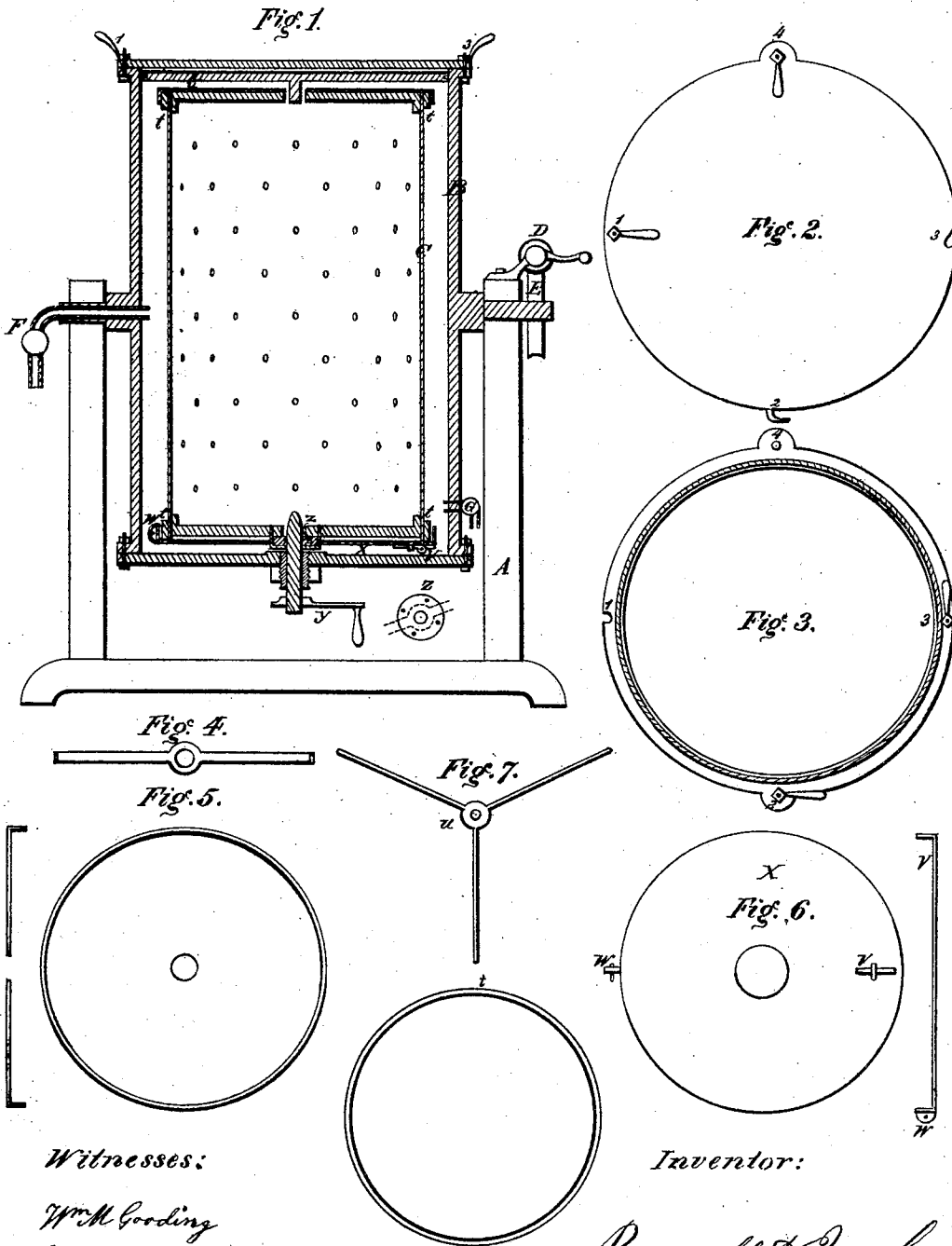


R. D. JACOBUS.

Vessel for Steaming Vegetables and Fruit.

No. 134,143.

Patented Dec. 24, 1872.



Witnesses:

Wm Gooding
Ezra C Walker

Inventor:

Roswell D Jacobus

UNITED STATES PATENT OFFICE.

