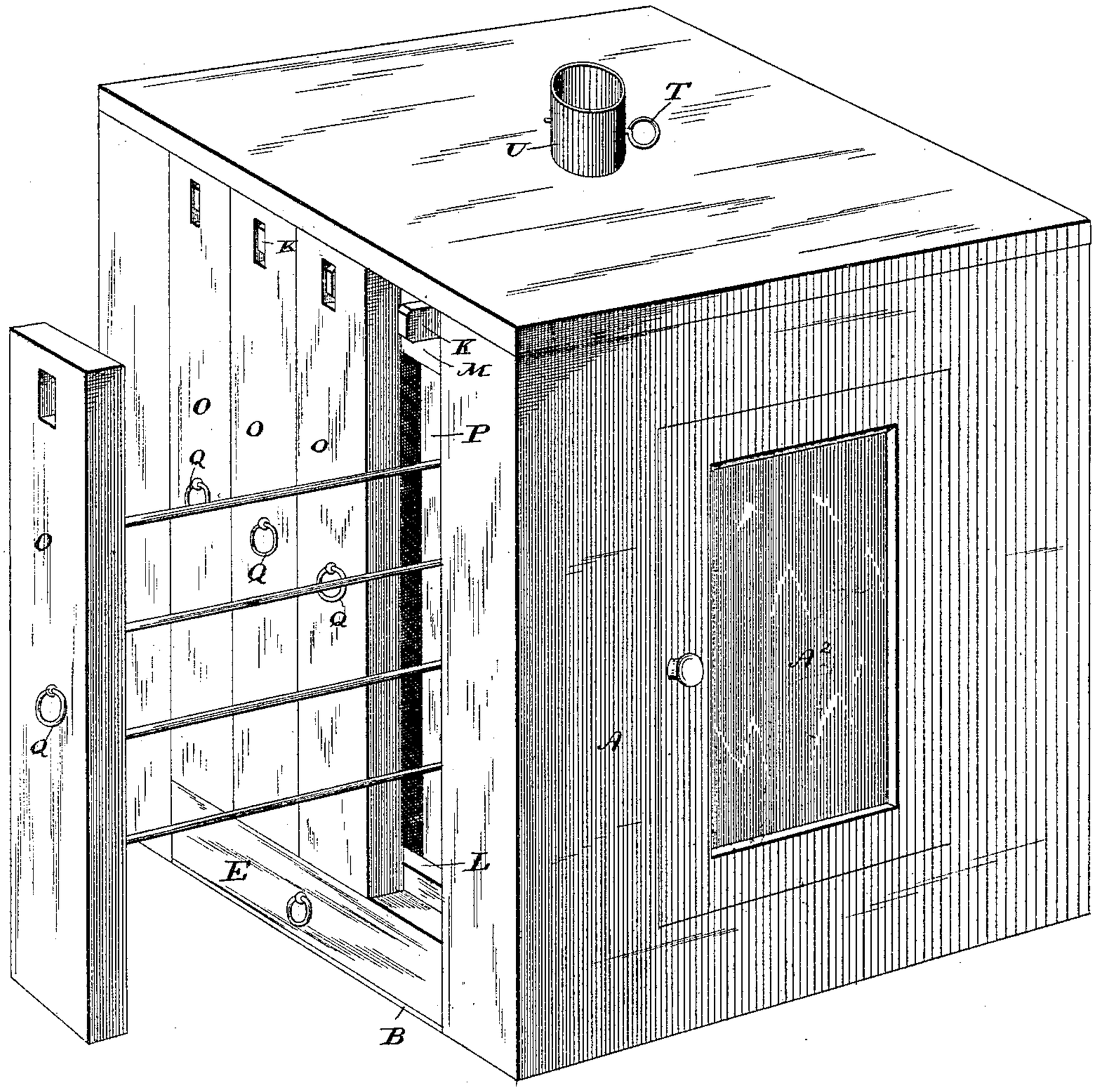
(No Model.) 2 Sheets—Sheet 1.

C. F. WOLF.

DRIER.

No. 318,588. Patented May 26, 1885.

