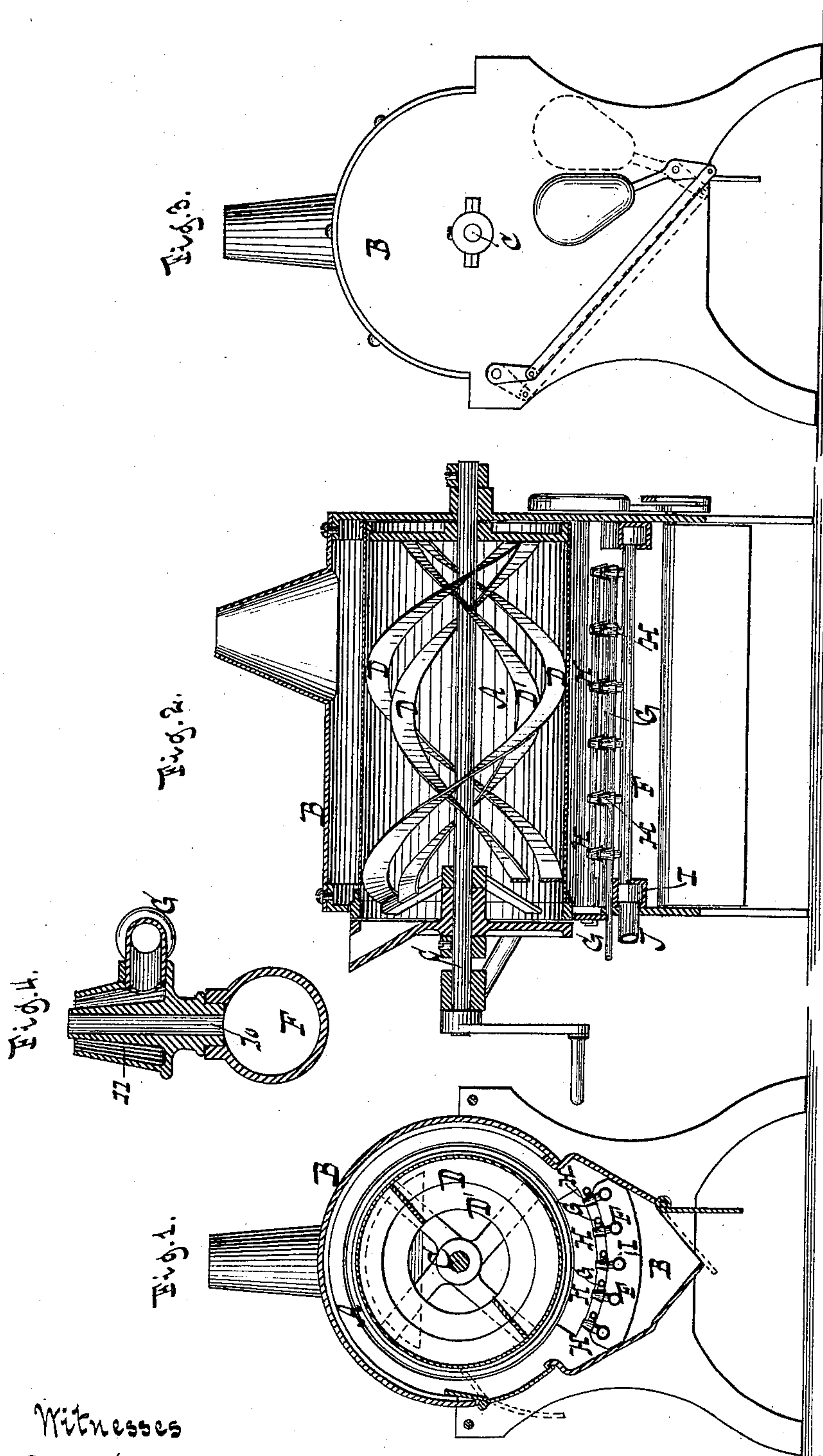


(No Model.)

J. BURNS.
Coffee Roaster.

No. 241,295.

Patented May 10, 1881.



Witnesses
Otto Hufeland
William Miller

Inventor
Jabez Burns.
by
Van Santwoord & Hauff
his attys.

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. 241,295, 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 19, 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 longitudinal vertical section. Fig. 3 is a rear view.

Similar letters indicate corresponding parts.

The letter A designates the roasting-cylinder, which is arranged within a surrounding casing, B, which forms a heating-chamber, said cylinder being fixed to a shaft, C, capable of being revolved, which shaft is journaled in the outer casing. One end of the cylinder A is open and communicates, through the casing B, with a hopper or passage for introducing the material into the cylinder. Within the cylinder are arranged double spiral blades D D', 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. The vertical walls of the casing at each end of the machine not only serve to support the shaft of the roasting-cylinder, but they are each formed or provided with an inwardly-projecting gas-chamber, I, connected together by the series of pipes F, which carry the gas-burners H. The gas enters through a pipe, J, into one of the gas-chambers I, and from thence it passes through the pipes F to the opposite gas-chamber, by which means the pressure of gas throughout the pipes is equalized and the burners uniformly supplied.

The letter G indicates a series of air-supply pipes for connecting with a suitable reservoir containing air under pressure, and said pipes extend along parallel with the gas-pipes, and are provided with suitable burners, which are

adjacent to the gas-burners, whereby the gas and air mix together directly at the point of combustion, thereby creating an intense heat, which is directed onto the roasting-cylinder. 55

The gas-feed chambers I are preferably curved, as shown, and the gas and air pipes are arranged in a plane concentric to the axis of the roasting-cylinder.

In this example the burners H are respectively constructed with a central gas-channel, 10, (see Fig. 4,) open at both ends, and with an air-jacket, 11, open at the upper end, such channel and jacket communicating with the appropriate pipes; but, if desired, other forms of burners may be used. 65

The arrangement of the burners H in the heating-chamber has the effect of preventing the loss or waste of heat.

I do not broadly claim a roasting-cylinder arranged entirely within a surrounding casing and heated by means of gas-burning devices arranged beneath the cylinder, as such is not my invention. 70

What I claim as new, and desire to secure by Letters Patent, is— 75

1. In a coffee-roasting apparatus, the surrounding casing B, supporting the shaft of the roasting-cylinder, and formed or provided with inwardly-projecting gas-chambers I, in combination with a pipe or pipes connecting said gas-chambers and provided with suitable burners, substantially as described. 80

2. In a machine for roasting coffee and similar material, the combination, with a surrounding casing, in which the roasting-cylinder is journaled, of gas-chambers formed or provided on the vertical end walls of the casing, a pipe or pipes provided with burners and connecting said gas-chambers together, and an air-supply pipe or pipes arranged to permit the admixture of air with the gas at the point of combustion, all substantially as shown and described. 85 90

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses. 95

JABEZ BURNS. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.