(No Model.) 2 Sheets—Sheet 1.

M. L. HULL

OVEN.

No. 255,865. Patented Apr. 4, 1882.

Fig. 1.

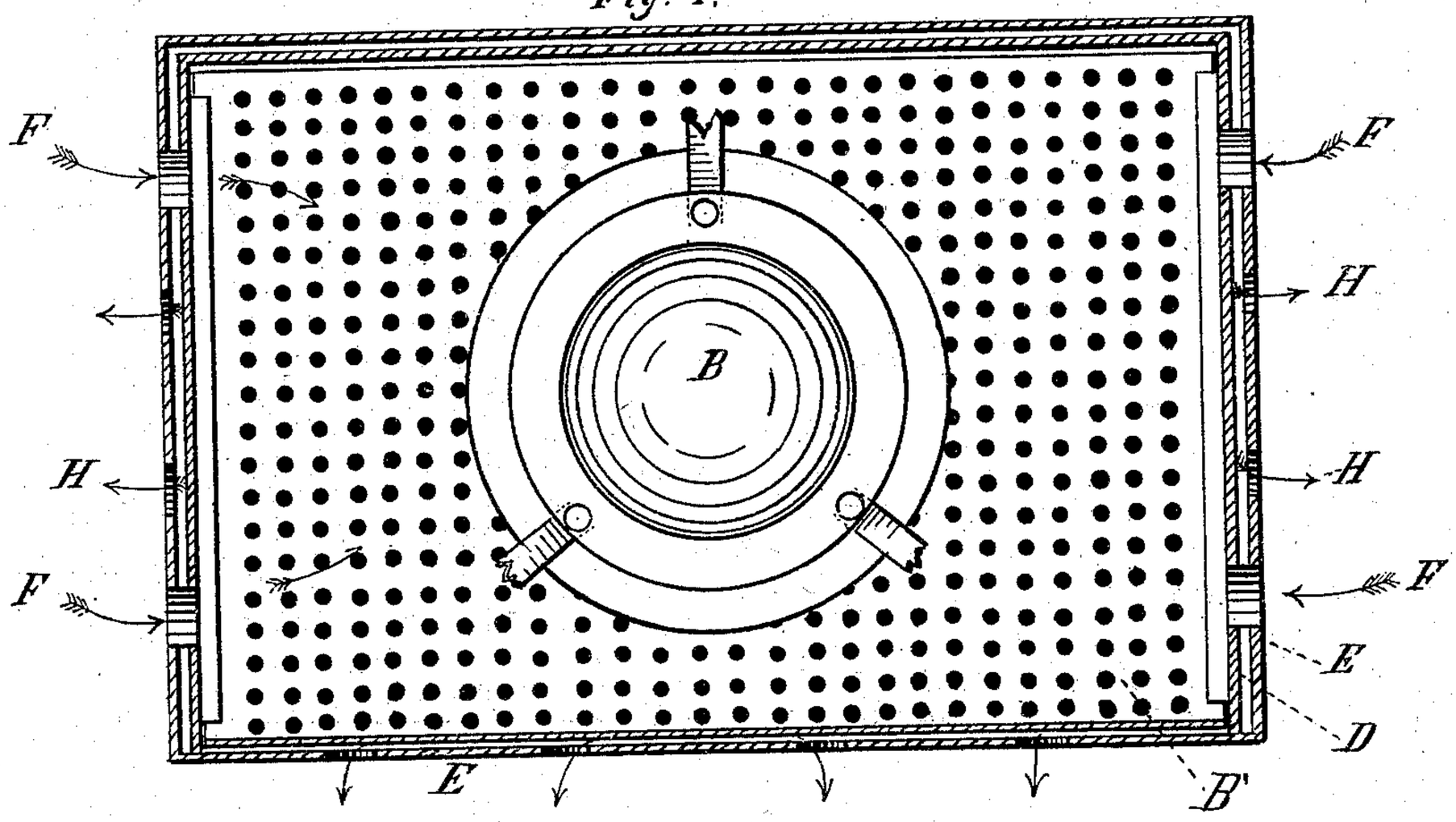


Fig. 2.