Fig. 1.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

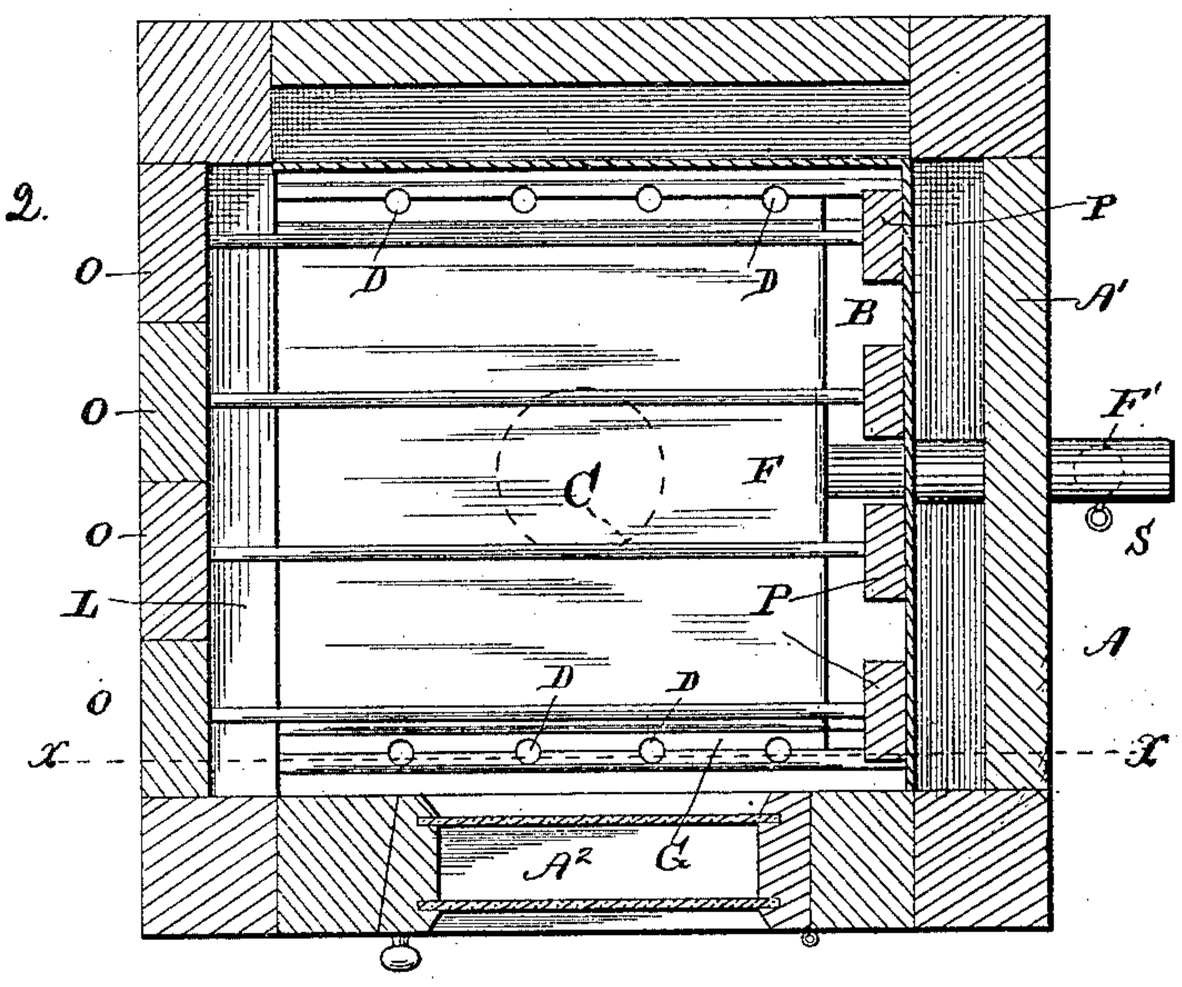
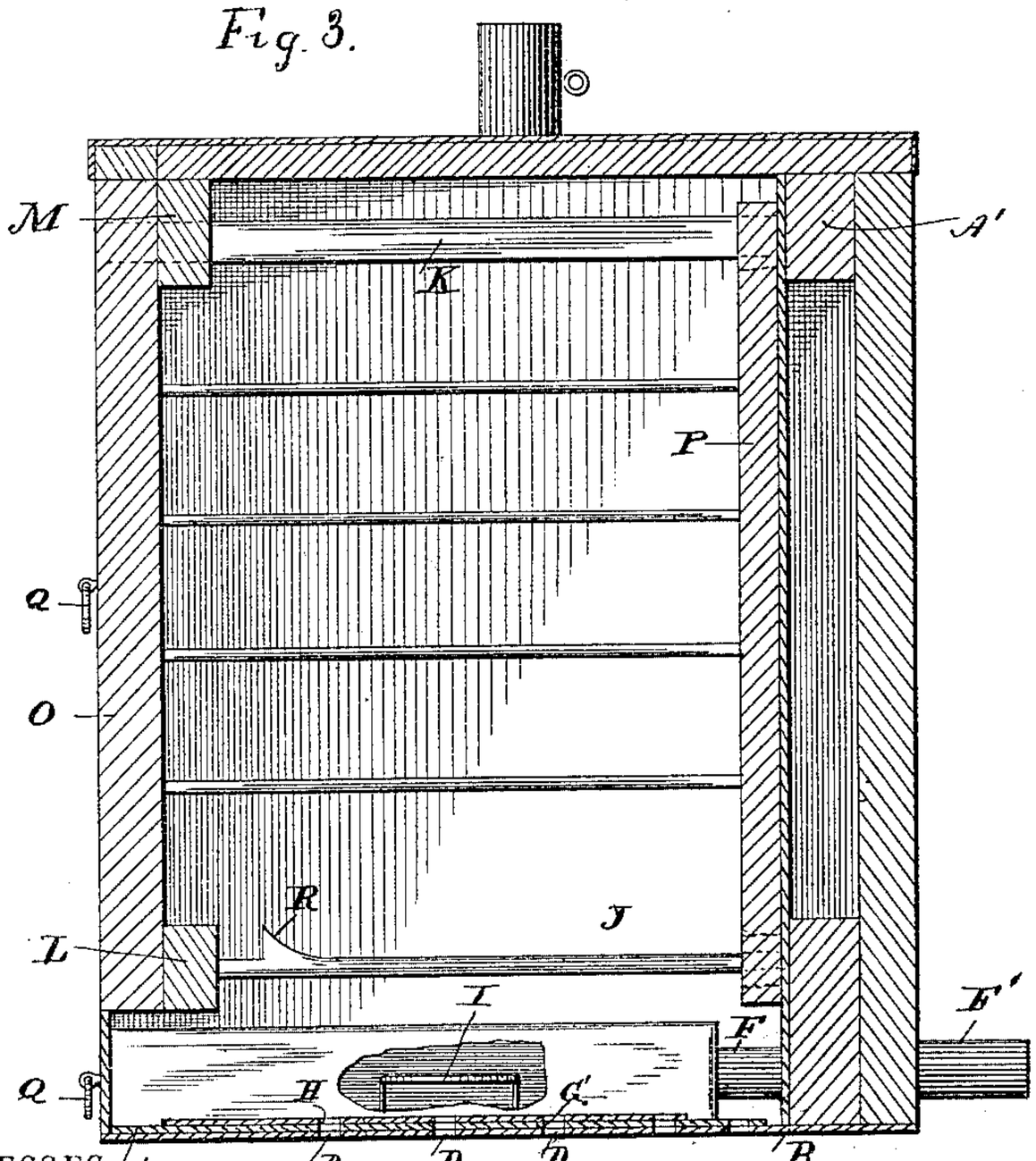


