

P. L. WHITESTINE.
FRUIT DRIER.
APPLICATION FILED DEC. 17, 1910.

993,932.

Patented May 30, 1911.

2 SHEETS—SHEET 1.

Fig. 1

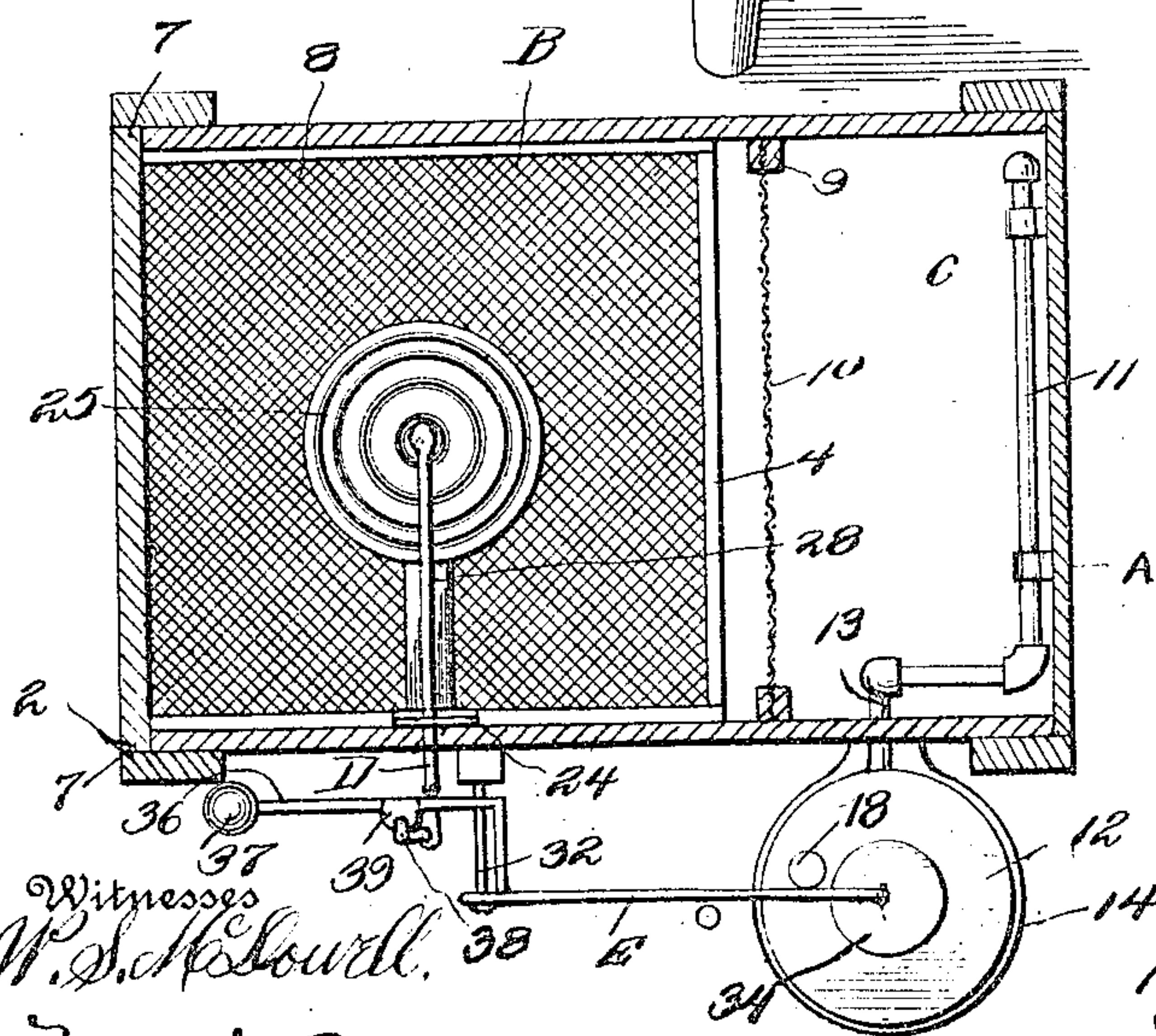
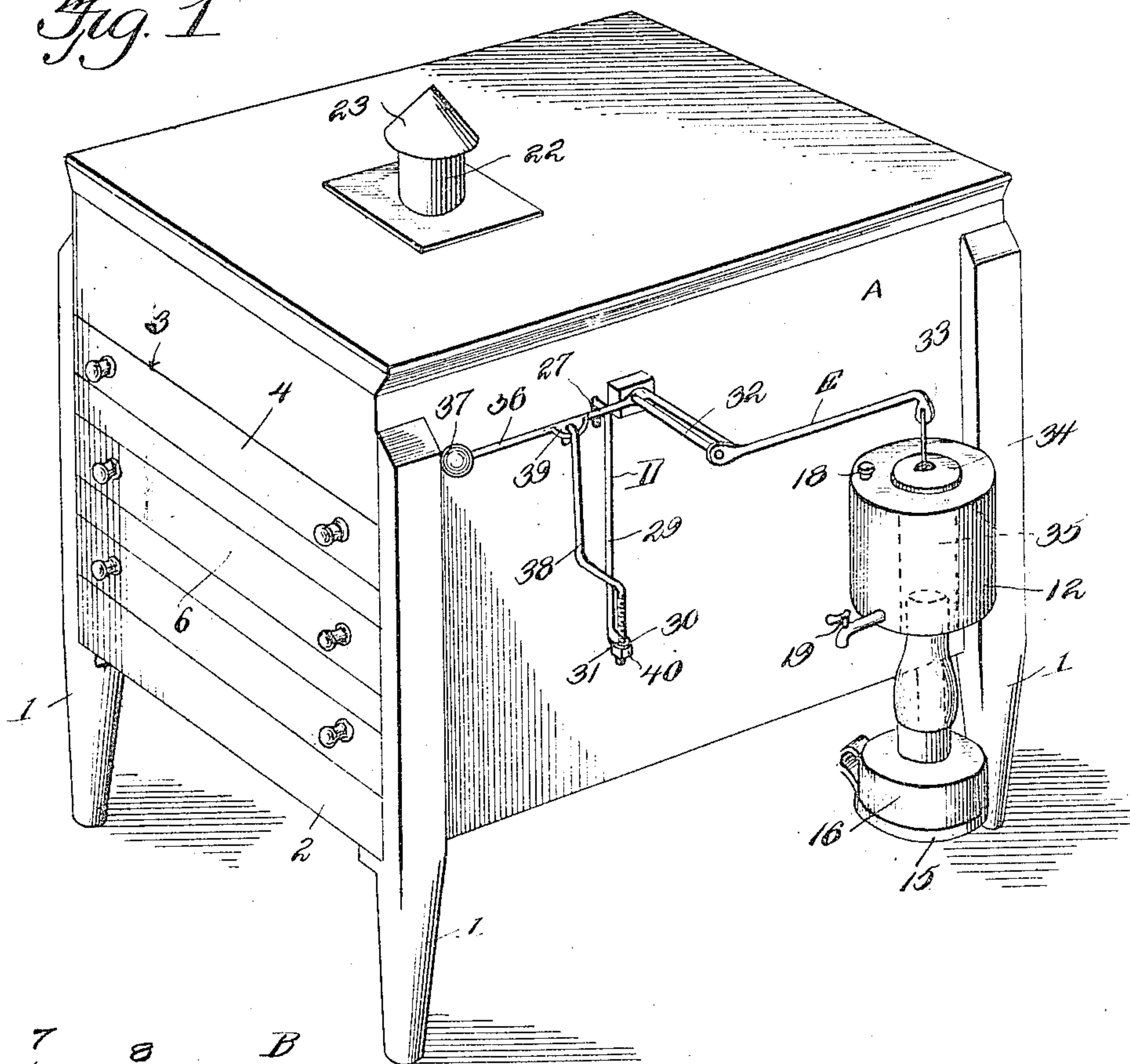