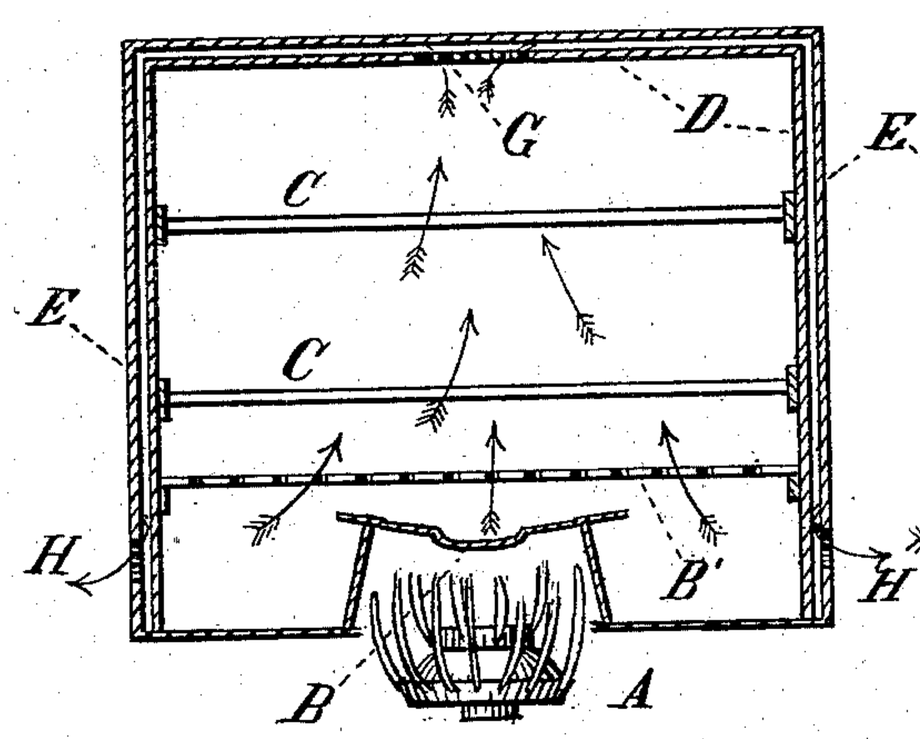
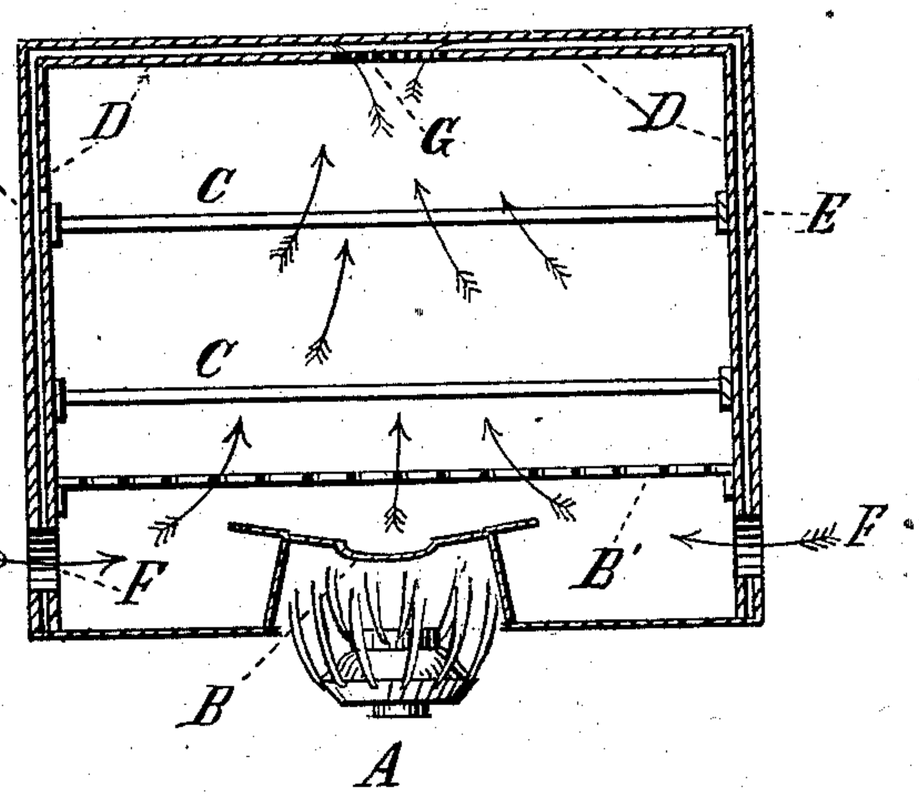


