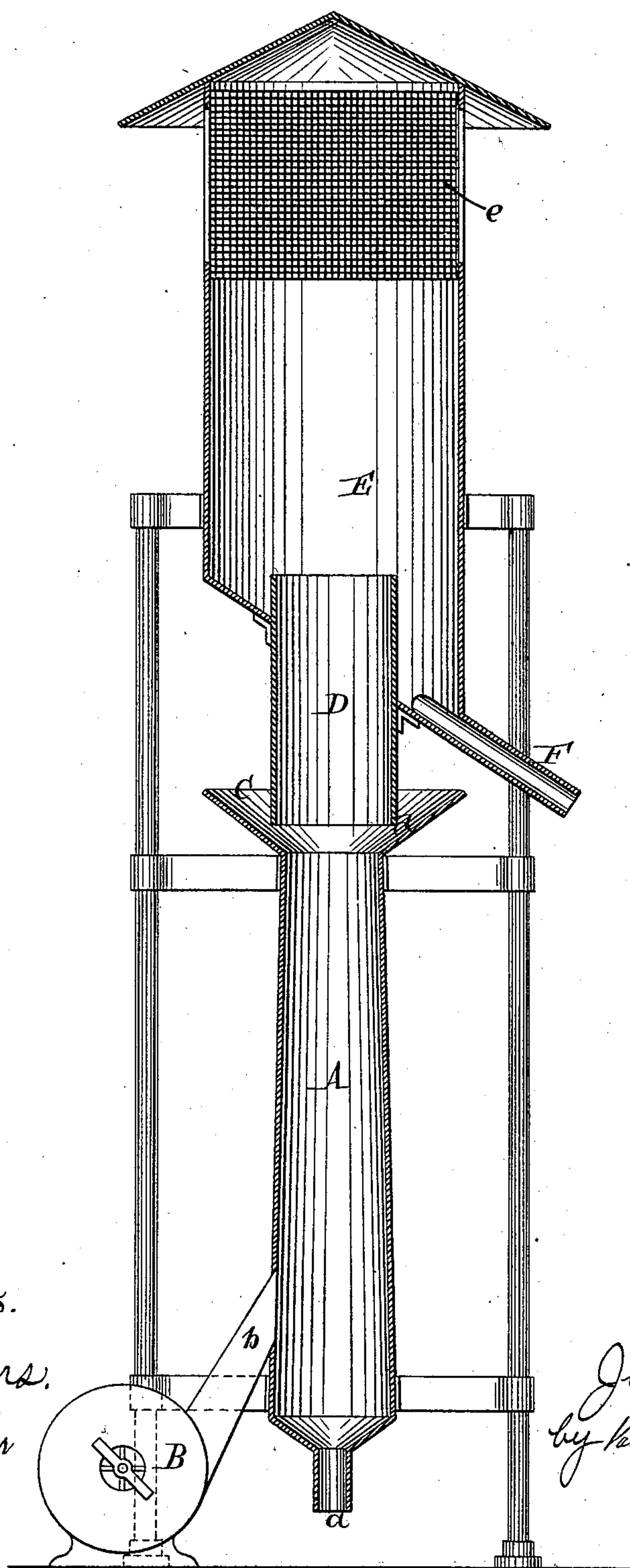


J. ARBUCKLE.
Apparatus for Cleaning Grain, &c.

No. 226,471.

Patented April 13, 1880.



Witnesses.
Chas. Wahlers.
William Miller

Inventor.
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UNITED STATES PATENT OFFICE.

JOHN ARBUCKLE, OF BROOKLYN, NEW YORK.

APPARATUS FOR CLEANING GRAIN, &c.

SPECIFICATION forming part of Letters Patent No. 226,471, dated April 13, 1880.

Application filed August 6, 1879.

To all whom it may concern:

Be it known that I, JOHN ARBUCKLE, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Apparatus for Cleaning Coffee, Grain, and other Similar Materials, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, which represents a vertical section.

This invention consists in the combination, in an apparatus for cleaning coffee, grain, and other similar materials, of a fan-blower or other air-forcing device communicating with a vertical air-flue, which extends down into a flaring mouth-piece without coming in contact therewith, and the diameter of which is somewhat larger than that of the air-flue, and a separating-chamber which embraces the upper end of the escape-flue, and from the inclined bottom of which projects a discharge-spout, so that coffee, grain, or other similar material, when being introduced into the flaring mouth-piece, is first exposed to a suction produced by the upward current of air, and as said material passes into the air-flue the light parts are carried up into the separating-chamber and the heavy parts descend through the air-flue.

In the drawing, the letter A designates a trunk or flue, which is, by preference, made circular in cross-section, and which is provided with a discharge-opening, *a*, at its lower end.

B represents a fan-blower or other air-forcing apparatus, the air-discharge *b* of which extends into the flue A, so that when the fan-blower is set in motion an upward current of air is created in said flue. On the upper end of this flue is formed a flaring mouth-piece, C, which serves to receive the coffee, grain, or other similar material to be cleaned. Above this mouth-piece is situated a flue, D, which I have termed the "escape-flue," and which extends down into the mouth-piece without touching its inner surface, leaving a space, *d*, through which the coffee or other material passes down.

The diameter of the escape-flue D is some-

what larger than that of the air-flue A, so that as the air rushes up from the flue A into the flue D a certain suction is produced through the space *d*, whereby the coffee or other materials are readily sucked into the flues A D and the dust and chaff are blown out, as will be presently explained.

The top end of the escape-flue D extends through the bottom of the separating-chamber E, and this bottom is inclined or sloping down toward the discharge-spout F.

The diameter of the separating-chamber is considerably larger than that of the escape-flue D, and its upper portion consists of wire-netting *e*, through which the dust and fine particles are blown out.

The force of the air-blast is regulated according to the material to be cleaned.

In cleaning coffee, for instance, the blast is so regulated that the dust and chaff are blown out at the top, the good beans are carried up through the escape-flue D into the separating-chamber E, where they drop down and pass off through the spout F, and the stones and other heavy particles mixed with the coffee drop down through the air-flue A and escape through the opening *a*.

I am aware that a gravity grain-separator has been composed of a series of cylindrical sections successively larger in diameter, and each having at its top a surrounding annular settling-chamber for the different grades of grain, said chambers having inclined bottoms and outlets and being capped by annular covers formed on and surrounding the lower end of the next section, the grain being exposed to an ascending suction-blast, and such I hereby disclaim.

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

In an apparatus for cleaning grain, &c., the combination of the chamber E, having an upper foraminous portion, *e*, an inclined bottom, and a discharge-spout, the escape-flue D, passing through said inclined bottom, the air-flue A, of a less diameter than the escape-flue, and having a flaring mouth-piece, C, for receiving the grain, &c., to be cleansed, and into which the escape-flue projects, its lower

end terminating above the surface of the flaring mouth-piece to create the annular space *d*, said air-flue having a discharge-opening, *a*, at its lower end, and being connected near
5 such end with an air-forcing device, the whole arranged substantially as described, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 25th day of July, 1879.

JOHN ARBUCKLE. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.