

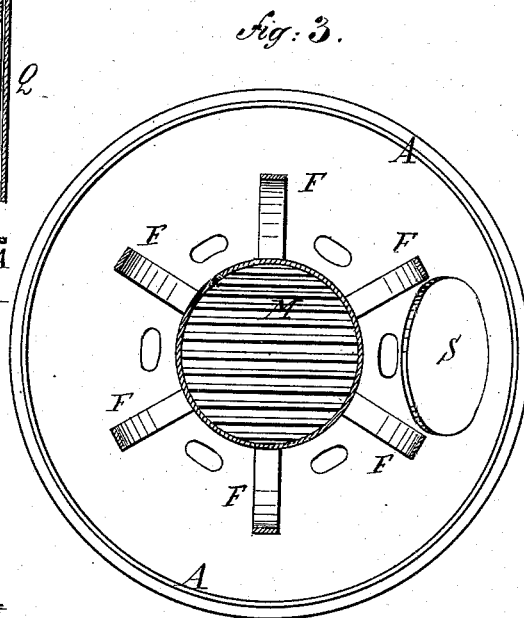
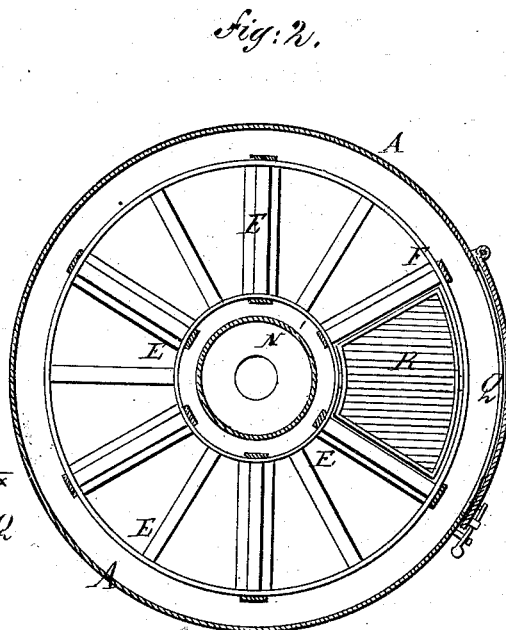
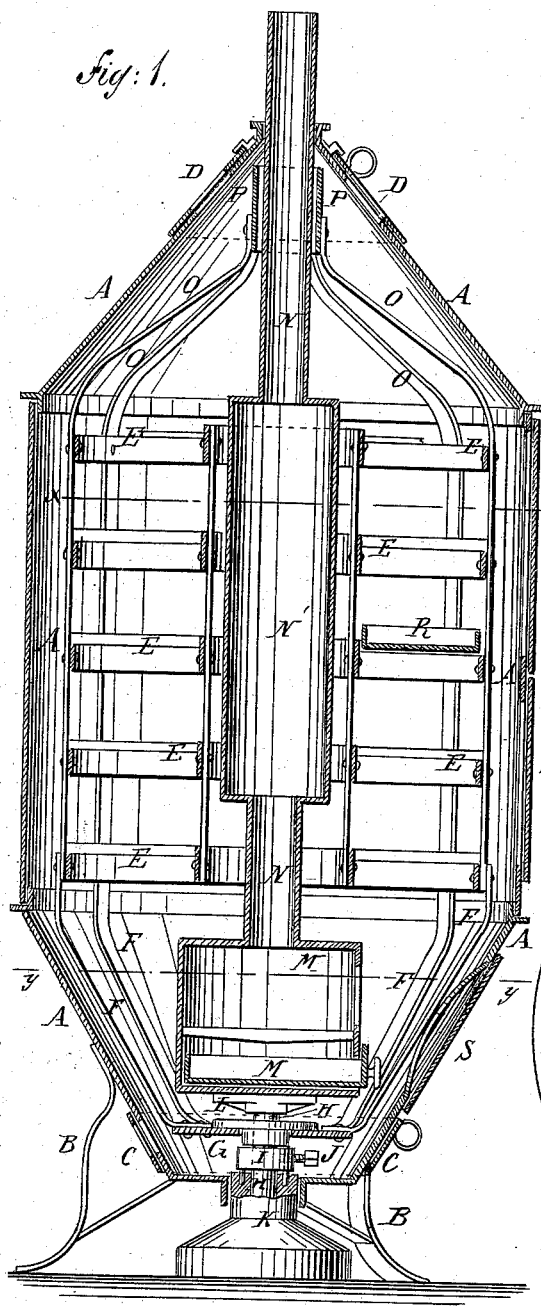
(Model.)

H. S. JORY.

DRIER FOR FRUITS AND OTHER SUBSTANCES.

No. 263,912.

Patented Sept. 5, 1882.



WITNESSES:

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HUGH S. JORY, OF SALEM, OREGON.

DRIER FOR FRUITS AND OTHER SUBSTANCES.

SPECIFICATION forming part of Letters Patent No. 263,912, dated September 5, 1882.

Application filed June 22, 1882. (Model.)

