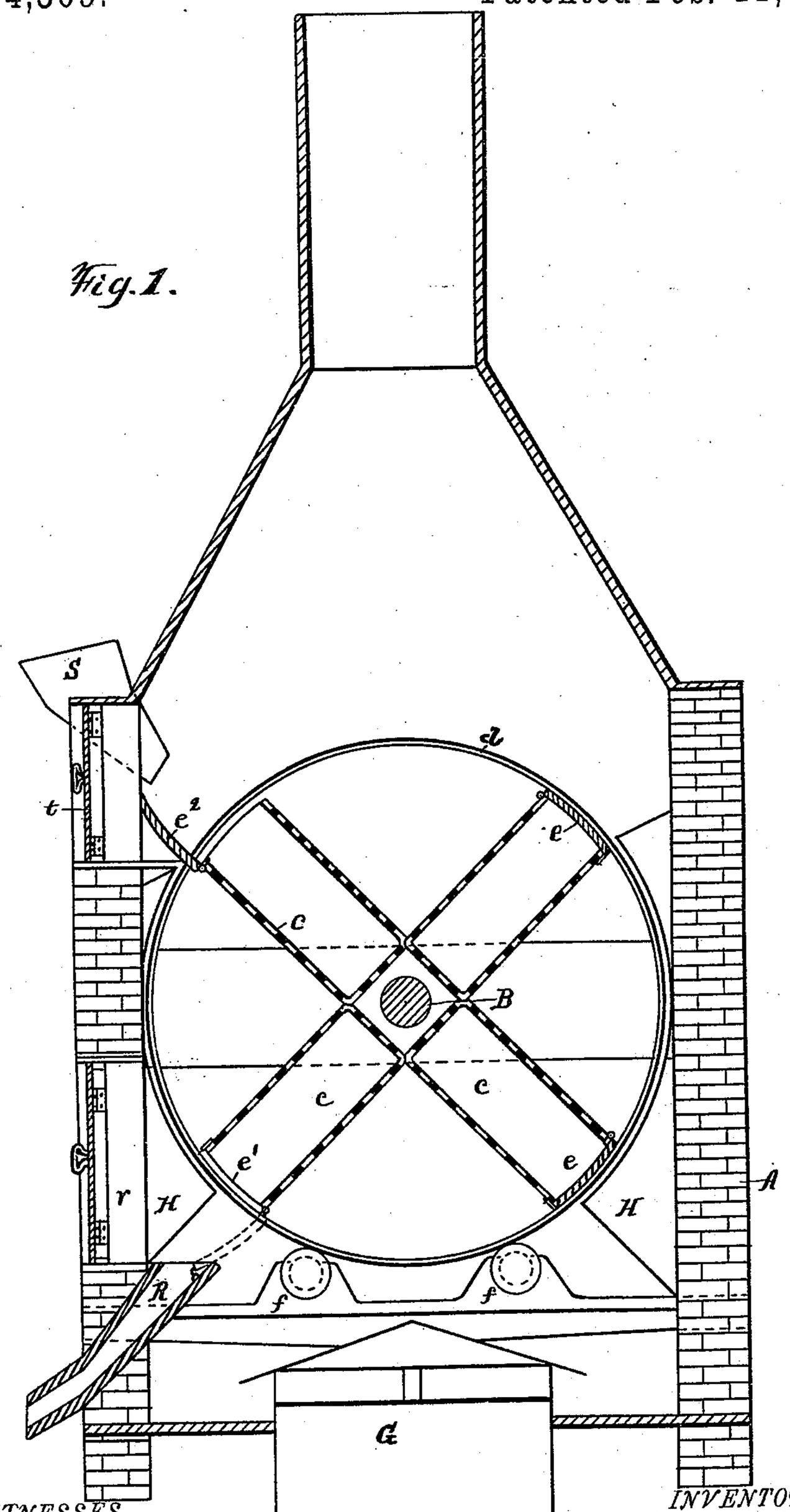
2 Sheets—Sheet 1.

L. A. HENZE.

MALT DRIER.

No. 554,509. Patented Feb. 11, 1896.

Fig. 1.



WITNESSES

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Virginia M. Clough.

