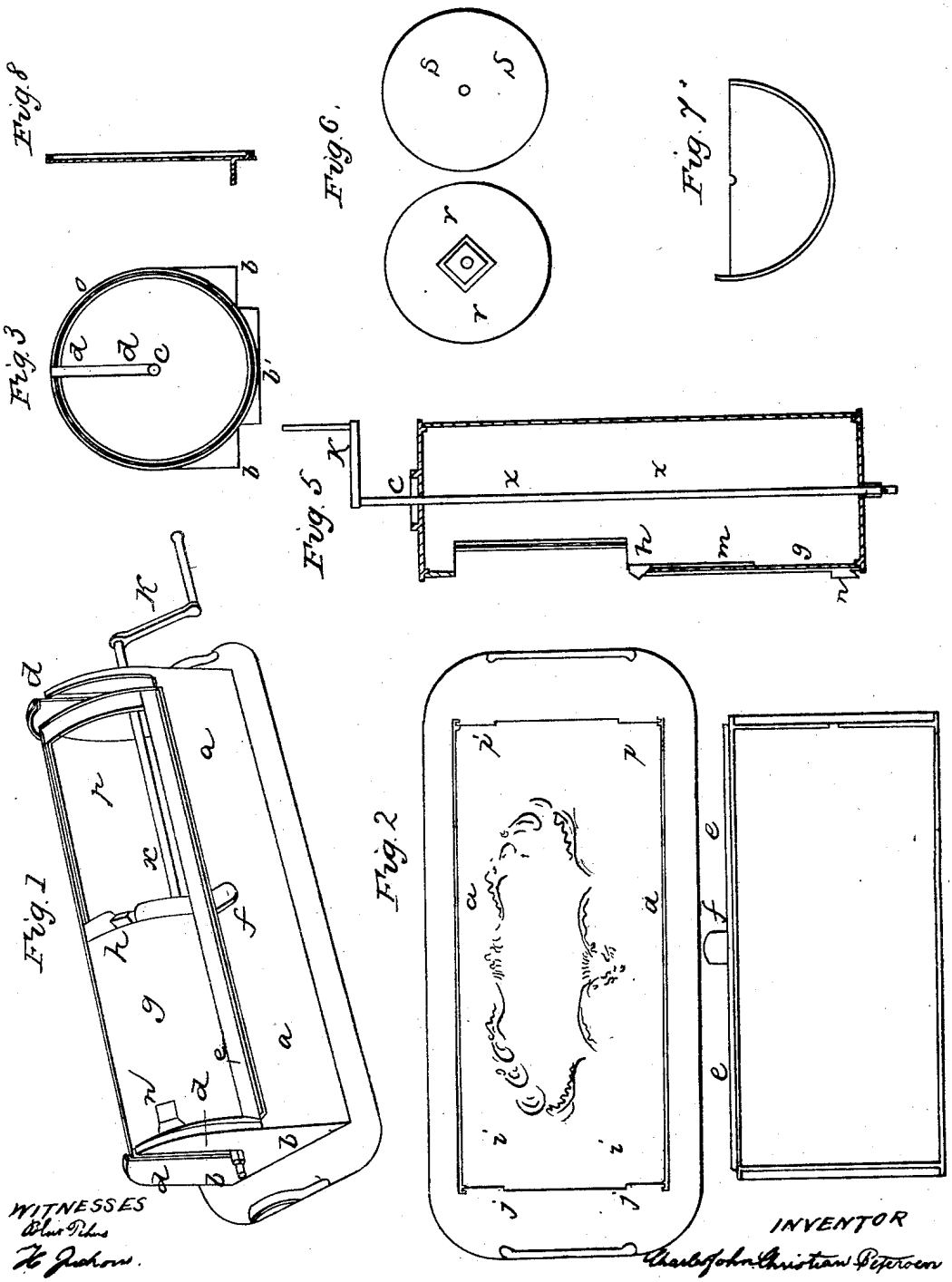
C. J. C. PETERSEN.

Coffee Roaster.

No. 21,845. Patented Oct. 19, 1858.



UNITED STATES PATENT OFFICE.

CHARLES J. C. PETERSEN, OF DAVENPORT, IOWA.

COFFEE-ROASTER.

Specification of Letters Patent No. 21,845, dated October 19, 1858.

To all whom it may concern:

Be it known that I, CHARLES JOHN CHRISTIAN PETERSEN, of Davenport, county of Scott, and State of Iowa, have invented a new and useful Machine for Roasting Coffee, denominated the "Family Coffee-Roaster;" and I declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the roaster; Fig. 2 is a vertical view of the base frame; Fig. 3, an inside view of a journal head; Fig. 4, a vertical view of the coffee-drum damper; Fig. 5, section of the coffee drum, through the lock; Figs. 6, 7, 8, parts and sections of the journal heads.

The nature of my invention consists, 1st, in supplying the coffee-drum with a damper, *e*, *e*, whereby the heat is, at pleasure, diffused over the surface of the drum, in the process of roasting coffee or is excluded from it. 2d, in furnishing the slide door of the coffee-drum, *g*, with a self-adjusting lock, *h*.

To enable others skilled in the art to make and use my invention I herein describe its construction and operation. To subserve perspicacity and convenience I divide, in so doing, the machine into five principal parts, to wit: (1) the frame base; (2) journal heads or ears; (3) the damper; (4) drum or roaster; (5) drum lock.

