

No. 615,252.

Patented Dec. 6, 1898.

E. CRAWLEY, JR. & W. T. JOHNSTON.
COFFEE ROASTING MACHINE.

(Application filed Sept. 30, 1896.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

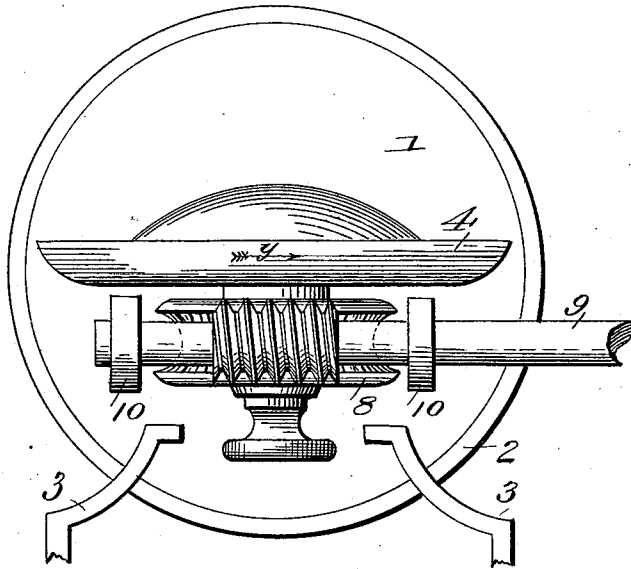


Fig. 2.

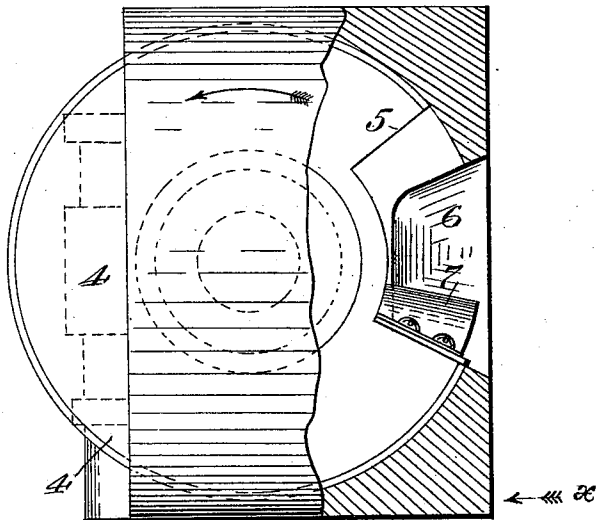
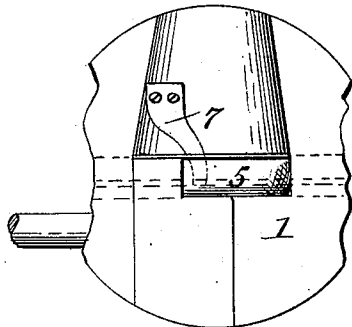


Fig. 3.



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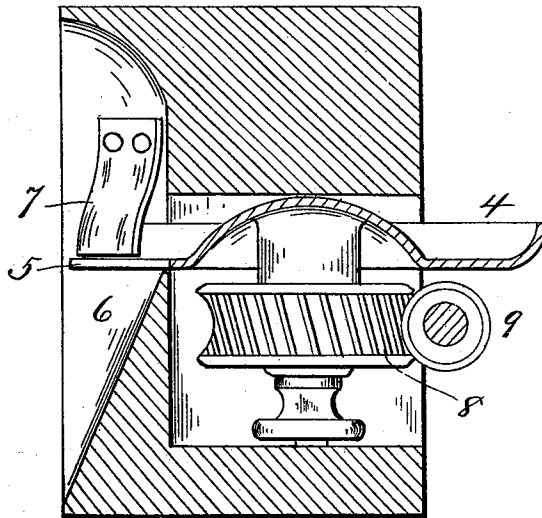
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2 Sheets—Sheet 2.

Fig. 4.



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UNITED STATES PATENT OFFICE.

EDWIN CRAWLEY, JR., AND WILLIAM T. JOHNSTON, OF NEWPORT,
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COFFEE-ROASTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 615,252, dated December 6, 1898.

Application filed September 30, 1896. Serial No. 607,471. (No model.)

