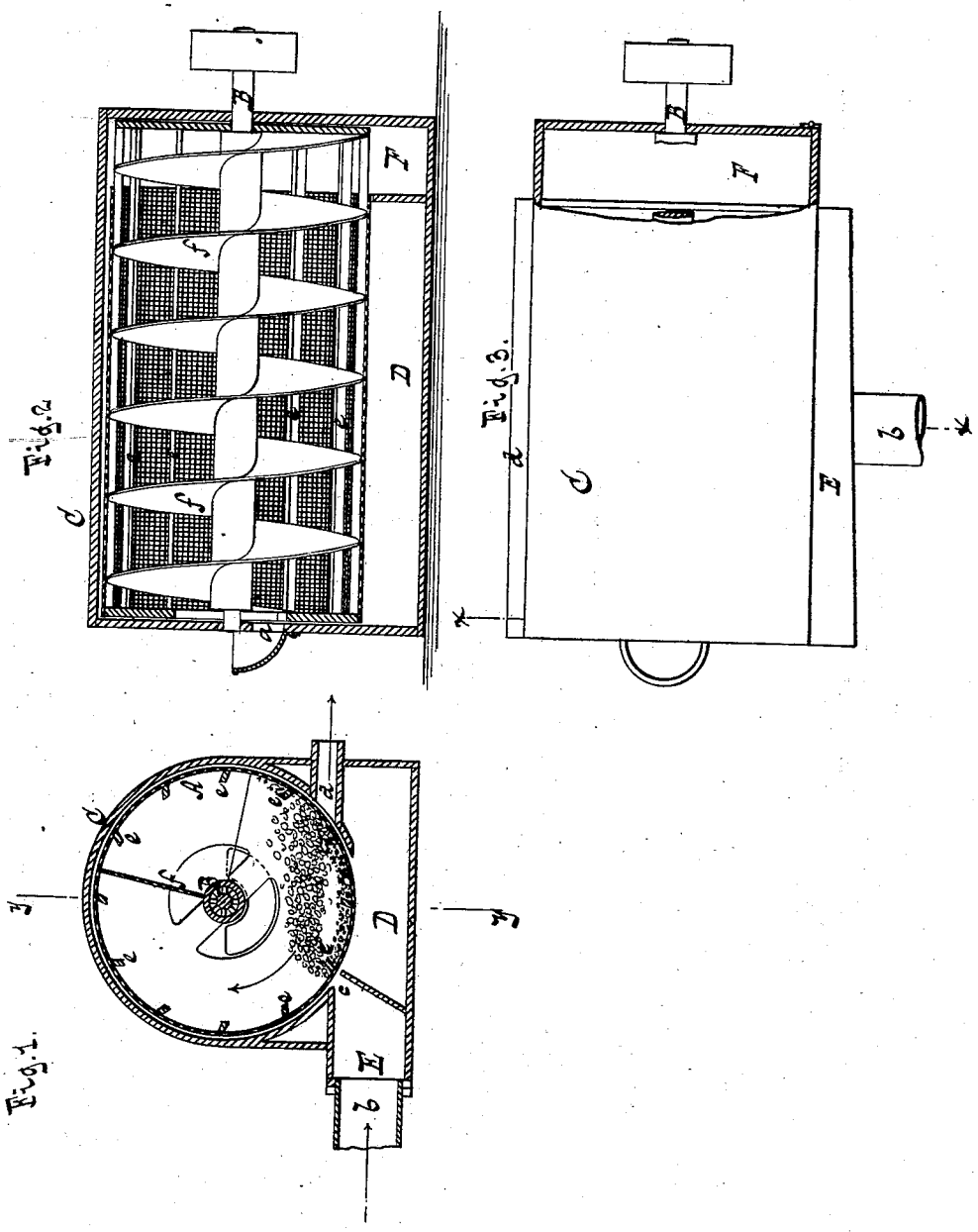
(No Model.)

S. B. CONOVER.

APPARATUS FOR DRYING OR CLEANING TOBACCO AND OTHER MATERIALS.

No. 275,596. Patented Apr. 10, 1883.



WITNESSES:

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APPARATUS FOR DRYING OR CLEANING TOBACCO AND OTHER MATERIALS.