Fig. 4

Witnesses
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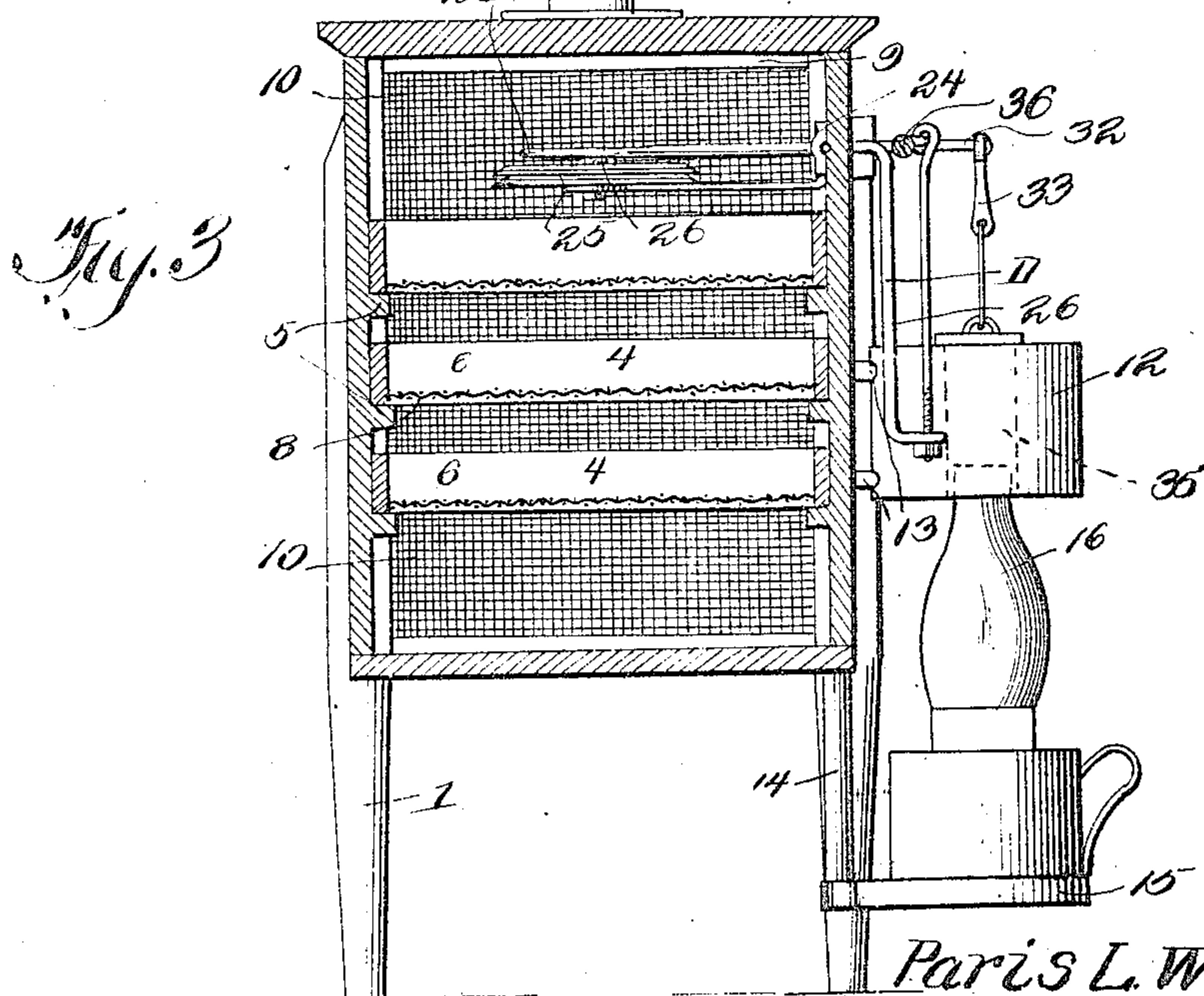
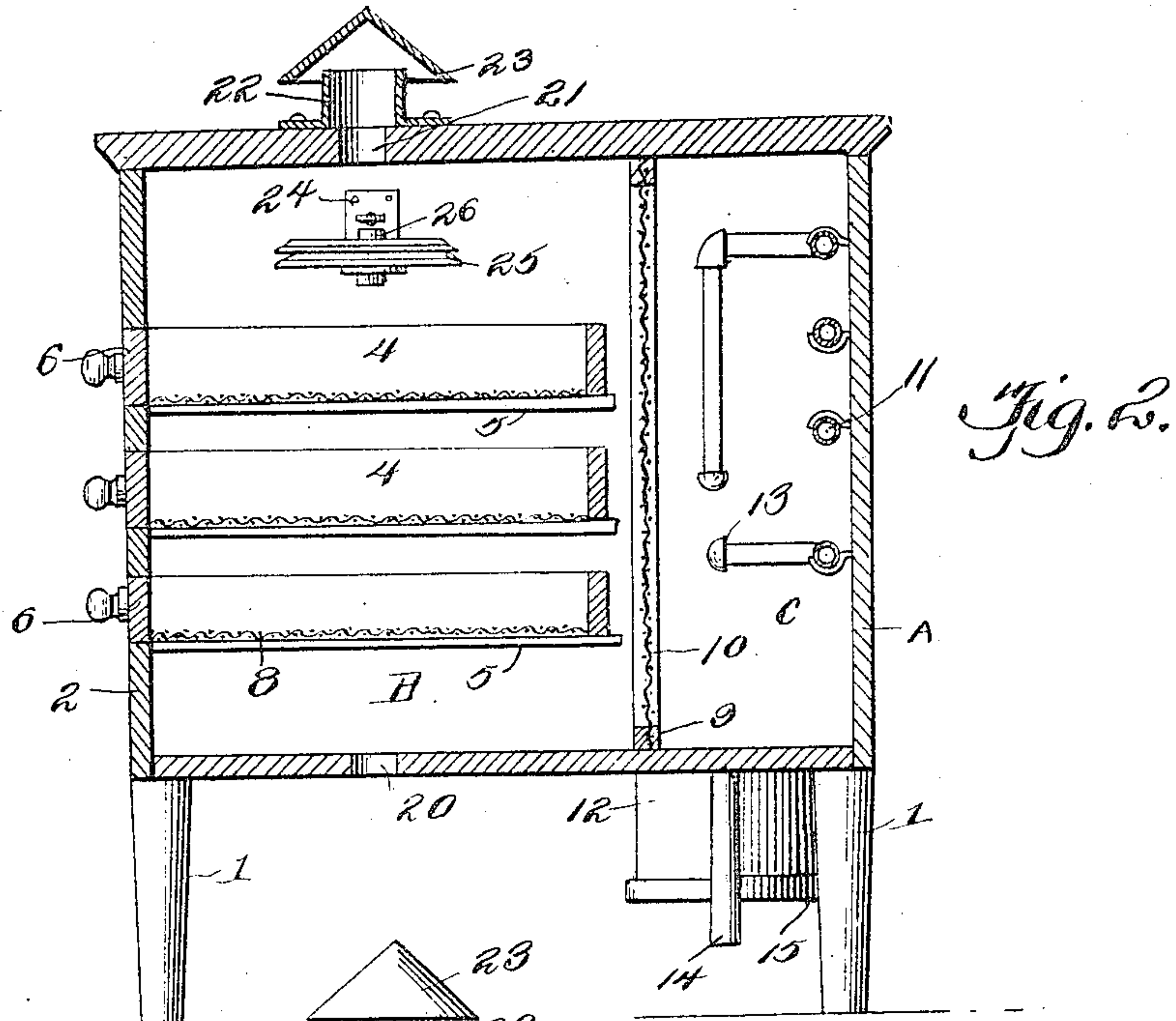
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