To all whom it may concern:

Be it known that we, EDWIN CRAWLEY, Jr., and WILLIAM T. JOHNSTON, citizens of the United States, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Coffee-Roasting Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to coffee-roasting machines, and it relates more particularly to means for sampling or testing the berries at intervals during the rotation of the roasting-drum; and among the objects in view is to provide simple, inexpensive, and efficient means whereby samples of the berries while roasting may be automatically brought from the interior of the drum into view of the operator at intervals and which samples will be automatically returned into the interior of the drum after inspection.

With the above and other objects in view, all of which will hereinafter appear, the invention consists in the novel construction, arrangement, and combination of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the appended claims.

In the drawings, Figure 1 is a front view of the improved sampling device; Fig. 2, a plan view, partly in section and partly broken away; Fig. 3, a side view of Fig. 2 looking in the direction of the arrow *x*. Fig. 4 is a vertical sectional view, partly in elevation.

The improved sampling device is applicable to the usual coffee-roasting machines wherein a rotating coffee-roasting drum is employed having a hollow trunnion through which the samples of the berries are passed.

In carrying out the invention we provide an annular block or hub 1, adapted to be fitted within the hollow trunnion 2 of the drum and held stationary therein by any suitable means—as, for instance, by a bracket or brackets 3. The block 1 is suitably recessed to receive a plate or tray 4, which is of a diameter sufficiently large and is so arranged within

the block that said tray will project beyond the front face of the block and also extend within the same with its circumferential edge flush, or nearly so, with the rear face of the block, as more plainly shown in Fig. 2.

The tray may be flat or more or less dish-shaped, which is preferable, whereby to more readily hold the coffee-berries when received thereupon. The tray or plate has a segmental portion removed, as seen at 5, while the block is recessed at its rear end, as seen at 6, which recess is more or less tapering, for a purpose presently apparent.

7 indicates a scraper-blade which is secured at one end to the block 1 and extends downwardly at its opposite end into close proximity with the upper face of the tray. The blade is located at one side of the recess 6 in line with the recess 5 of the tray, and the width of said blade approximates the width of the said recess 5, as shown in Fig. 2.

The function of the tray is to receive samples of the berries during the roasting operation, carry them into view of the operator, and then return them into the drum, and in order that this result may be accomplished the tray is to be rotated during the roasting operation, and for this purpose any suitable means may be employed. A suitable means is shown in the drawings, and consists of a worm-wheel 8, carried by the tray, with which wheel meshes a worm-shaft 9, which extends across the face of the block 1 and mounted in suitable bearings 10 thereon, which shaft may be suitably geared to the shaft which drives the drum.

It will be seen that if the shaft 9 is rotated in the direction of the arrow marked thereon the tray will be rotated in the direction of the arrow *y*, and as the tray passes across the recess 6 a few coffee-berries will, owing to the rotation of the drum, be thrown upon the tray, which will carry them around and expose them to view of the operator, and as the tray passes beneath the scraper the latter scrapes the berries together, and as soon as the recess of the tray comes beneath the scraper the latter scrapes the collected berries off the tray and they fall along the in-

clined sides of the recess 6 back into the drum. Thus at each rotation of the drum a sample of berries is automatically collected, brought to view exteriorly of the drum, and returned automatically into the drum, so that the operator is enabled to determine exactly when the berries have been sufficiently roasted.

What we claim, and desire to secure by Letters Patent, is—

1. A sampling device for use as described, consisting in the combination with a block having a recess or opening of a plate or tray arranged therein having a portion cut away or removed to form a recess or opening adapted to aline with the opening in the block when rotated, and a stationary scraper-blade carried by the block and operating against or in close proximity to the upper face of the tray.

2. The combination with the hollow trunnion of a coffee-roasting drum, of a block stationarily arranged therein and having a

recess or opening, a rotatable plate or tray within the block having a recess or opening adapted to aline with the recess in the block when rotated, and a stationary scraper-blade carried by the block and operating against or in close proximity to the upper face of the tray.

3. The combination with a hollow trunnion of a coffee-roasting drum, of a tray or plate rotatably arranged and operating to receive samples of the roasting berries, carry the same to a point to be inspected from the exterior of the drum and return the same within the trunnion, and a scraper operating to sweep or brush the samples from the tray.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWIN CRAWLEY, JR.
WM. T. JOHNSTON.

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