

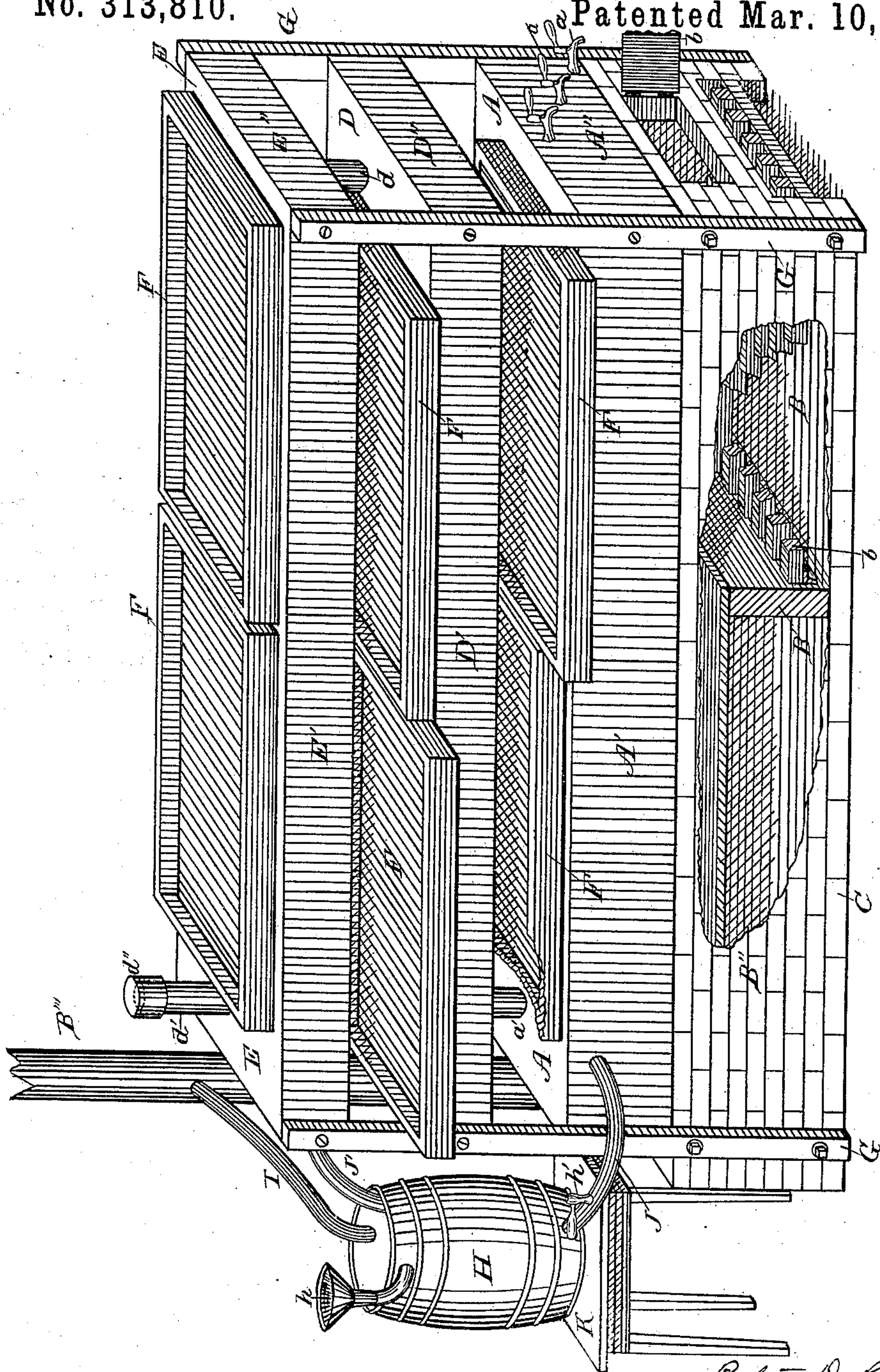
(No Model.)

P. D. & J. H. CORYELL.

## FRUIT DRIER.

No. 313,810.