PARIS LEROY WHITESTINE, OF SPICKARD, MISSOURI.

FRUIT-DRIER.

993,932.

Specification of Letters Patent. Patented May 30, 1911.

Application filed December 17, 1910. Serial No. 597,904.

To all whom it may concern:

Be it known that I, PARIS L. WHITESTINE, a citizen of the United States of America, residing at Spickard, in the county of Grundy and State of Missouri, have invented new and useful Improvements in Fruit-Driers, of which the following is a specification.

This invention relates to fruit driers, and it has for its object to provide a fruit drier of simple and improved construction comprising a casing, a plurality of trays supported therein and heating means whereby the contents of the trays will be subjected to a degree of heat which will be sufficient to evaporate the moisture contained therein.

A further object of the invention is to provide a fruit drier of the character described with thermostatic means for regulating the heat so that the device when in operation will require little watching and care.

A further object of the invention is to provide a device of the character described which shall be simple in construction and suitable for family use.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes alterations and modifications within the scope of the claims may be resorted to when desired.

In the drawings,—Figure 1 is a perspective view of a fruit drier constructed in accordance with the invention. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view. Fig. 4 is a horizontal sectional view.

Corresponding parts in the several figures are denoted by like characters of reference. A rectangular casing A, which may be constructed mainly of wood and which may be of any suitable dimensions, is supported upon legs 1, 1 at the four corners thereof. The front wall 2 of the casing has a plurality of openings 3 for the admission of the drying trays 4 which slide like drawers upon

the supporting cleats 5 which are secured upon the inner faces of the side walls of the casing. The trays consist of rectangular wooden frames, the front members of which 6, are extended laterally to form lugs 7 which are adapted to abut upon the side walls of the casing, thereby limiting the inward sliding movement of the trays. Said trays are provided with bottoms 8 which may be constructed of foraminous material, such as woven wire screen, or they may be constructed of textile or other suitable material in the discretion of the manufacturer.

The side walls of the casing are provided upon their inner faces, in rear of the tray supporting cleats 5, with vertical cleats 9 upon which a partition 10 of wire screening is secured, dividing the interior of the casing into two compartments, namely, the tray compartment B and the heating compartment C. The latter compartment contains a radiator or heating coil 11 which is suitably connected with an annular heating drum 12 which is secured exteriorly upon the casing by means of the pipes or ducts 13 whereby it is connected with the radiator or heating coil. A bracket 14 depending from the bottom of the casing supports a swinging shelf 15 upon which a heater, such as a lamp 16, may be supported, the upper end of the lamp chimney terminating within the lower end of the annular heating drum. The latter is provided with a filling aperture 18 and with a valved pipe 19 through which the contents may be drawn off when desired.