(1) *Base frame.*—This consists of iron, cast in one piece, Fig. 2, with vertical parallel plates *a*, *a*, Fig. 1, whose height is equal to the radius of the damper, whose length surpasses that of the drum by a little more than the thickness of the journal heads or ears, and whose distance asunder somewhat exceeds the diameter of the same. Their use is chiefly designed to confine the fire-blaze or heated air to the damper whether lying over or under the drum, and to furnish grooves at their ends in which the ears or journal heads slide down into place. Through the base frame is the rectangular opening *i*, *i*, *i*, *i*, Fig. 2, for the passage of heat to the drum or damper. Its dimensions correspond with the length and diameter of the same.

(2) *Ears or journal heads.*—Consist also of iron and are constructed as represented in Figs. 1, 3, and 8. Their width and height vary with the diameter of the damper. From the top of each runs a slot *d*, *d*, Figs. 1 and 3, half way to its base, *b'*, Fig. 3, for the insertion and removal of the journals *c*, *c*, Figs. 1 and 5, to the coffee drum. At the bottom of this slot is the box in or on which the journal turns. Each ear, at its base *b*, *b*, Fig. 3, has a rectangular projection *b'*, flanked by suitable shoulders, which, when the ear is driven down into position, as in Fig. 1, extends below the under surface of the base frame at *j*, *j*, Fig. 2, and forms a flange to prevent any lateral motion of the machine when operating on a range or stove. In the drawing represented by Fig. 3 an interior view of an ear is given, wherein *d*, *d*, exhibit the journal slot, and, *o*, *o*, *o*, a groove cast in the circumference of the ear for the ends of the semicylindrical damper (represented in section by Fig. 7) and in which they slide in the semi-revolutions of the same.

(3) *The damper.*—This is represented in section in Fig. 4 and consists of iron molded in the form of a hollow semicylinder, with a flange, *e*, *e* Fig. 1, on one edge to prevent its passing beyond half a revolution or the upper line of the parallel plates *a*, *a*. At the center of its flanged edge is a thumb piece *f*, Figs. 1 and 4, for the expeditious and convenient turning of the damper over and under the coffee drum during the process of roasting. It is the exterior covering of the coffee roaster *g* and *p*, Fig. 1, and of dimensions larger, but precisely similar to those of the drum inclosed by it in half. Its ends slide in the circular grooves of the ears *o*, *o*, *o*, Fig. 3, by which it is supported and moved therein independent of the drum in the reciprocating motions which may be given it by the cook. Its use is to admit the fire blaze or heat to the drum or to exclude it partly or entirely as may be desired in practice. In Fig. 1 the damper is under the drum, and nothing, therefore, is seen of it, but the flanged edge *e*, *e*, and the thumb piece *f*. In Fig. 4 the view is vertical and represents the damper as turned over the drum for the admission of heat, and with the thumb piece, *f*, of course, on the side opposite to that drawn in Fig. 1.

(4) *Drum or roaster proper.*—This consists of a hollow iron cylinder of any dimensions sought, with suitable heads *r*, *r*, and *s*, *s*, Fig. 6; suspension shaft *x*, *x* and crank *k*, Figs. 1 and 5, and an opening with sliding door for the delivery of the coffee into and from its chamber and for inspection

during the process of roasting. There is also attached to the interior of the drum a strap of metal extending the whole length and standing perpendicular to the tangent of contact, which strap is called the stirrer, and in the revolutions of the drum causes the coffee to be thrown off the circumference and otherwise agitated. The interior of the drum, the suspension shaft, &c., are seen in Fig. 1. The sliding door *g*, Fig. 1, is drawn as removed from its place to give free access to the chamber of the drum.

(5) *Drum lock.*—This consists of a metallic spring *m*, Fig. 5, fastened on the inside of the drum at a proper remove from the opening in the drum and in line with its center. Its upper and inward end is loaded with a small wedge shaped knob *h*, Figs. 1 and 5, which fits in a corresponding rectangular window in the drum and plays through it vertically in use. Upon the sliding door *g*, is a semi-wedge formed block *n*, Fig. 5, which, when the door is in position exactly closes upon one side of the wedge *m* and keeps the door fast. This block, the wedge and the spring aforesaid constitute the lock, whose utility is expressed in the fact that the sliding door *g* is held by it at any position it may take, and is easily moved to the right or left at pleasure.

Operation.

The operation of the family coffee roaster differs in no essential respect from the cylindrical or spherical drummed ones in common use, saving and excepting those effected by the damper and lock heretofore delineated. I shall, therefore, simply prescribe the operation as affected by these.

1. *Damper.*—Upon charging the coffee drum, closing the sliding door and adjusting the machine to the stove or range, the damper is turned over the drum, so that the heat may pass entirely around, or, in other words, that a stratum of heated air may completely inclose or envelop it. In this position the damper remains during the revolutions of the roaster, unless the cook wishes to inspect the roasting coffee or to shut off the heat from the drum, in which cases the damper is turned back, that is to say, is turned under the drum and interposed between the heat and drum. The advantages thus afforded the process of roasting coffee, the safety and certainty which the damper imparts, are too obvious for demonstration.

2. *Lock.*—Easy and convenient access to the coffee while roasting combined with proper facilities for charging and discharging the drum, is both desirable and important. The lock and door herein described meet these wants. By gently applying any suitable instrument at command to the knob *n*, Figs. 1 and 5, the sliding door *g*, Fig. 1, is carried at pleasure to the right or left just the distance required.

What I claim as my invention and desire to secure by Letters Patent, is—

1. The application of a damper constructed and operating substantially as herein set forth to the drum of a coffee roaster.

2. The spring catch, *h*, and block, *n*, in connection with the sliding door of the drum, constructed and operating substantially as described.

CHARLES JOHN CHRISTIAN PETERSEN.

Witnesses:

THALES LINDSLEY,

CHAS. T. CHURCH.