J. BURNS.

Coffee Roaster.

2 Sheets—Sheet 1.

No. 44,704,

Patented Oct. 18, 1864.

Fig. 2.

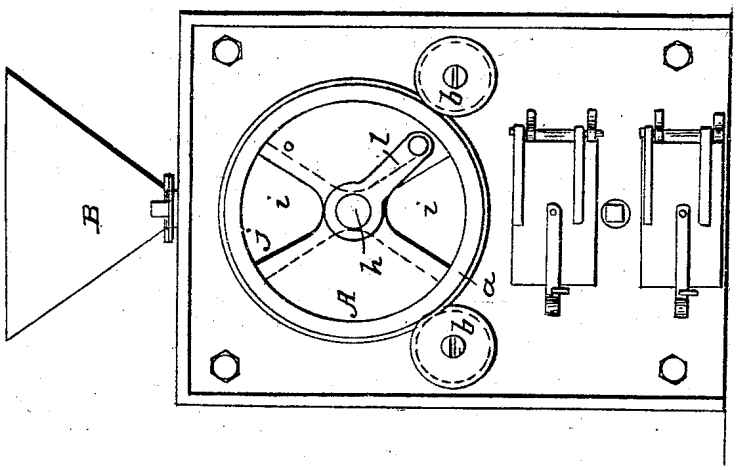
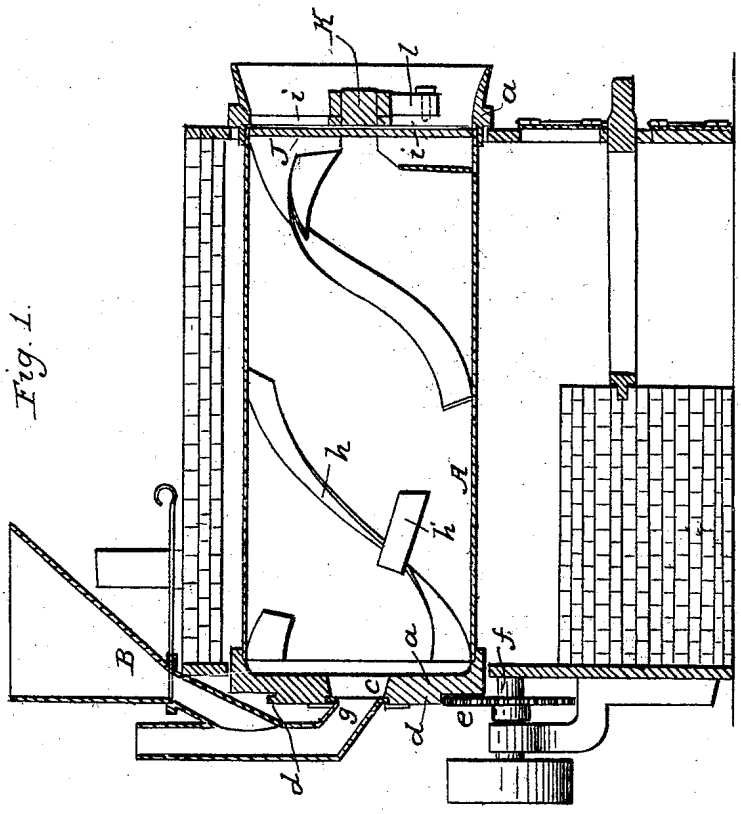


Fig. 1.



Witnesses:

Jas P Hall

Wm F McNamara

Inventor:

Jabez Burns

2 Sheets—Sheet 2.

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Fig. 3.

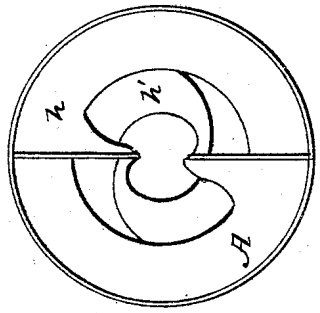
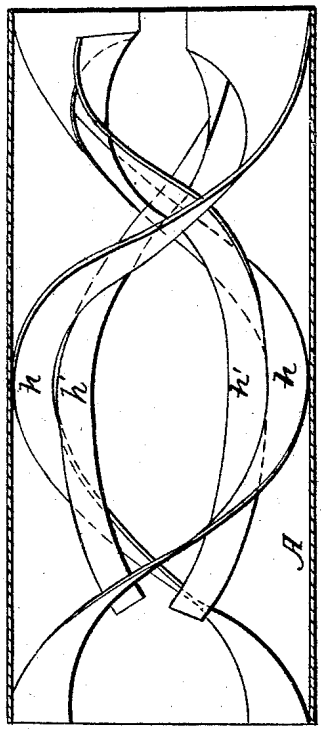


Fig. 3.