The foraminous partition 10 which divides the casing transversely, while in no wise interfering with the circulation of air through both compartments of the casing and from one compartment to the other, will prevent the fruit supporting trays from being accidentally pushed too far within the heating compartment where the fruit might be subjected to an excess of heat from the heating coils and thereby injuriously affected.

The bottom of the casing A is provided with an air inlet 20, and the top of the casing has an outlet 21 with which a ventilating pipe 22 having a cap 23 is associated.

A bracket 24, which is secured interiorly upon one of the side walls of the casing, supports a thermostatic disk 25 which is located directly beneath the air outlet 21, said disk being provided with a boss 26 which, when the disk is expanded under the

influence of an increasing degree of heat, moves upwardly. Pivotally supported in a slot 27 in the side wall of the casing is a bell crank D having an inwardly extending arm 28 which lies in the path of the boss 26 of the thermostatic disk. The vertical arm 29 of the bell crank extends downwardly exteriorly of the casing and has a terminal bracket 30 provided with an aperture 31. An arm or bracket 32 which projects from the side wall of the casing supports a lever E which may be suitably bent as shown, and one arm of which, 33, extends above the annular heating drum 12 and carries a damper 34 which is adapted to partly obstruct the upper end of the vertical channel or passage 35 of said heating drum. The arm 36 of the lever E may be provided with a counterweight 37 adapted to balance the damper carrying arm. A link 38 is provided, one end of which is connected with a lug or bracket 39 upon the lever arm 36. The lower end of the link 38 extends through the aperture 31 in the terminal bracket 30 upon the arm 29 of the bell crank D, said lower end being screwthreaded and provided with a nut 40 bearing against the underside of the bracket 30, thus enabling the damper-carrying lever E to be properly adjusted with reference to the bell crank D, which latter is actuated by the thermostat, as previously described, and thus permitting the damper 34 to be adjusted to any desired position with reference to the annular heating drum at a predetermined degree of temperature. It is obvious that when the temperature within the drier casing increases and the thermostatic wafer expands, the bell crank will be actuated to tilt the damper carrying lever in such wise as to lift the damper from the annular heating drum, thus permitting a portion of the heat derived from the lamp or heater to become diffused in the atmosphere. When, on the other hand, the temperature within the drier casing is decreased, the action is reversed, and the temperature will be lowered, thus causing a larger percentage of the heat to be utilized in heating the water contained in the drum 12, whence it circulates through the radiator 11.

By this simple construction and arrangement of parts it will be seen that an even temperature may be maintained within the heater casing, thereby causing fruits which

have been previously prepared by drying and deposited upon the trays or shelves to become thoroughly dried at the proper degree of temperature. Fruits dried in this device will be absolutely protected from dirt and insects.

The device is simple in construction and may be manufactured at a small expense which renders it valuable for family use.

Having thus described the invention, what is claimed as new, is:—

1. In a fruit drier, a casing supported upon uprights, a foraminous transverse partition in said casing, a plurality of trays supported slidably in the compartment at one side of the foraminous partition, a heating coil constituting a radiator supported in the compartment at the opposite side of the foraminous partition, and water heating means connected with said coil or radiator.
2. In a fruit drier, a casing supported upon uprights and having a transverse foraminous partition, a radiator supported in the compartment at one side of the partition, a plurality of trays supported slidably in the compartment at the other side of the partition, an air inlet in the bottom of the casing, an air outlet in the top of the casing having a ventilator connected therewith, a thermostatic disk supported above the stack of trays beneath the air outlet, said disk having a boss, a bell crank lever fulcrumed in a slot in one side of the casing and having a horizontal arm extended in the path of the boss of the thermostat and a vertical arm lying outside of the casing and provided with a terminal apertured bracket, an annular heating drum supported outside the casing and connected with the radiator, a burner supported below the annular heating drum, an arm extending from the side of the casing, a lever fulcrumed upon said arm and having oppositely extending arms, a damper connected with one of said arms and adapted to obstruct the passage through an annular heating drum, and a link connecting the other arm of the lever with the apertured terminal bracket of the downwardly extending arm of the bell crank.

In testimony whereof I affix my signature in presence of two witnesses.

PARIS LEROY WHITESTINE.

Witnesses:

E. C. INMAN,
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