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(No Model.) 2 Sheets—Sheet 2.

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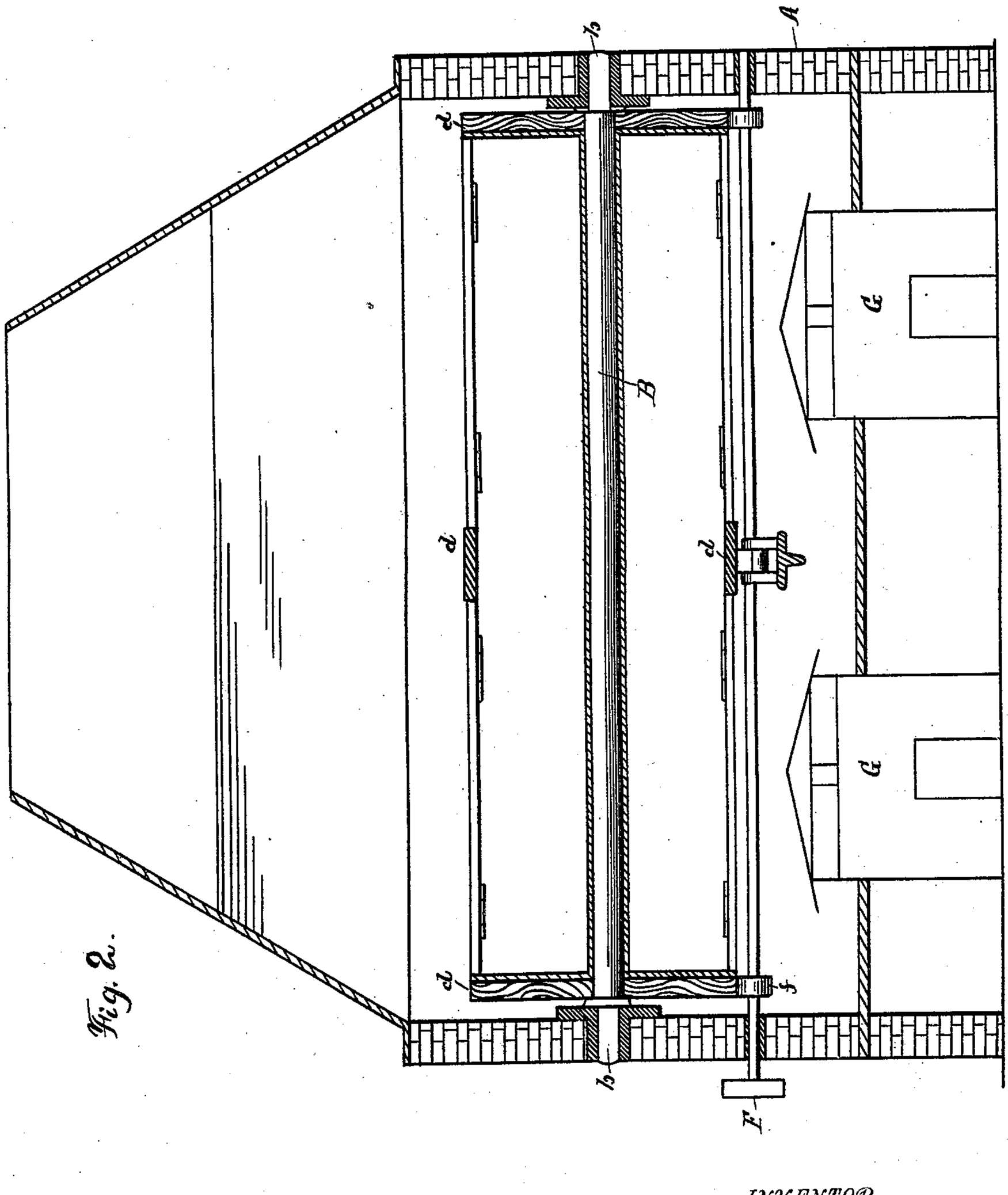

Fig. 2.

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UNITED STATES PATENT OFFICE.

LOUIS A. HENZE, OF DETROIT, MICHIGAN.

MALT-DRIER.