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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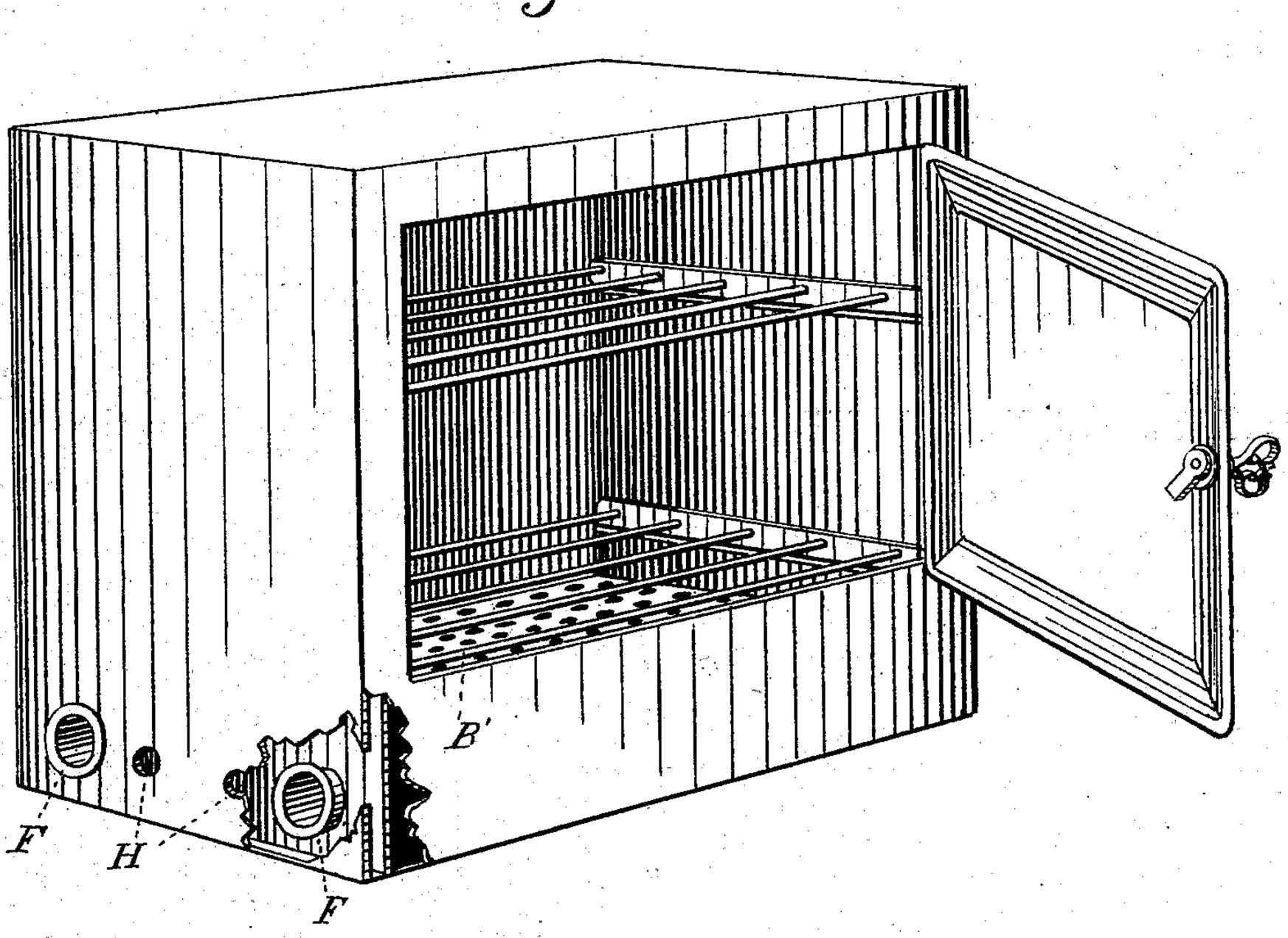
Fig. 4.



