

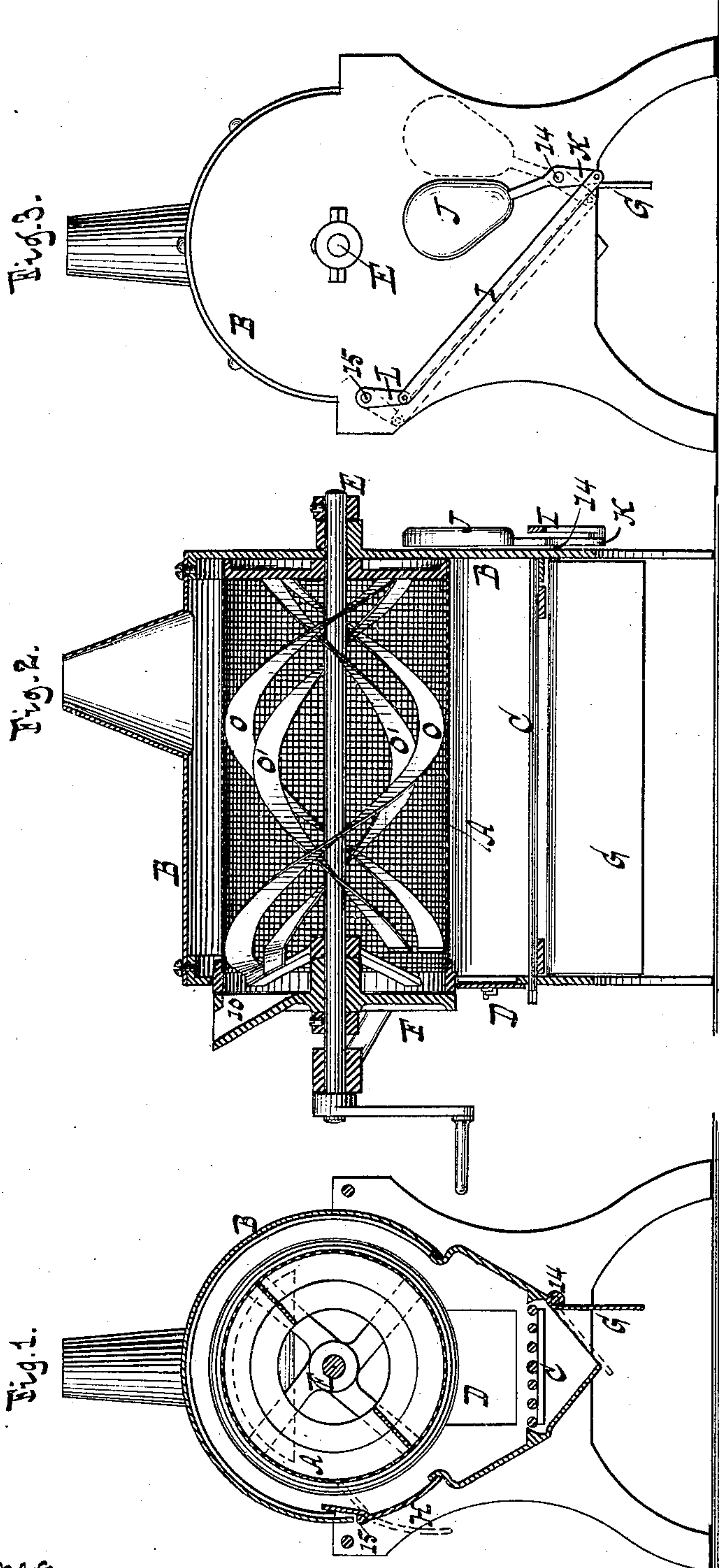
(No Model.)

2 Sheets—Sheet 1.

J. BURNS.
Coffee Roaster.

No. 241,294.

Patented May 10, 1881.



Witnesses.
Otto Stufelund
William Miller

Inventor
Jabez Burns.
by
Van Santvoord & Knapp
his attys

(No Model.)

2 Sheets—Sheet 2.

J. BURNS.
Coffee Roaster.

No. 241,294.

Patented May 10, 1881.

Fig. 4.