Patented Mar. 10, 1885.



Witnesses  
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Roy C. Bowen.

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# UNITED STATES PATENT OFFICE.

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## FRUIT-DRIER.

SPECIFICATION forming part of Letters Patent No. 313,810, dated March 10, 1885.

Application filed May 6, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, PETER D. CORYELL and JOE H. CORYELL, citizens of the United States, residing at Glidden, in the county of Carroll and State of Iowa, have invented certain new and useful Improvements in Fruit-Drying Apparatus; and we 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 appertains to make and use the same.

Our invention relates to fruit-drying machines; and it consists in the improvements hereinafter fully described and set forth.

In the accompanying drawing, the figure represents in perspective a fruit-drying machine embodying our improvements.

A is the steam-generator, which may be made entirely of suitable sheet metal in the form shown, and provided at its sides A' and ends A'' with wood or other anti-condensing material, or it may be more cheaply and as practically constructed by making the top and bottom of metal sheets securely affixed by means of screws to the upper and lower edges of wood sides A' and wood ends A'', in a way to form water-tight joints, for which purpose suitable gaskets or packing material may be placed between the metal and the edges of the wood frame forming the sides and ends A' A'' of the steam-generator, which is to reach from one outer edge to the other of the furnace-walls C.

B is the furnace-chamber provided with a bridge-wall, B', and a draft-course for throwing the heat closer to the bottom of the steam-generator and extending to the rear end thereof, where it is provided with an ordinary smoke-stack, B''.

D and E are steam-boxes having metal tops and bottoms affixed to wood sides D' E' and ends D'' and E'' in the same manner as the steam-generator A.

G G are wood standards suitably secured to the furnace-walls and to the ends of the steam-boxes D and E, which may be increased in number, as desired, by lengthening the standards G. The spaces between the steam-boxes should not be more than six inches.

F F represent movable pans made of thin sheet metal, and into which the fruit is placed preparatory to being put on and between the steam-boxes, where it is dried by the heat of the steam supplied from the generator through a series of circulating-pipes, as shown at a' and d', and which should be located at alternate ends of the apparatus to maintain a continuous flow from the generator of fresh steam, which has an outlet from the box E, as shown at d'. The forward end of the generator is provided with a series of faucets or gage-cocks, a, for testing the supply of water therein. b represents the furnace-door.

H is a water-tank mounted on a platform, K, at an elevation above and connected with the steam-generator by means of supply-pipes J, provided with a stop-cock, h'.

J' is a steam-conducting pipe connecting the upper steam-box, E, with the water-tank H, for a purpose hereinafter set forth.

I is a pipe connecting the interior of the tank H with the smoke-stack B'', and h represents a funnel and pipe for supplying the tank with water. The steam-outlet d' is provided with a closely fitting cap, d'', for covering the same, and thereby directing the steam into the tank H and so heat the water that it will be more rapidly and economically converted into steam for the purpose intended. The object of the pipe I is to prevent a dangerous accumulation of steam in the water-tank by continuously discharging it into the smoke-stack.

The cover d'' to the outlet d' is to be removed when the temperature of the steam in the generator and boxes tends to a greater degree of heat than is proper for drying the fruit, as by removing the same the steam will escape more rapidly and the temperature will be harder to maintain and consequently reduced in proportion.

Valuable time can be saved and gained in the use of the apparatus by providing double sets of pans F, and by supplying them with sliced fruit, make the same ready for placing on and between the steam-boxes immediately upon the removal of the pans containing the dried fruit.

Having explained the construction and operation of our improvement, what we claim, and desire to secure by Letters Patent, is—

The combination, in a fruit-drier, of a supporting-frame, a series of superposed steam-boxes supported therein and communicating with each other by means of circulating-pipes, a steam-generating boiler and furnace, an uptake or flue, a supply-tank communicating  
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10 with said boiler, and a pipe, I, connecting

said tank with the uptake, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

PETER D. CORYELL.  
JOE H. CORYELL.

Witnesses:

A. HARRIS.  
M. M. COONEY.