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UNITED STATES PATENT OFFICE.

MARTIN L. HULL, OF CLEVELAND, OHIO.

OVEN.

SPECIFICATION forming part of Letters Patent No. 255,865, dated April 4, 1882.

Application filed November 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, MARTIN L. HULL, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Ovens; and I do hereby 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 it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to ovens, and especially to ovens adapted for use in connection with vapor-burning and similar stoves; and it consists in the construction and arrangement substantially as hereinafter specified.

In the drawings, Figure 1 is a view in longitudinal horizontal section, looking upward from beneath the stove. Fig. 2 is a view in transverse vertical section, showing the arrangement of the double wall and the construction and arrangement of parts for permitting a heating and escape of air from the oven; and Fig. 3 is a view in transverse vertical section, showing the construction and arrangement of parts for admitting air through the double wall within the chamber of the oven, and for allowing its escape. Fig. 4 is a perspective elevation with portions broken away to show the interior of the walls.

A is any suitable burner or source of heat.

B is a dispersing-plate, against the lower face of which the heat primarily impinges, and is thereby diffused evenly and gently within the chamber of the oven.

C C are suitable grated or perforated shelves, supported within the chamber of the oven by brackets or otherwise. The precise construction or number of these shelves or the manner of attaching them, whether adjustable or otherwise, within the chamber of the oven is a thing to which my invention does not specially relate, and which may be indefinitely varied.

I prefer for general purposes to make the shelves detachable and adjustable, so that they can be taken out or raised or lowered at pleasure. In practice I have found a good effect to follow the use of a perforated bottom shelf, B′, as the heat in passing through the perforations is more evenly distributed within the oven, thus supplementing the function of the dispersing-plate B.

It will be seen that I construct my oven of double walls and separate them, so as to leave an air space between. Both the inner wall, D, and the outer wall, E, are perforated by inlets F. These inlets are in the form of tubes or are equivalently constructed, the object being that air entering through them shall not enter the air-space between the walls before it reaches the interior of the oven.

G is an opening through the upper portion of the inner wall, D. Instead of the single opening G, however, more than one may be employed, if desired.

H H are exit-openings made through the lower portion of the exterior wall, E, and these openings may be of any required number.

The operation of my device is as follows: The heat as it strikes the dispersing-plate B is spread, and in passing through the perforated floor B′ is gently and evenly diffused throughout the chamber of the oven. The air to be heated enters the inlets F, as indicated by the arrows, passing directly from the exterior to the interior of the oven without entering the air-space between the oven-walls. As this air is heated it ascends through the oven-chamber, escaping through the aperture or apertures G, filling the air-space between the walls with hot air. This air as it becomes cooled, and as it is forced by the continuous upward current of warm air, drops and escapes through the exit-openings H. Thus do I effect the following results: first, an even distribution of heat throughout the oven-chamber and a sufficient supply of fresh air, which is heated before entering the oven-chamber proper; second, a prevention of the cooling of the oven-walls by making them double with a hot-air space between; and, third, such a construction as will permit a constant circulation of warm air not only within the oven-chamber but throughout the air-space surrounding it.

The material from which I prefer to construct this oven is sheet metal, although in this respect my invention is not limited.

What I claim is—

1. In an oven having two walls with an air-space between them, the combination, with the

outer wall, provided with openings to the outer air, which are located near the base of the oven, of the inner wall, provided with openings to the air-space between the two walls, said openings being located at the top of the inner wall, and tubular openings connecting the inner and outer walls and located near the base of the oven, substantially as set forth.

2. In an oven having an inner and an outer wall connected by inlets F, and having exits G and H, the combination, with a burner or other source of heat, A, of a dispersing-plate, B, and foraminating plate or floor B′, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTIN L. HULL.

Witnesses:
JNO. CROWELL, Jr.,
ALBERT E. LYNCH.