F. A. HOFFMANN.

Grain Steamer and Drier.

No. 205,551. Patented July 2, 1878.

Fig. 1.

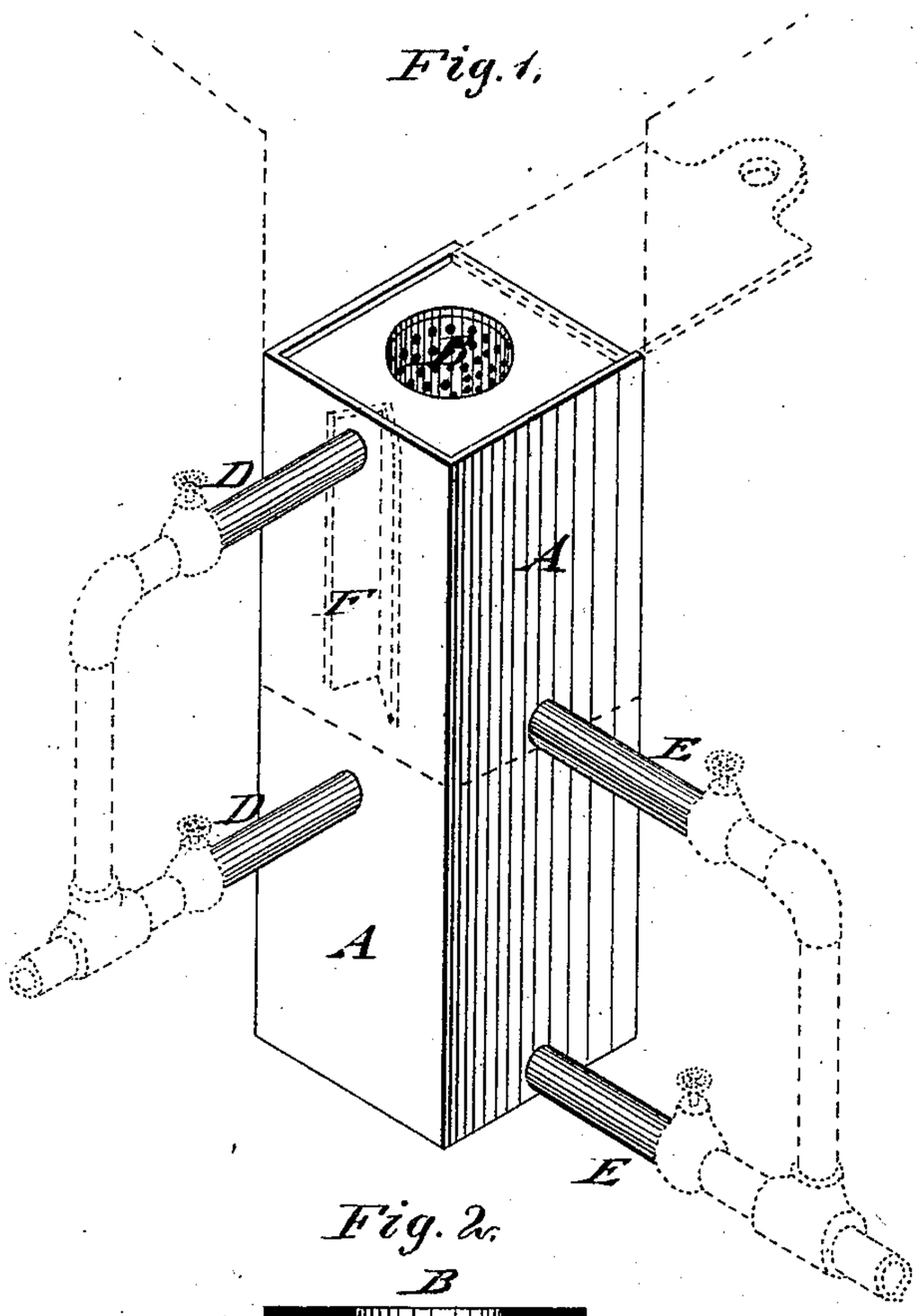
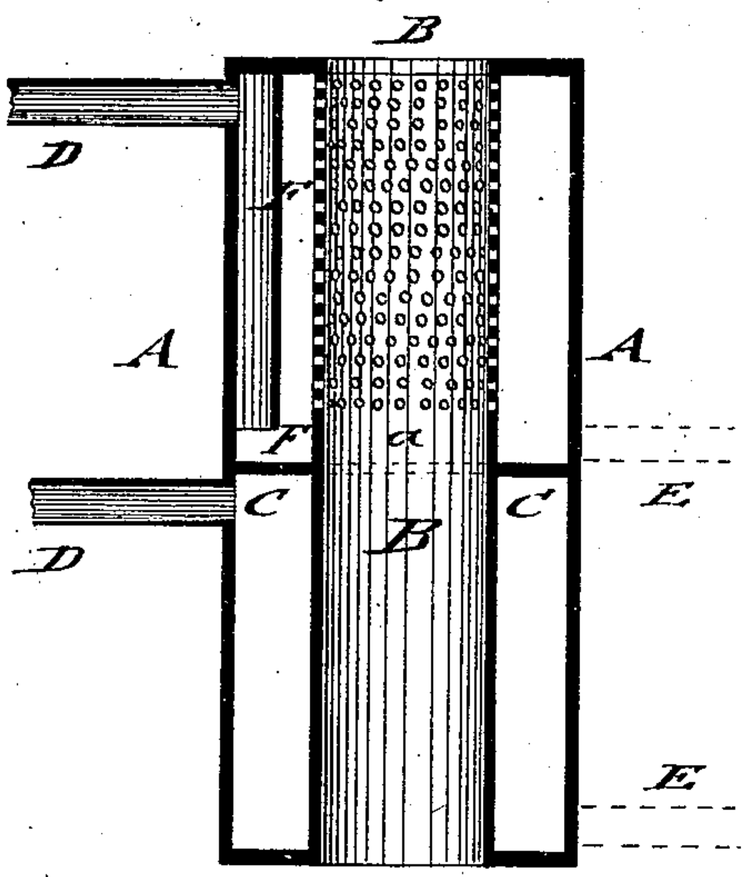