SPECIFICATION forming part of Letters Patent No. 275,596, dated April 10, 1883.

Application filed July 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN B. CONOVER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Apparatus for Drying or Cleaning Tobacco and other Materials, of which the following is a specification.

This invention relates to an apparatus in which the material to be dried or cleaned is placed in a revolving drum of wire-gauze or other equivalent material, and exposed to an air-blast in a direction transversely to the axis of the drum. The peculiar construction of my apparatus is pointed out in the following specification.

In the accompanying drawings, Figure 1 represents a transverse section in the plane *x x*, Fig. 3. Fig. 2 is a longitudinal section in the plane *y y*, Fig. 1. Fig. 3 is a plan or top view. Similar letters indicate corresponding parts.

In the drawings, the letter A designates a drum of wire-gauze, perforated sheet metal, or other equivalent material, which is firmly mounted on a shaft, B, and which is inclosed in a case, C, surrounding the same on all sides. The heads of this case form the bearings for the shaft B, and in one of these heads is an opening, *a*, Fig. 2, through which the material to be dried is introduced into the drum A. The case C fits the drum closely, except at its bottom part, where a dust-receptacle, D, a blast-chamber, E, and a discharge-chamber, F, are formed, this last-named chamber being situated at the head opposite the head containing the feed-opening *a*. The blast-chamber E extends from the feed end of the case to the discharge-chamber, (see Fig. 3,) and it connects, by means of a pipe, *b*, with a suitable blast apparatus. The air-discharge opening *c* of the blast-chamber extends throughout its entire length, and the air injected into the blast-chamber passes into and through the drum A, and escapes through the discharge-channel *d*, which is situated on the opposite side of the case and extends throughout its whole length.

On the inner circumference of the drum A are firmly secured a series of ribs, *e*, slightly inclined, as shown in Fig. 1, and on the shaft B is mounted a feed-screw, *f*, which extends from the shaft to the inner circumference of the drum. As the drum revolves in the direction of the arrow marked on it in Fig. 1 the material contained between the successive ribs of the drum, on coming opposite to the blast-opening *c*, is thrown across toward the air-discharge channel *d*, and as said material is then again carried back toward the blast-opening it is a second time blown across toward the discharge-channel, and so on, while at the same time for each revolution of the drum the material is advanced from the feed-opening *a* toward the discharge-chamber F.

By the combined action of the transverse air-blast and of the revolving drum, therefore, the material to be dried or cleaned is first blown from the blast side of the drum toward the air-discharge side, and thence carried back toward the blast side, and in being thus carried from one side toward the other the material is exposed from all sides to the air-blast, so that it is rapidly dried or cleaned, as the case may be.

By referring to Fig. 1 it will be seen that the ribs *e* are inclined, so that the material is readily blown off from the same, as indicated in said figure. The force of the air-blast must be regulated according to the nature of the material to be dried.

It is obvious that instead of a blast apparatus an exhaust-fan may be used, the same being connected to the discharge-channel.

A feather-renovator has heretofore been composed of a casing provided interiorly with a perforated fixed shelf, on which the feathers are supported and stirred by fingers on a rotary shaft, a fan being arranged at one side of the casing to drive air out, the feathers being agitated, the opposite side of the casing having an outlet covered by a door, so that the feathers after treatment can be discharged. A drying apparatus has been also composed of a steam-heated rotary cylinder having longitudinal wings within it for lifting the material to be dried and permitting it to fall by gravity, and a coffee-roaster has been composed of a rotary wire-gauze cage to contain the coffee, a screw or worm to carry the coffee along the same, and means for heating the coffee, so that the latter is continuously turned over in the cage and carried along the

same by the screw or worm. Such structures, however, do not constitute my invention, and are not claimed by me.

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

The combination, substantially as hereinbefore described, of a stationary casing, C, a foraminous drum, A, arranged to revolve within the casing and provided with interior ribs, *e*, an air-blast opening, *c*, extending longitudinally along the drum at one side of the casing, an air-discharge channel, *d*, extending longitudinally along the drum at the opposite side of the casing, and mechanism for carrying the material along the length of the drum.

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

STEPHEN B. CONOVER. [L. S.]

Witnesses:

W. HAUFF,

CHAS. WAHLERS.