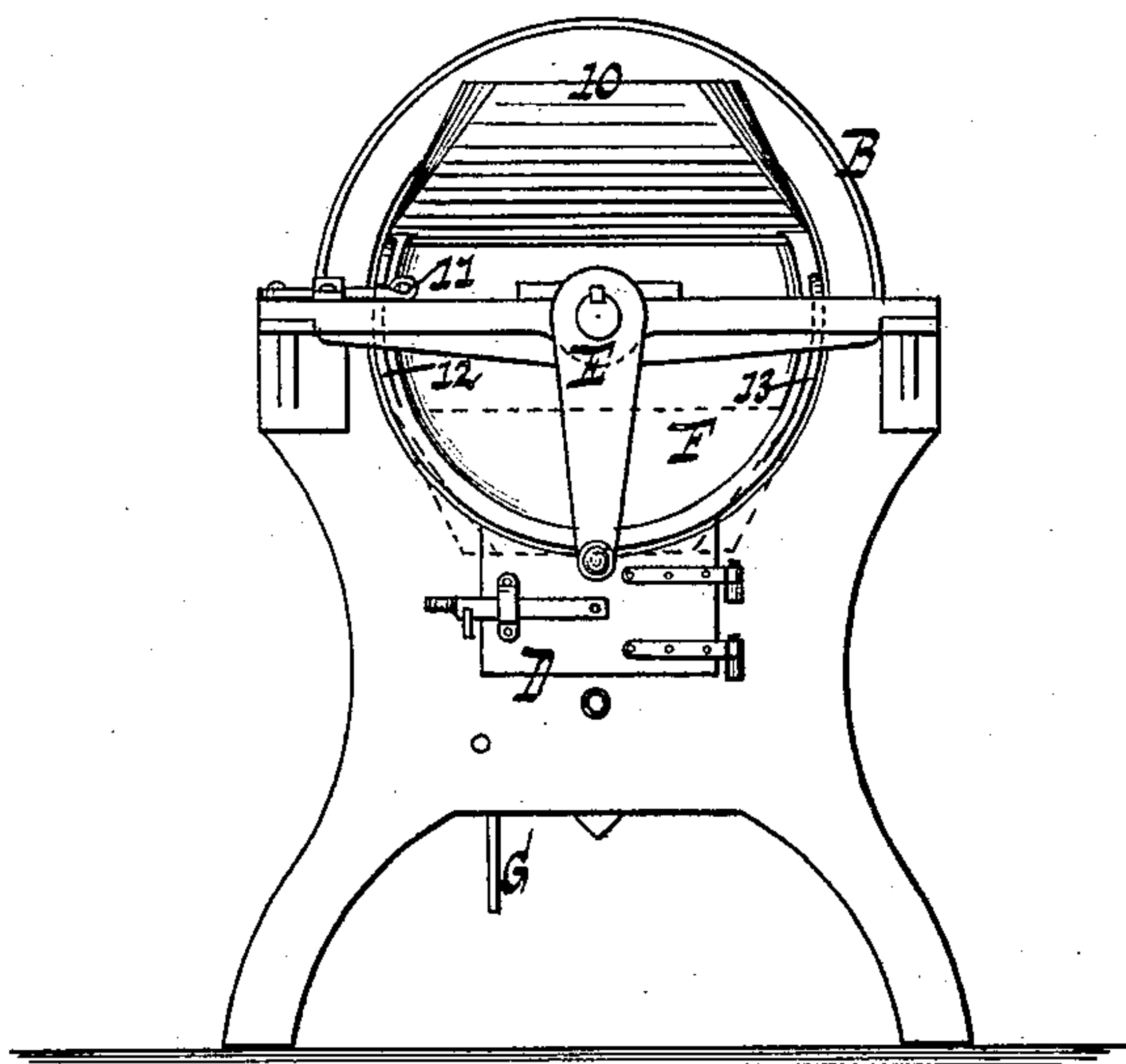


Fig. 5.

