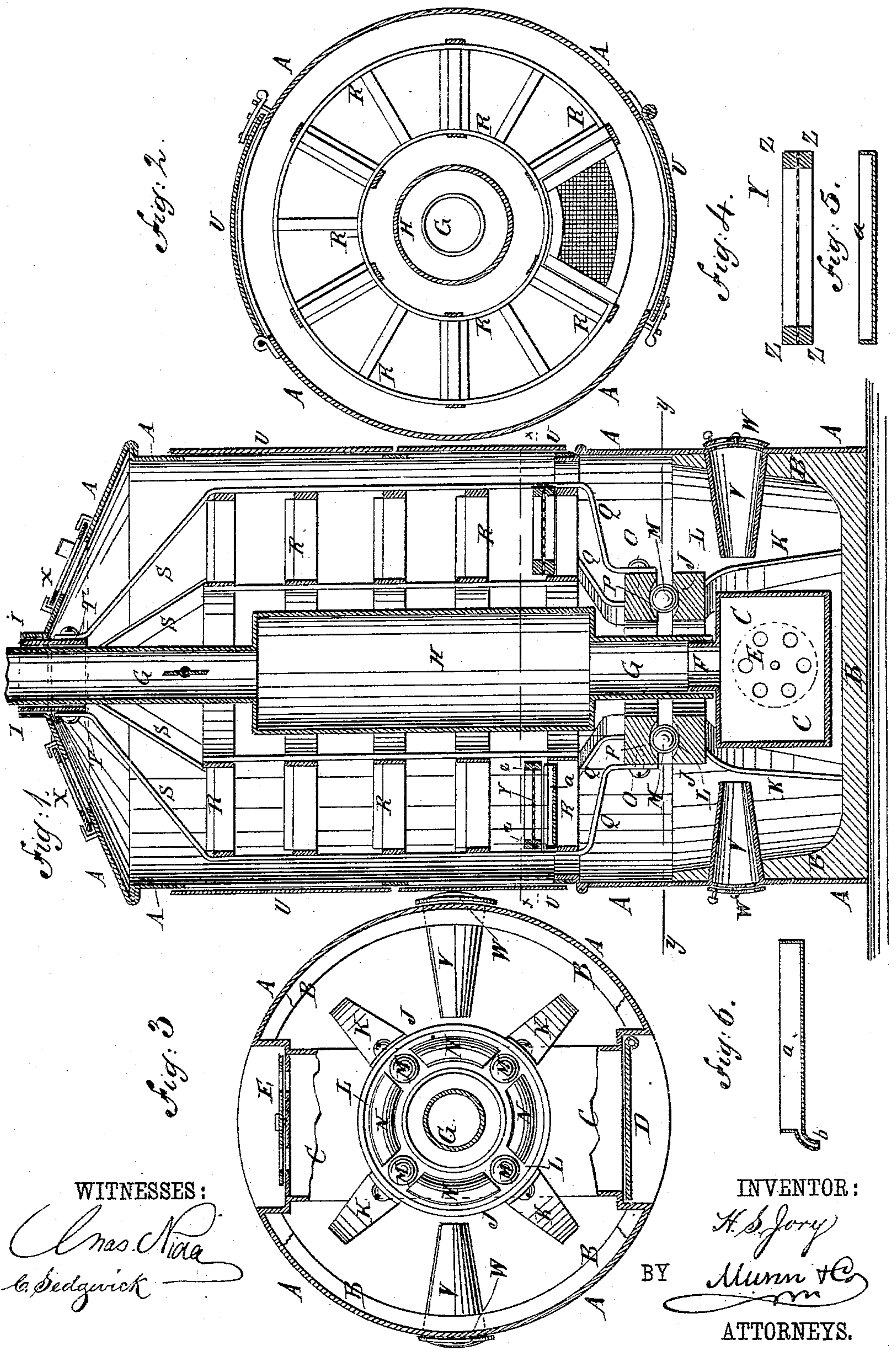


(No Model.)

H. S. JORY.
FRUIT DRIER.

No. 339,557.

Patented Apr. 6, 1886.



WITNESSES :

Chas. Nida
C. Sedgwick

INVENTOR:

H. S. Jory

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HUGH S. JORY, OF SALEM, OREGON.

FRUIT-DRIER.

SPECIFICATION forming part of Letters Patent No. 339,557, dated April 6, 1886.

Application filed May 13, 1885. Serial No. 165,319. (No model.)

To all whom it may concern:

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

Reference is to be had to the accompanying drawings, forming a 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 one of my improved driers. 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, parts being broken away. Fig. 4 is a sectional elevation of one of the fruit-trays. Fig. 5 is a sectional elevation of one of the drip-pans. Fig. 6 is a sectional elevation of one of the drip-pans, shown as provided with a drip-tube.

The object of this invention is to improve the construction of the driers for which Letters Patent No. 263,912 were granted to me September 5, 1882, in such a manner as to make them more convenient in use and more effective in operation.