Witnesses:

Jas P Hall

Wm. T McNamara

Inventor:

Jabez Burns

UNITED STATES PATENT OFFICE.

JABEZ BURNS, OF NEW YORK, N. Y.

COFFEE-ROASTER.

Specification forming part of Letters Patent No. 44,704, dated October 18, 1864.

To all whom it may concern:

Be it known that I, JABEZ BURNS, of the city, county, and State of New York, have invented a new and Improved Coffee-Roaster; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal vertical section of this invention; Fig. 2, an end view of the same. Fig. 3 is a detached longitudinal section of the cylinder. Fig. 4 is a transverse vertical section of the same.

Similar letters of reference indicate like parts.

This invention consists in the employment or use of a cylinder which rotates on friction-wheels by means of flanges projecting from one or both of its ends, and which is provided with a stationary feed-box at one and with a rotary slide or other suitable gate opening at the opposite end, in such a manner that the coffee can be introduced into the cylinder and discharged therefrom without stopping its motion or removing it from its bearings, and that by this arrangement cylinders of a much larger caliber can be used and much more work accomplished than by the ordinary method of hanging, charging, and discharging the roasting-cylinders. The interior of my cylinder is occupied by double spiral flanges, one inside the other and running in opposite directions in such a manner that by the action of one flange the beams are propelled toward one and by the action of the other flange toward the opposite end of the cylinder, and the beams are made to travel back and forth through the cylinder without reversing the motion of the same.

A represents the roasting-cylinder, which is supported at both ends with flanges *a*. These flanges project beyond the furnace-wall, which surrounds the cylinder, and they rest upon friction-wheels *b*, which are secured in the proper position to the ends of the furnace-wall, as clearly shown in Fig. 2 of the drawings. One of the heads of the cylinder is provided with a tubular projection, *c*, to which the cog-wheel *d* is firmly keyed; or it may be cast solid with the same, and instead of a cog-wheel a simple friction-gear may be employed. This cog-wheel gears into another similar cog-wheel, *e*, on the driving-shaft *f*, by means of which motion is imparted to the cylinder.

B is the feed-box, from the bottom of which extends a pipe, *g*, into the tubular projection *c*, as clearly shown in Fig. 2 of the drawings, so that the contents of said feed-box can be easily let down into the cylinder whenever it may be desired. The interior of the cylinder is occupied by two spiral flanges, *h h'*, one inside the other, which are so arranged that one of them propels the beans toward one and the other toward the other end of the cylinder, and the coffee is thus carried back and forth through the entire length of said cylinder without reversing the motion of the same. By this arrangement a uniform roasting of a comparatively large quantity of beans can be effected in a short cylinder without danger of burning or scorching.

That head of the cylinder opposite the feed-box is provided with one or more openings, *i*, which are opened or closed by a rotary slide, *j*. This slide has its bearings on the central pivot, *k*, to which a lever, *l*, is firmly attached, so that by taking hold of this lever the slide can be easily turned in either direction. The apertures *i* can thus be opened or closed while the cylinder is in motion, and if a batch of coffee has been in the cylinder sufficiently long to be roasted the slide is turned and the apertures *i* are opened. The roasted coffee is discharged automatically by the action of one of the spiral flanges *h* or *h'*.

Instead of the rotary slide any other suitable gate may be applied, which can be opened and closed while the cylinder is in motion. After one batch of coffee has been discharged, the slides are closed and a second batch is let into the cylinders, and the roasting proceeds without ever removing the cylinder from its bearings or stopping its motion.

I claim as new and desire to secure by Letters Patent—

1. The employment or use of the friction-wheels *b*, in combination with the flanged heads of the cylinder A, constructed and operating substantially as and for the purpose described.

2. The application of the stationary feed-box B to the rotating cylinder A.

3. The double spiral flanges *h h'*, extending through the interior of the cylinder A and running in opposite directions, substantially as and for the purpose set forth.

4. The slide or gate *j*, applied in combination with apertures *i*, flanges *h h'*, and rotating cylinders A, substantially as and for the purpose described.

JABEZ BURNS.

Witnesses:
JAMES P. HALL,
WM. F. MCNAMARA.