ROSWELL D. JACOBUS, OF VERONA, NEW JERSEY.

IMPROVEMENT IN VESSELS FOR STEAMING VEGETABLES AND FRUIT.

Specification forming part of Letters Patent No. 134,143, dated December 24, 1872.

To all whom it may concern:

Be it known that I, ROSWELL D. JACOBUS, of Verona, in the township of Caldwell, county of Essex and State of New Jersey, have invented certain Improvements in Cylinders or other-shaped Vessels for use in Steaming Vegetables and Fruit, as part of a process for preservation for future use, of which the following is a specification:

The improvements relate to conveniences and facilities of filling and discharging, and to a device for agitating the material under treatment while it is under the pressure of the steam.

Two cylinders, an inner and outer, are used in the process, the outer cylinder being of boiler-iron with cast-iron heads, strong enough to bear pressure of one hundred pounds per inch. The inner cylinder is made of galvanized sheet-iron, and is the receptacle of the materials to be steamed. The outer cylinder is hung balancewise upon journals placed near the middle of its length. Through one of the journals a pipe passes into the interior, a suitable stuffing-box allowing the pipe to be stationary while the journal turns, the pipe being connected with the boiler in which the steam is generated. On the other journal is placed a worm-wheel, operated by a worm and crank that are secured to the frame-work. The use made of them is to turn the cylinders from a vertical to a horizontal position when the material under the process requires agitating. I do not confine myself to a worm-wheel for the purpose, as other means are available and as good—as, for instance, a lever. The inner cylinder is made to revolve on bearings at each end. A bar across the top has in its middle a bearing for a center-pin that is attached to a triple cross-bar fitted into and held in the top of the main cylinder, close under the top cover. The lower journal has a clutch that receives a cross-bar secured in the bottom of the inner cylinder, the bar having in it a bearing for the center-pin in the clutch. This journal passes through the lower head of the outer cylinder, and, having a crank thereon, it is used to revolve the inner cylinder to agitate the contents thereof, the cylinders having been brought horizontal for that purpose. The cylinders being again placed vertical, the top cover of the outer one is turned off, and by a crane the inner cylinder is hoisted

out and swung to a receiver, into which the contents of the cylinder are discharged by opening its bottom. When the bottom is closed and the cylinder lowered to the floor it is conveniently refilled from the top, and, being covered, is, by use of the crane, replaced in the steam-cylinder to repeat the process. A stop-cock is provided for cutting off the steam, and also one to exhaust, previous to opening the outer to remove the inner cylinder.

In the accompanying drawing, Figure 1 is a vertical section through the middle of the combined cylinders. Fig. 2 is the top cover of the outer cylinder. Fig. 3 is the top flange of the steam-cylinder with a ring of packing to make a steam tight-joint when the top is bolted down. Fig. 4 is the cross-bar for the top and bottom of the inner cylinder. Fig. 5 is a flat and an edge view in section of sheet-iron cover for the top of inner cylinder. Fig. 6 is a flat and edge view in section of the bottom of the same. Fig. 7 is a triple-bar with the upper journal for the inner cylinder in the middle thereof.

A is the frame; B, the outer cylinder; C, the inner cylinder. D is the worm; E, the worm-wheel. F is the injection-pipe; and G the exhaust.

The numerals 1 2 3 4 in Figs. 2 and 3 show the bolts for securing the top to the flange, having nuts with handles to facilitate opening and closing. The bolt 4 is the pivot on which the cover turns when turned aside by a lateral motion, the provision for the bolts to be always in place, requiring no handling, as shown. The bolt 1 is carried with the cover, while 2 and 3 remain in the flange when the cover is removed.

z is the clutch and journal; *y*, the crank. *x* is the bottom of the inner cylinder. *v* is its hinge, and *w* its fastening. *t* is the iron ring for the sheet-iron of the inner cylinder to be riveted to, to keep its shape. To the rings the cross-bars, Fig. 4, are attached; and *u* is the triple-bar.

What I claim is—

The cylinders B and C, when constructed, arranged, combined, and operated as and for the purpose specified and shown.

ROSWELL D. JACOBUS.

Witnesses:

WILLIAM M. GOODING,
EZRA C. WALKER.