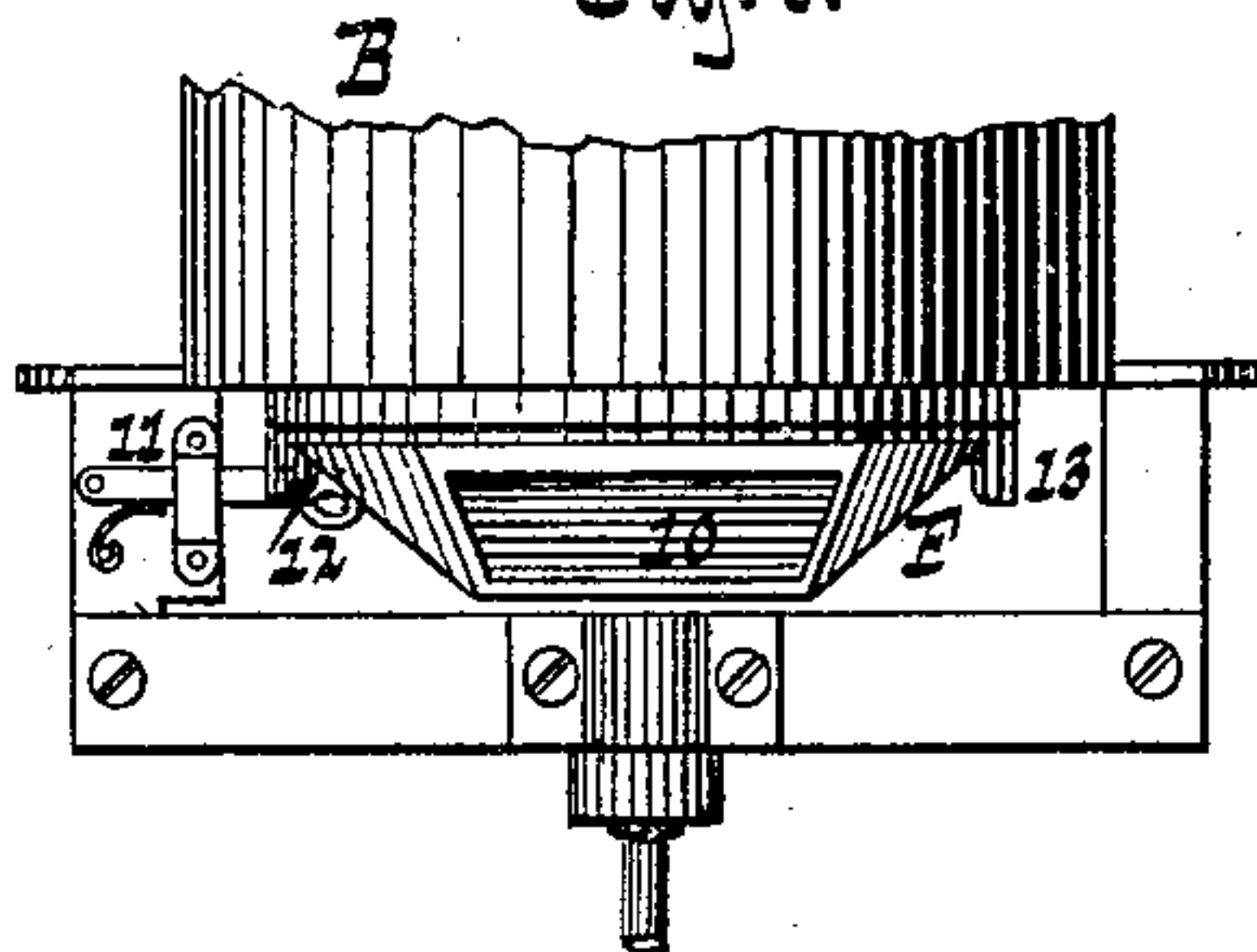
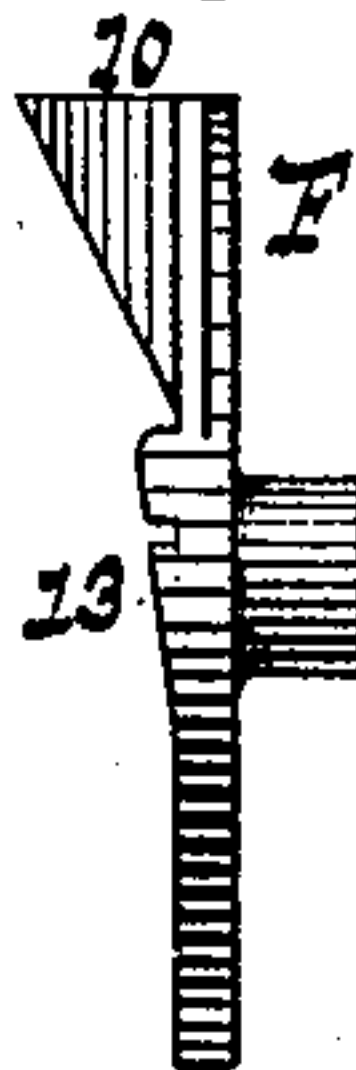


Fig. 6.



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UNITED STATES PATENT OFFICE.

JABEZ BURNS, OF BROOKLYN, NEW YORK, ASSIGNOR TO WILLIAM DARBROW, OF SAME PLACE.

COFFEE-ROASTER.

SPECIFICATION forming part of Letters Patent No. 241,294, dated May 10, 1881.

Application filed October 21, 1880. (No model.)

