(Model.)

W. J. BACON.

FRUIT DRIER.

No. 256,615 Patented Apr. 18, 1882.

Fig. 1.

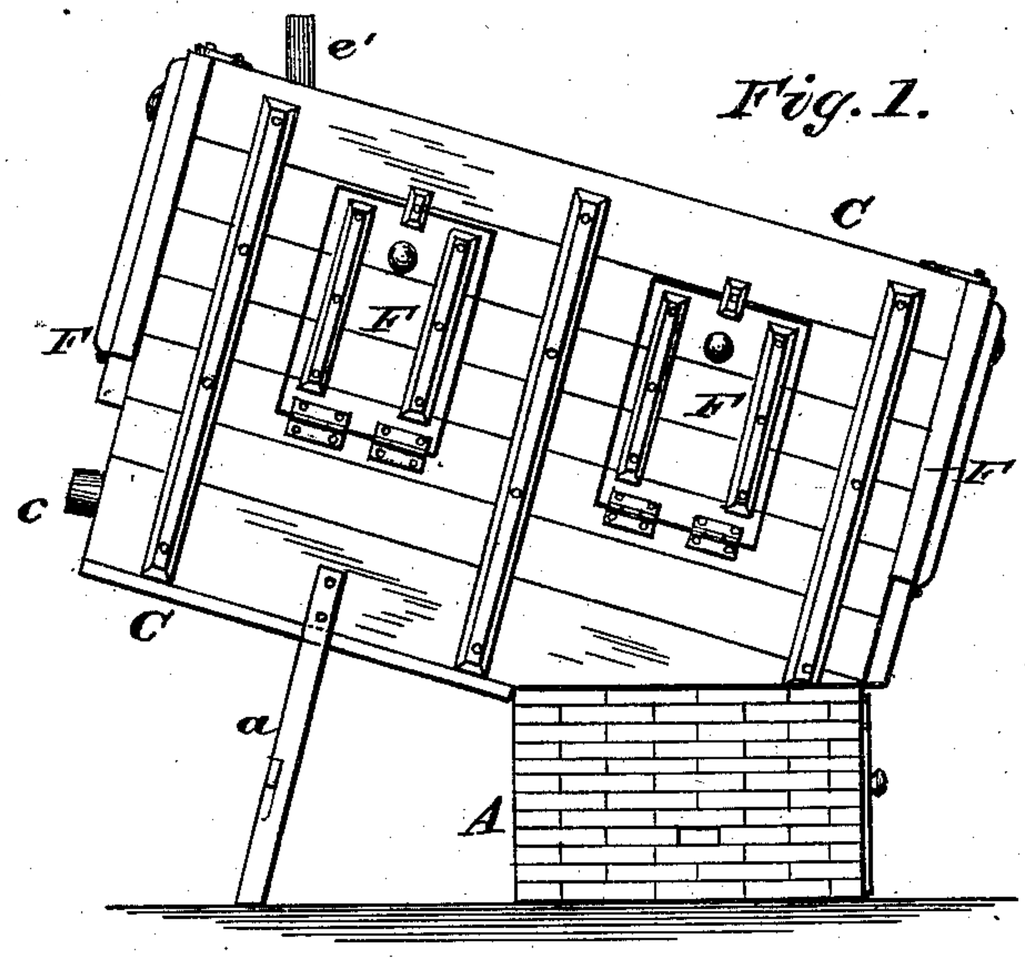


Fig. 2.

