C. L. HALL.

Coffee and Peanut Roasters.

No. 196,964. Patented Nov. 6, 1877.

Fig 3

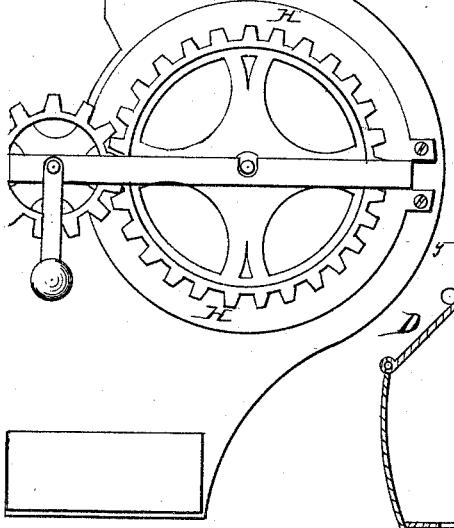
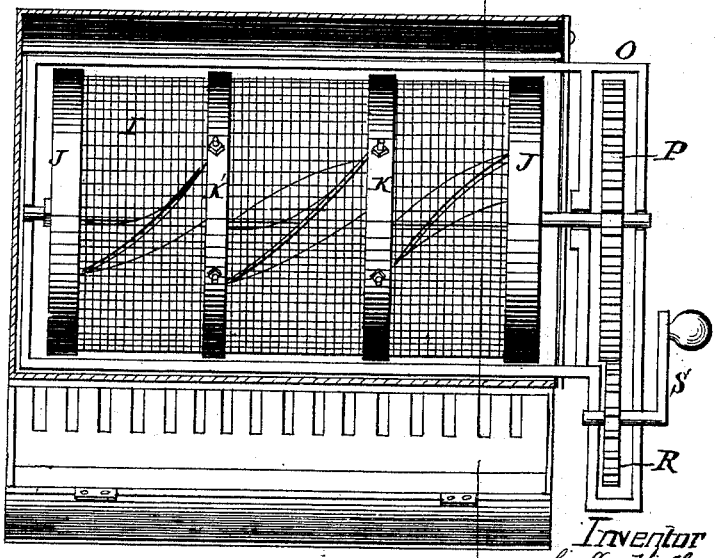


Fig 1

Fig 2



Witnesses
W. C. McArthur,
C. L. Event.

Inventor
C. L. Hall.
T. H. Alexander & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

CASSIUS L. HALL, OF YPSILANTI, MICHIGAN.

IMPROVEMENT IN COFFEE AND PEA-NUT ROASTERS.

Specification forming part of Letters Patent No. **196,964,** dated November 6, 1877; application filed January 24, 1877.

To all whom it may concern:

Be it known that I, CASSIUS L. HALL, of the city of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Coffee and Pea-Nut Roasters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a coffee and pea-nut roaster, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a transverse vertical section of my invention. Fig. 2 is a longitudinal section of the same, and Fig. 3 is a side view thereof.

A represents a cylindrical shell of any suitable dimensions, made of sheet-iron, and around the same is an exterior shell or jacket, B, of cast-iron. This outer shell is formed on the front at the bottom with a furnace, C, having suitable grate and ash-pan, as shown, and an inclined door, D, at the top, through which the fuel is inserted. The heat and smoke pass from the furnace through the flue *a*, which flue is simply the space between the two shells A and B, to the chimney or outlet G, located on the front at the top.

The furnace C and chimney G extend the entire length of the outer shell or case B, and the heat and smoke act upon the entire inner shell A, except the portion situated at the front between the chimney and the top of the furnace. At this point is a door, E, to the interior of the inner shell A, and in this door are suitable dampers *b b*, to admit cold air into said cylinder or shell A.

At one end of the machine are pivoted two doors, H H, which open, one upward and the other downward, to admit of the insertion and removal of the roasting-cylinder. This cylinder is made of wire-cloth I, attached to heads J J, and through the center of these heads is passed a longitudinal shaft, *d*, firmly fastened to the heads. On the shaft *d*, at suitable intervals, are placed ribs *h h*, made of wire, and bent at their inner ends to form eyes for the passage of the shaft. The outer ends of these ribs or stays *h* pass through the cylinder, and through metal bands K K and nuts *i i*, placed on the ends of said ribs, outside and inside of the cylinder, thereby allowing of adjusting and holding the same rigidly in position on the shaft.

To the ribs or stays *h h* are secured, in inclined position, the curved or twisted wings L L, which stir and turn over the coffee in the cylinder as the same is being rotated. These wings are so arranged as to connect one stay of one series with the second one of the next series—that is, they are curved somewhat in spiral form, and thereby carry the article being roasted from end to end of the cylinder and back.

The cylinder-shaft *d* rests on a frame, O, which is movable out and in upon longitudinal ribs *m m*, fastened on the inside of the inner shell A. The parts are so constructed that when the frame O is inserted in the shell the cylinder can rotate freely therein without coming in contact with the same.

It will be noticed that the coffee at no time comes in contact with the heated surface of the inner shell, but that the entire roasting is done by the action of the heated air within the shell.

The frame O is long enough to extend outside the roaster, and within said extended part of the frame is a cog-wheel, P, secured on the end of the shaft *d*, and into this cog-wheel meshes a pinion, R, also mounted in the extended part of the frame, and on the outer journal of said pinion is secured a crank, S, by means of which the cylinder is rotated.

In the back of the inner shell A are dampers *n*, to regulate the heat within the same in conjunction with the front dampers *b*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The cylinder consisting of the wire-cloth I, heads J, central shaft *d*, radial stays *h*, with

nuts *i*, and the surrounding bands K, all substantially as and for the purposes herein set forth.

2. The front dampers *b* and rear dampers *n*, in combination with the inner and outer shells A and B, substantially as and for the purposes herein set forth.

3. The combination of the inner shell A, provided with interior ribs *m* and dampers *b n*, the outer shell B, having furnace C and exit G, both arranged at the front of the machine, with the flue *a*, surrounding the inner shell, and the movable frame O, with the roasting-cylinder thereon, all substantially as and for the purposes herein set forth.

4. The curved or twisted wings L L, in combination with the radial stays *h*, center shaft *d*, and cylinder I J, substantially as and for the purposes herein set forth.

5. The sliding frame O, carrying the roasting-cylinder, and provided with the gears R P and crank S, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CASSIUS L. HALL.

Witnesses:

C. R. PATTERSON,

FRED. A. HUNT.