The invention consists in the peculiar construction and arrangement of parts, all as hereinafter fully described, and pointed out in the claims.

A is the casing of the drier, which is made of sheet-iron, brick, or other suitable material, in cylindrical form, and with a conical top. The lower part of the casing A may be provided with a lining, B, of brick, cast-iron, or other suitable material, to give it strength and solidity to support the upper parts of the drier and prevent the loss of heat through the said lower part.

Within the lower part of the casing A is placed a furnace, C, which is made shorter than the diameter of the said casing, and is connected at its ends with recesses in the sides of the said casing, as shown in Fig. 3, to bring the fire beneath the middle part of the drier. The furnace is provided with a door, D, and damper at each end, or with a door, D, and damper at one end, and a damper, E, at the other end, so that air to support combustion

can enter either or both ends of the furnace to cause a thorough combustion of the fuel without its being necessary to use a grate to support the fuel.

In the center of the top of the furnace C is formed an opening provided with a collar, F, upon which is placed the lower end of the smoke-pipe G, which is made with a cylindrical enlargement or drum, H, at its middle part, to form a heating-chamber, with a damper at the upper end of the drum in the pipe.

The upper part of the smoke-pipe G passes out through a collar, I, secured in an opening at the apex of the conical upper end of the casing A, and is the upper bearing of the revolving frame.

Above the furnace C is placed an annular plate, J, which is supported by the said furnace C, or by legs K, attached to it and extending down at the sides of the furnace. In the upper side of the annular plate J is formed an annular groove, L, in which are placed four or more balls, M. The balls M are kept at equal distances apart by sections N of an annular slide placed in the groove L between the said balls, as shown in Fig. 3, and which are made of a less diameter than the said balls, so that they can be easily pushed along the groove L by the movements of the said balls M.

Upon the balls M rests an annular plate, O, which has an annular groove, P, in its lower side to receive the said balls M and keep it in place upon them.

To the annular plate O are attached the lower ends of a number of brace and supporting bars, Q, the upper ends of which are attached to the annular skeleton frame R, forming a series of annular skeleton shelves to receive the trays hereinafter described, as shown and described in Letters Patent No. 263,912.

To the upper end of the annular skeleton frame R are attached bars S, which incline inward and upward, and are attached at their upper ends to a sleeve, T, placed upon the pipe G within the collar I of the casing A, as shown in Fig. 1. With this construction the skeleton frame R can be easily revolved, so that the trays can be readily put in and taken out through openings in the side of the casing A, and which are closed by the doors U.

In openings in the lower part of the casing A, opposite the upper middle parts of the sides of the furnace C, are secured the outer ends of tapered tubes V, which extend inward nearly to the said furnace, and are provided with dampers W at their outer ends, so that the entrance of air can be readily regulated. With this construction the cold air is delivered against the opposite sides of the middle part of the furnace C, so that it will all be heated before it passes up through the drier.

The moist hot air escapes through openings in the conical top of the casing A, which openings are provided with dampers X, so that the escape of the air can be readily regulated.

The trays to receive the fruit or other substance to be dried are made of such a size as to fit into the spaces between radial arms of the rotary frame R, as shown in Fig. 2.

The trays are formed of a plate, Y, of galvanized wire-cloth, perforated sheet metal, or other suitable material, secured at its edges between two frames, Z, so that the trays can be used either side up, and can be placed one upon another when filled with green or dried fruit, and will thus occupy but little space. With this construction the trays can be filled and stacked near the drier, so that when a batch of fruit or other substance has been dried the trays can be quickly taken out and replaced with another set while the drier is still warm.

a is a shallow pan, of sheet metal or other suitable material, of the same shape and size as the trays Y Z, so that they can be placed in the rotary frame R at the bottom, and the said trays placed above them when required, to catch any liquid that may drip from the fruit, berries, or other substances while being dried,

to save the said liquid when required, and to prevent the said liquid from dripping upon the furnace or other parts.

If desired, the pans a can be provided with drip-tubes b, to conduct the juice or other liquid dripping from the substance being dried into a receiver.

The pans a are designed to be taken out when the liquid ceases to drip from the substance being dried.

The furnace herein shown and described forms no part of the present invention; but I reserve to myself the right to make a separate application therefor at some future time.

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

1. In a drier, the combination, with the casing A, the furnace C, and the smoke-pipe G, extending out through the upper part of the casing, of the plate J, supported above the furnace and having an annular groove, L, the frame R, the plate O, secured to the said frame and having the annular groove P, and the balls M, between the said plates J O, substantially as herein shown and described.

2. In a drier, the combination, with the casing A, the furnace C, and the smoke-pipe G, having the enlargement H, of the annular grooved plate J L, supported above the furnace, the annular grooved plate O P, the balls M, the sleeve T, and the frame R, secured to the said grooved plate O P and the sleeve T by the rods Q S, respectively, substantially as herein shown and described.

HUGH S. JORY.

Witnesses:

JNO. J. SHAW,
W. G. PIPER.