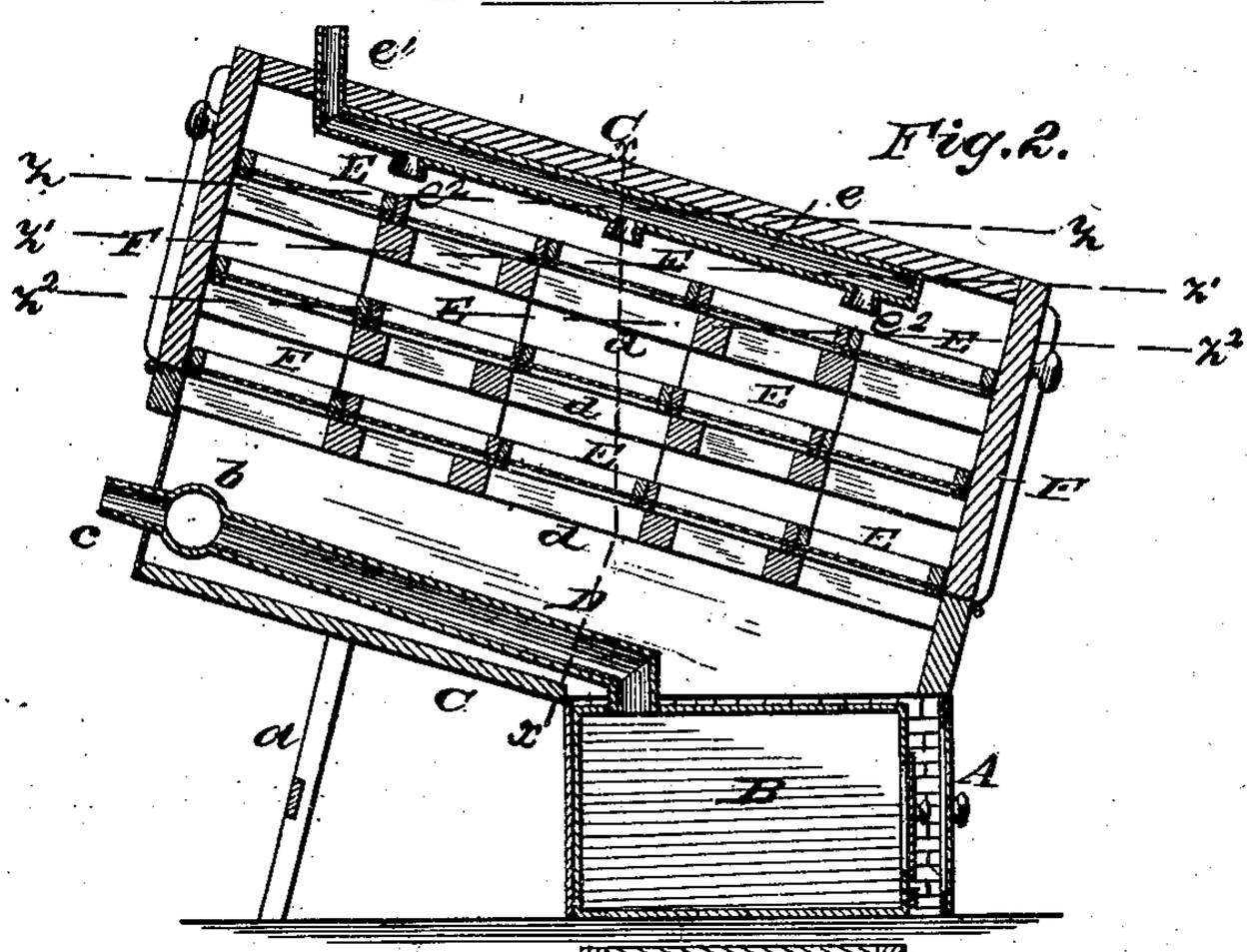
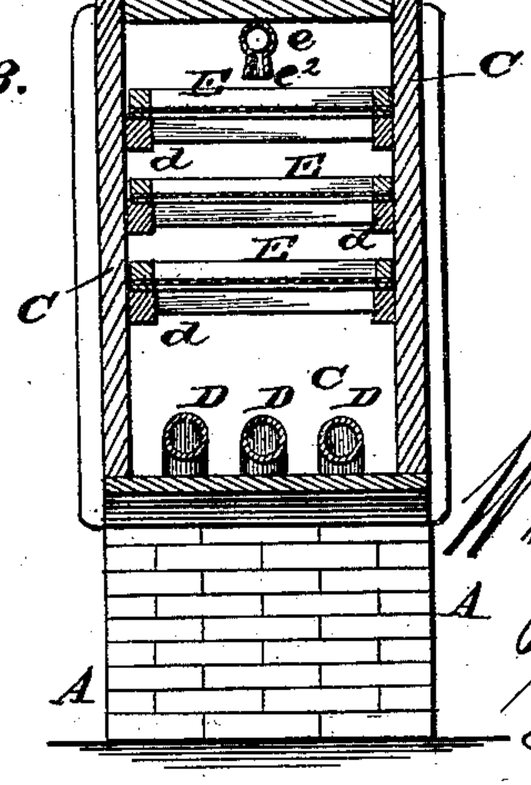