To all whom it may concern:

Be it known that I, HUGH S. JORY, of Salem, in the county of Marion and State of Oregon, have invented a new and useful Improvement in Driers for Fruits and other Substances, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of my improvement. Fig. 2 is a sectional plan view of the same taken through the line *xx*, Fig. 1. Fig. 3 is a sectional plan view of the same taken through the line *yy*, Fig. 1.

The object of this invention is to facilitate the drying of fruit and other substances.

The invention consists in a drier for fruits and other substances, constructed with an inclosing cylindrical casing having conical ends, an annular tray-supporting frame rotating within the casing and around a furnace and its smoke-pipe, the said furnace being supported upon a pin resting in a socket-base, as will be hereinafter fully described.

A is the casing of the drier, which is made of sheet-iron, brick, or other suitable material, and with a cylindrical middle part and conical ends. The casing A is supported by legs B, attached to the lower conical end. The casing A may be secured in a vertical position by a surrounding frame, or by braces or other supports connecting its upper end with the ceiling of the room.

In the lower part of the casing A are formed openings closed by a damper, C, to admit dry air, and in the upper part of the casing A are formed openings closed by a damper, D, to allow the moist warm air to escape.

Within the cylindrical part of the casing A is placed a frame, E, formed of five (more or less) annular skeleton shelves, each shelf being formed of two concentric bands connected by radial bars, and the shelves being connected by upright bars attached to the inner and outer bands. To the outer band of the lower shelf are attached the upper ends of a number of brace-bars, F, which incline inward and extend downward into the lower conical

end of the casing A, and are attached at their lower ends to a circular plate, G. The plate G has a hole formed through its center to receive a pin, H, and rests upon a collar, I, placed upon the said pin, and secured in place by a set-screw, J. The lower end of the pin H rests in a socket in a base-block, K, which rests upon the floor, and the upper end of which passes up through a hole in the lower end of the casing A.

To the upper end of the pin H is attached or upon it is formed a cross-head, L, to which is secured the bottom of a stove or furnace, M, made of sheet-iron or other suitable material, and provided with a door, fire-grate, and ash-pan in the ordinary manner. From the top of the furnace M the smoke-pipe N extends up through the interior of the annular frame E and through an opening in the top of the casing A. The part of the smoke-pipe N that passes up through the annular frame E can have an enlargement or drum, N', formed in it, if desired, to provide a larger heating-surface within the said frame.

To the upper outer band of the annular frame E are attached the lower ends of a number of brace-bars, O, which incline inward and extend upward into the conical upper part of the casing A, and are attached to a sleeve, P, through which the stove-pipe N passes, and which serves as the upper bearing for the rotating frame E. When the outside supporting-frame is used the sleeve P can extend up through the top of the casing A and revolve in a bearing in the said frame.

In the side of the cylindrical part of the casing A are formed doors Q, through which the trays R, that contain the fruit to be dried, can be readily put in and taken out, the frame E being easily rotated to bring each tray opposite a door Q. The trays R are formed to fit the spaces between the radial bars of the frame E, which give them a wide outer part and a narrow inner part, so that they can be readily handled, and their contents can be readily poured into a box or other receiver.

In the lower conical part of the casing A is formed a door, S, to give convenient access to the furnace M for starting and attending to the fire.

With this construction as the dry air enters through the openings in the lower part of the casing A it is heated by the furnace M and passes up through the interior part of the frame E and around its outer part, filling and circulating through the spaces between the shelves of the said frame, while the heat from the stove-pipe N or drum N' is radiated through the spaces between the said shelves and is reflected back by the inner surface of the casing A, so that the fruit will be dried quickly, thoroughly, and evenly.

If desired, the furnace M can be placed below the revolving frame to give more convenient access to the said furnace, particularly when the casing is made of brick, the said frame revolving upon a sleeve placed upon the smoke-pipe at the top of the furnace.

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

1. A drier for fruits and other substances, constructed substantially as herein shown and described, and consisting of the casing A, having conical ends and provided with dampers C D and doors Q S, the annular rotating frame E, and the furnace M, and smoke-pipe N, as set forth.

2. In a drier for fruit and other substances,

the combination, with the furnace M, having upright smoke-pipe N, of the pin H, having a cross-head, L, at its upper end, and the socket-base K, substantially as herein shown and described, whereby the said furnace can be supported within a rotary drier, as set forth.

3. In a drier for fruit and other substances, the combination, with the furnace M, smoke-pipe N, and supporting-pin H, of the annular tray-supporting frame E, the inclined bars, and plate F G, and the collar and set-screw I J, substantially as herein shown and described, whereby the said frame is supported and can be readily rotated, as and for the purpose set forth.

4. In a drier for fruit and other substances, the combination, with the furnace and smoke-pipe M N and the rotary tray-supporting annular frame E, of the casing A, having conical ends and provided with dampers C D and doors Q S, substantially as herein shown and described, whereby the heated air is confined and made to pass up through and around the substance being dried, as set forth.

HUGH S. JORY.

Witnesses:

LEO WILLIS,

JOHN S. HAWKINS.