To all whom it may concern:

Be it known that I, JABEZ BURNS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Coffee-Roasters, of which the following is a specification.

This invention is adapted, among others, to that class of apparatus for which Letters Patent of the United States were granted to me October 18, 1864, No. 44,704; and it consists in certain novel combinations of parts, hereinafter fully described, and pointed out in the claims.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a vertical cross-section. Fig. 2 is a vertical longitudinal section. Fig. 3 is a rear view. Fig. 4 is a front view. Fig. 5 is a plan or top view, showing the locking device for the cylinder-head. Fig. 6 is a side view of the cylinder-head detached.

Similar letters indicate corresponding parts.

The letter A designates the roasting-cylinder, arranged within a heating-chamber, B, which is provided with a fire-grate, C, in its lower part, access being had thereto through a door, D.

The cylinder A is fixed to a shaft, E, which is arranged to receive a revolving motion, and on which is mounted loosely at one end of the cylinder a head, F. This head F is detached from the cylinder A, and remains stationary during the revolutions thereof, and it is constructed with an opening, 10, therein, which, in this example, has a rectilinear form and flares in an outer direction.

When it is desired to charge the cylinder A with the material to be roasted, the cylinder-head F is set to bring the opening 10 above the shaft E, as shown, while when it is desired to discharge the cylinder, the head is set to bring such opening below the shaft. A locking device is used for retaining the cylinder-head F in either of these two positions, and in this example such locking device consists of a spring-latch, 11, which is fastened to the machine-frame, and which engages with a notched incline, 12 or 13, on the face of the cylinder-head, when the latter reaches the appropriate positions.

Below the fire-grate C in the heating-chamber is arranged a draft-damper, G, while above the grate in such chamber is arranged a cold-air-inlet damper, H, and these dampers are connected together in a suitable manner to be opened and closed alternately—that is to say, when the draft-damper is opened the cold-air damper is closed, and vice versa. When the roasting-cylinder A is in motion the draft-damper G is opened, so as to support combustion of the fuel on the grate C; but when the roasting-cylinder is at rest, as when it is being charged or discharged, the other or cold-air damper H is opened, the draft-damper being thus closed, so as to check the fire, while air is admitted to the heating-chamber B for cooling the cylinder. In this example the dampers G H are hung on pivots 14 15, and are connected together by a rod, I, (see Fig. 3,) combined with arms K L on the pivots in such manner that the motion of one damper is transmitted to the other in the appropriate manner.

Both of the dampers G H are retained in an open position by the action of a weight, J, which is secured to the arm K, and is brought on opposite sides of a vertical plane intersecting the pivot 14 of the draft-damper in the two positions of the dampers.

In order to cause the cold air admitted to the heating-chamber B by the damper H to pass around the lower part of the roasting-cylinder this damper is constructed to deflect the inflowing air downwardly when it is opened. To this end the damper H is extended both above and below its pivot, and the upper part thereof is arranged to hug the roasting-cylinder when the damper is opened, as indicated in dotted outline in Fig. 1, thus preventing the inflowing air from passing upward.

Within the roasting-cylinder A are arranged double spiral blades O O', extending in opposite directions, one inside the other, so that when the cylinder is put in motion one set of blades propel the material to be roasted in one direction, and the other set in a contrary direction.

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

1. The combination, with the roasting-cylinder and its shaft, of a stationary head mounted loosely on the shaft at one end of the cylinder,

and constructed with an opening therein, and a device for locking the cylinder-head with its opening brought either above or below the shaft, whereby such opening is adapted both
5 to charge and discharge the cylinder, as set forth.

2. The combination, with the roasting-cylinder, the heating-chamber, and its grate, of a draft-damper and a cold-air-inlet damper arranged, respectively, above and below the fire-
10 grate in the heating-chamber, and connected together to be opened and closed alternately, substantially as described.

3. The combination, with the roasting-cylinder, the heating-chamber, and its grate, of a
15 draft-damper and a cold-air-inlet damper arranged, respectively, below and above the grate in the heating-chamber, and connected to-

gether, substantially as described, and a balance-weight arranged to act on either of the
20 dampers for retaining the same in an open position, as set forth.

4. The combination, with the roasting-cylinder, the heating-chamber, and its grate, of the
25 cold-air-inlet damper, constructed to deflect the inflowing air downwardly around the cylinder, and a draft-damper connected to the cold-air damper, substantially as described, for the purpose set forth.

In testimony whereof I have hereunto set
30 my hand and seal in the presence of two subscribing witnesses.

JABEZ BURNS. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.