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM J. BACON, OF ADDISON, MICHIGAN.

FRUIT-DRIER.

SPECIFICATION forming part of Letters Patent No. 256,615, dated April 18, 1882.

Application filed July 13, 1881. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BACON, of Addison, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Fruit-Driers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved fruit-drier. Fig. 2 is a vertical longitudinal section, and Fig. 3 is a vertical transverse section through line *x x* of Fig. 2.

This invention has reference to an improvement in fruit-driers, having for its object to effectively and properly dry or cure the fruit; and it consists in the combination and arrangement of parts substantially as hereinafter more fully set forth.

In the accompanying drawings, A is a vault or inclosure, in which is placed the heater or furnace B.

C is a case or house, with its under forward end supported upon the vault or inclosure A of the furnace, while its rear end is supported upon an upright frame or legs, *a*, supporting the case in an inclined position.

Arranged in the lower part of the case A are a number of heating tubes or flues, D D, connected to the furnace B and together at their upper or rear ends by a cross-pipe, *b*, to which is connected the smoke exit or stack *c*, leading out through the case C.

A number of cleats, *d*, extending the entire length and secured to the sides of the case C in the same inclined plane with the case, afford means upon which to place the fruit-trays E, having gauze bottoms to permit the ready passage through them of the steam or heat to the fruit to effect the drying of the fruit.

To permit the escape of the vapor or steam, a pipe, *e*, with openings or short tubes e^2 at certain intervals apart upon its lower side, is affixed to the inside of and has an elbow, *e'*, passing up through the top of the case C.

At the ends and in the sides of case C are doors F to permit of the passing into and the removal from the case of the trays of fruit. The trays of fruit are passed into the case at the lower end, the preceding tray being pushed along by the succeeding one until the first inserted tray has reached the upper discharging end of the case, when its contents will have been properly and effectively dried, and consequently in condition to be removed. This process is continued until all the trays of fruit have been dried and removed.

By the construction of the drier as herein shown and described all parts of the apparatus are easily accessible. The heat within the casing is always even and easily controlled; and by the arrangement of the inclined pipe *e* with its inlets e^2, excess of hot air is carried off with the vapors of the fruit in a gradual manner from the highest point of the inclined roof or top of casing C toward the lowest. This is because the hot air will naturally ascend from the top of the furnace A B and heating-flues D to the highest point or rearward upper corner of casing C, where it will accumulate until the level indicated by the broken line marked *z z* is reached, when the surplus will escape through the upper outlet e^2. If there is an increase of heat, so that the upper opening e^2 is insufficient to carry off the excess, a lower level, *z' z'*, will gradually be reached, when, and not before, the second hot-air exit e^2 will come into operation. These two outlets will, as a rule, be found amply sufficient to carry off all moisture and excess of heat; but if in firing up or from other causes the heat in the furnace should be further increased, the lower hot-air level, z^2 z^2, will be reached, and the third or lowermost outlet e^2 comes into play. In this manner I am enabled to maintain a regular and even temperature within the apparatus, which is of the greatest importance in drying fruit.

Having thus described my improvement, I claim and desire to secure by Letters Patent of the United States—

The combination, with the furnace A B and inclined casing C, having flues D and trays E, arranged as described, of the inclined hot-air exit-pipe *e*, arranged under the inclined roof of the casing, and provided with a series of inlets, e^2 e^2 e^2, and outlet *e'*, substantially as shown and specified, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM J. BACON.

Witnesses:

JOSEPH B. OSBORN,

MARY OSBORN.