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES FREDERIC WOLF, OF TERRE HAUTE, INDIANA.

DRIER.

SPECIFICATION forming part of Letters Patent No. 318,588, dated May 26, 1885.

Application filed October 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WOLF, of Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Heating and Drying Ovens; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

My invention has for its object to provide an improved oven for drying clothes, fruit, &c., and which shall also be adapted to the baking of bread and other articles of food, such oven to be heated by gas, or by a coal-stove, oil-stove, or other convenient source of heat-supply.

I will first describe my invention at length, and then point out its particular features of novelty in the claims at the end of this specification.

In the accompanying drawings, Figure 1 represents a perspective view of my improved oven with one of the sliding racks pulled out. Fig. 2 is a horizontal section of the same; Fig. 3, a longitudinal section taken on the line *x x*, Fig. 2.

Similar letters of reference in the several figures indicate the same parts.

The letter A indicates the body of the oven, consisting of a chamber of any desired size, formed preferably of wood and lined with galvanized iron, and with orwithout one or more air-spaces within its walls. The bottom of this chamber consists of a metal plate, B, having a large central hole, C, for the admission of heat, and having also a series of smaller openings, D, for ventilation purposes, as will be further on explained. Upon this bottom B is arranged a heat-chamber, E, constructed in the form of an inverted drawer, and adapted to be slid in and out through one of the side walls of the chamber when desired. A pipe, F, is attached to the rear of this heat-chamber, and when the said chamber is slid in is adapted to project into a corresponding pipe, F′, passing through the side of the chamber A and leading out into the open air. The said heat-chamber is further provided with a flange, G, which projects from its sides and inner end, and rests upon the bottom plate, B. A series of openings, G′, are formed in this flange G, and when the chamber is slid to the proper position these openings H register with the openings D in the bottom B, and afford direct communication between the outside and the interior of the chamber A, though when the heat-chamber is moved slightly the said openings do not register and the communication with the outside is cut off. Within the heat-chamber, opposite the opening in the bottom plate, B, through which the heat enters, is arranged a deflector, I, the function of which is to prevent the entering heat from striking directly upon the top of the heat-chamber, but instead to be deflected laterally to the extremities of the heat-chamber, and thus diffuse it.

Within the main drying-chamber are arranged two sets of cross rods or bars, J K, the former being arranged slightly above the top of the heating-chamber, and being supported at one end by the wall A′ of the chamber and at the other end by a cross-piece, L, while the latter (K) are arranged near the top of the chamber, and are likewise supported at one end by the wall A′ and at the other end by a cross-bar, M. These upper and lower cross-rods, K and J, serve as guides for a series of sliding racks, O. The inner vertical pieces, P, of these sliding racks are slotted at their lower and upper ends for the accommodation of the guide-rods K J, while the outer vertical pieces of said racks, when the racks are slid in, abut against each other and constitute the wall of that side of the drying-chamber, their lower ends resting upon the end of the heat-chamber. Each rack is provided with a suitable handle, Q, by which it can be conveniently slid in and out. I form suitable shoulders, R, upon the lower guide-rods, J, near the cross-pieces L, and when the racks are drawn out to their fullest extent their inner vertical pieces pass these shoulders and drop down behind them, the slots in the pieces P being made slightly longer than the guide-rods, so as to allow of this limited up and down movement, and the racks are maintained in vertical position and prevented from sagging by the backs of the pieces P being in contact with the forward portion of said shoulders. One side of the chamber A is preferably closed by a dou-

ble glass door, A^2, through which the contents of the chamber can be inspected while the drying operation is going on. Heat might be supplied to the heat-chamber by placing the chamber over any suitable open fire, stove, gas-stove, or oil-stove; or one or more gas-jets may be lighted beneath the opening C in the lower plate, B, leading to the heat-chamber. If smoke enters the heat-chamber, it will pass out readily through the exit-pipe F′ into the open air, and if it is desired to regulate the amount of heat flowing through the heat-chamber it can be done by manipulating the damper S, arranged in the said pipe F′.

In order that requisite ventilation may be given the interior of the drying-chamber, the heating-chamber may be shifted so as to cause the openings D G′ to register, and a proper circulation can be effected by adjustment of a damper, T, which is arranged in a pipe, U, that leads to the open air from the top of the drying-chamber. Where clothes are to be dried, they are hung upon the racks, and the latter are shifted into their places within the chamber, and but a short time will be required to thoroughly dry them. Where fruit is to be dried or bread or other articles cooked, the material may be placed on trays and the latter slid in upon the cross-bars of the rack through the open door.

I have found from practical tests that light goods can be dried thoroughly in from twenty to thirty minutes and woolen goods in from forty-five to sixty minutes without the slightest injury to the texture of the goods or to their color. I have also found that fruit might be dried and bread and pastry baked within the oven with most satisfactory results.

Having thus described my invention, what I claim as new is—

1. The combination of the drying-chamber having the opening in its bottom plate for the ingress of heat and also the ventilation-openings, and the sliding heating-chamber provided with a discharge-pipe, and having the ventilating-openings in its flange corresponding with the ventilating-openings in the bottom plate of the main chamber, substantially as described.

2. The combination, with the drying-chamber, of the upper and lower horizontal guide-rods, the latter being supported at one end by the cross-bar L and having the shoulders arranged near the said cross-bar, and the sliding racks adapted, when drawn out to their fullest extent, to be supported in a horizontal position and prevented from sagging by means of the shoulders on the said guide-rods, substantially as described.

CHARLES FREDERIC WOLF.

Witnesses:
JOHN B. DEEDS,
JOHN WHITAKER.