Fig. 2.



WITNESSES:

Henry V. Miller

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UNITED STATES PATENT OFFICE.

FREDRICK A. HOFFMANN, OF BALDWIN CITY, KANSAS, ASSIGNOR TO HIMSELF AND SAMUEL WELCH, OF SAME PLACE.

IMPROVEMENT IN GRAIN STEAMER AND DRIER.

Specification forming part of Letters Patent No. **205,551,** dated July 2, 1878; application filed April 27, 1878.

To all whom it may concern:

Be it known that I, FREDRICK A. HOFFMANN, of Baldwin City, in the county of Douglas and State of Kansas, have invented a new and Improved Grain Steamer and Drier, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a perspective view of my grain steamer and drier, and Fig. 2 is a vertical central section of the same.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish, for the steaming and drying of grain and middlings in simple and superior manner, an improved apparatus by which the burrs may be supplied continuously with properly steamed and dried grain, without removing the apparatus and without any choking of the same by the grains or middlings in their passage to the burrs. By using the apparatus, flour of a greater degree of whiteness and with a lighter bran is obtained, with less waste in the sweepings.

The invention consists in the construction and combination of parts, which will be hereinafter more fully described, and then set forth in the claim.

Referring to the drawing, A represents the outer box of my improved grain steamer and drier, which is preferably made of square shape, and B is the inner conducting-tube, which is secured to the top and bottom walls of the outer box, and to an intermediate horizontal partition, C, that divides the box into separate sections.

The apparatus may be made of two parts and connected at the middle partition, in which case the upper part may be used separately for steaming and the lower part for drying the grain.

The box is connected permanently to the stock-hopper, and the supply of grain regulated by a top slide, as shown in dotted lines in Fig. 1. Both sections of the box are provided with steam-supply pipes D and with drain-pipes E, for the escape of the water of condensation that collects in the lower parts of the sections.

The upper part of the tube B is perforated along its entire length down to a short distance from the partition, so as to leave a solid portion or rim, *a*, a few inches in height, above the partition, which rim serves the purpose of collecting the water and preventing it from getting into the wheat, and for drawing it off to the drain-pipe. The upper section is also provided at the inside with a steam-guard, F, in front of the entrance-opening of the steam. The steam-guard extends downward to a point near the partition, so as to cause the condensed steam to drip down to the lower part and prevent it from getting into the wheat. The hot dry steam only is thereby allowed to pass through the upper perforated part of the tube and through the grain, so as to exert the proper steaming action thereon. The grain is dried in its passage through the lower section, which may be at a higher degree of heat than the other and more perfectly dried.

The conducting-tube conveys the grain in an uninterrupted flow from the stock-hopper to the burrs, and is not liable to choke up, the grain being exposed therein to a proper degree of steaming and drying, so that a whiter flour, with less waste, is obtained. The burrs are also easier dressed, as the wheat becomes softer by the steaming operation. The apparatus may also be used for drying middlings, in which case a greater yield, a whiter flour, and a lighter bran are obtained.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a grain steamer and drier, the combination, with an outer box having horizontal partition, and an interior conducting-tube having perforated upper portion, of a steam-guard extending over the steam-supply opening and down toward the partition, substantially as specified.

FREDRICK A. HOFFMANN.

Witnesses:
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E. E. GADDIS.