SPECIFICATION forming part of Letters Patent No. 554,509, dated February 11, 1896.

Application filed September 14, 1895. Serial No. 562,484. (No model.)

To all whom it may concern:

Be it known that I, LOUIS A. HENZE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Malt-Drying Processes; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to malt-driers, and has for its object an improvement in buildings in which malted barley or other malted grain may be dried rapidly and perfectly without the usual labor of handling and otherwise treating the same.

In the drawings, Figure 1 is a cross-section of the building and appliances contained therein. Fig. 2 is a sectional longitudinal view of the main shaft of the drier.

A indicates the walls of the building, which is in the form of an ordinary rectangular building provided with a gabled or hip roof, with a suitable chimney-orifice. Centrally through this building extends a shaft B, terminating at its ends with bearings *b b*, which are held in suitable boxes supported in the main walls of the building, or in any other suitable way. The shaft B supports a number of rectangular boxes, the upper and under walls of which are made of perforated material having perforations so coarse that heated air would pass through them, but so fine that the malted grain would not pass through. This may be of perforated sheet metal, or woven material, or any similar suitable substance. The ends of the several boxes are supported and held in position by a ring *d*, and there may be of these rings (each of which is concentric to the main shaft B) any suitable number to furnish proper support to the boxes *c c*. The ends of the boxes, by which is meant those portions which are parallel with the main shaft B and join the perforated upper and under sides, are made in the form of doors *e e*, hinged to the under piece so that they may be readily opened, as indicated in Fig. 1 at e' and e^2, and they are also provided with proper hasps and catches to hold them shut at times when it is not desired to have them open. Through one of the side walls of the building there is, near the top, a chute S, and an inspection-door or a number of inspection-doors *t*, and on the same side of the building, near the bottom of the wall, there is an exit-chute R and an inspection-door *r*. The door e^2, when open, as shown in Fig. 1, forms a prolongation at the bottom of the chute S, and guides grain thrown into the chute S directly into the box *c*. The door e', when in the position indicated in dotted lines in Fig. 1, forms a continuation of the bottom of the box *c*, and directs the outflowing grain from box *c* into the delivery-chute R.

f f indicate two driving-rollers suitably mounted on framework in the building, and one of which at least receives motion from some external source, as the driving-wheel F. (Shown in Fig. 2.) Motion communicated to these driving-wheels, acting by friction on the rim *d*, serves to rotate the drying-boxes *c c* on or with the shaft B, so that both sides of the boxes *c c* are successively brought and repeatedly brought, if desired, next to the top of the furnace G.

H H indicate side guards secured to the walls of the building and extending for about ninety degrees into close contiguity with the paths of the ends of the drying-boxes *c c*, the purpose of these guards being to prevent the rising heat from passing between the ends of the boxes and the walls and compelling it to pass through the contained material. The doors *r* and *t* furnish a ready access to the interior of the building at a place such that the contents of the boxes may be inspected at any time, and the flap-doors e' e^2 may be opened or closed as desired.

The boxes *c c* may be opened from one end to the other, giving free passage-way to the material, or they may be closed by cross-partitions around the shaft, as indicated in Fig. 1, it being immaterial to the successful working of the devices whether there be free passage-way to the material clear across the box or only part way across it.

What I claim is—

1. In a dry-house for malt, the combination of a central shaft, drying-boxes extending radially from the shaft, provided with perforated inclosing walls parallel with the radial line from said shaft and with doors at

the ends of said boxes adapted to form continuations of said inclosing walls and a guarding-partition adapted to direct the heat through the drying-boxes, substantially as described.

2. In a dry-house for malt, the combination of a central shaft, drying-boxes extending radially from the shaft and provided with perforate inclosing walls parallel with the radial lines from said shaft, and with doors at the ends of said boxes adapted to open outward as extensions of the box sides, an inlet-spout adapted to deliver into the open end of a box when near the top, and an outlet-spout adapted to receive and conduct the outflowing malt from a box when near the bottom.

In testimony whereof I sign this specification in the presence of two witnesses.

LOUIS A. HENZE.

Witnesses:
FRANCES CLOUGH,
CHARLES F. BURTON.