R. B. WIGHTMAN.

FEATHER-RENOVATOR.

No. 186,183. Patented Jan. 9, 1877.

Fig. 2.

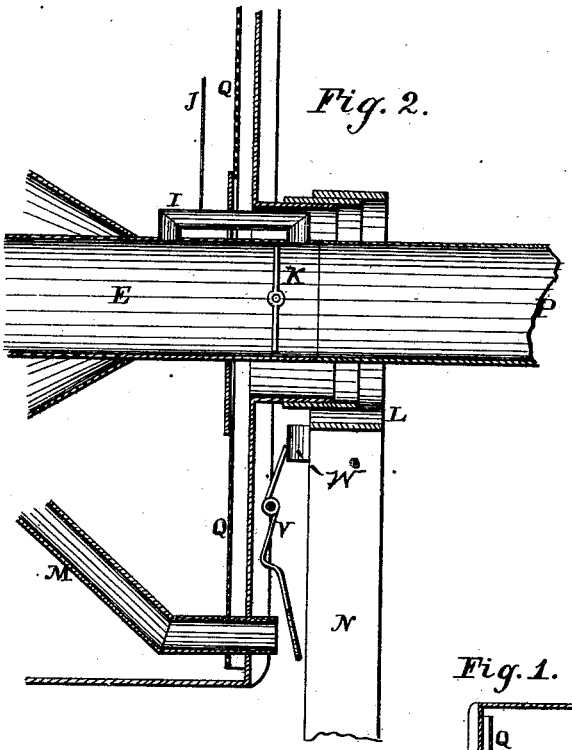


Fig. 3.

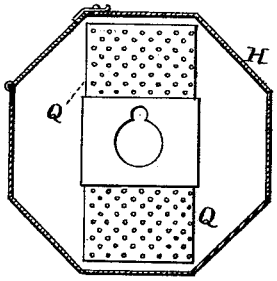
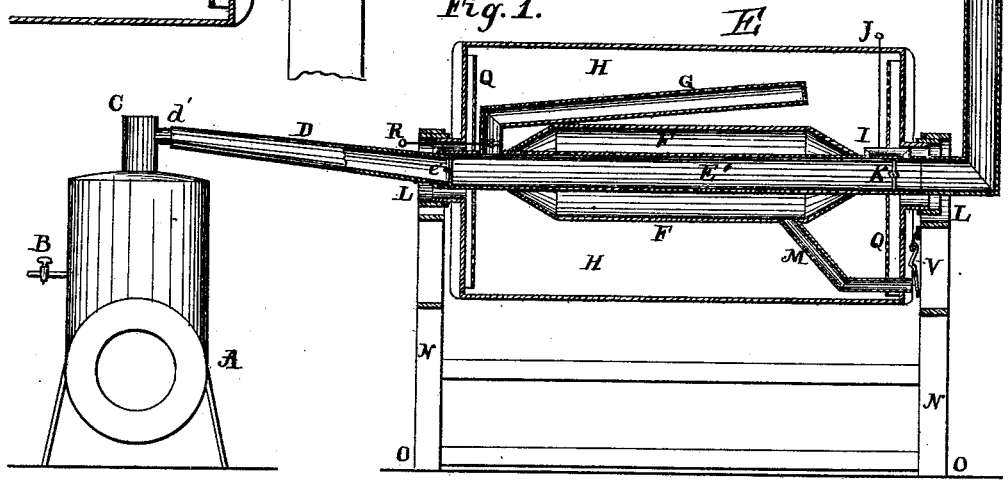


Fig. 1.



Witnesses:

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UNITED STATES PATENT OFFICE.

RANSFORD B. WIGHTMAN, OF HERKIMER, NEW YORK.

IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. **186,183**, dated January 9, 1877; application filed August 18, 1876.

To all whom it may concern:

Be it known that I, RANSFORD B. WIGHTMAN, of Herkimer, in the county of Herkimer and State of New York, have invented a new and Improved Machine for Renovating Feathers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of the machine attached to a boiler or steam-generator. Figs. 2 and 3 are detail views of the machine.

This invention has relation to feather-renovators; and the novelty consists in a rotating drum provided with cleansing and drying pipes, operating in the manner as will be hereinafter more fully set forth. It also consists in the novel construction and arrangement of certain devices, as will be hereinafter described.

In the annexed drawings, A represents a boiler or steam-generator, provided with a gage-cock, B, and safety-valve C, with coupling-connection *d'*. D is a steam-pipe connecting the feather-renovator with the steam-generator. E represents the rotating drum, having eight sides, more or less. One of said sides is provided with a hinged door to admit access to the interior of the drum.

A central shaft, E', preferably made of gas-pipe and perforated, is passed through the drum E, and the perforations thereof are surrounded by a casing, F, to a chamber for the steam. A perforated elbow-pipe, G, as shown in Fig. 1, is connected with the central shaft E', and provided with a stop-cock, R, for regulating the passage of steam from the central shaft E' into the interior of the drum in which the feathers are placed.

The elbow-pipe I is to exhaust the surplus steam from the central shaft. This is accomplished by passing the pipe I through partition Q, and arranging the inlet and outlet openings thereof over the valve K. When the stop-cock J is opened and the escape-valve K closed, the steam in the central shaft E' will pass through the pipe I and outside the head of the rotating drum and up the pipe P.

A drip-pipe, M, is attached to the steam-casing F, and extends downward and through the drum-head, as shown in Fig. 1 of the drawings. To the drum-head is attached a spring-valve, V, for closing the lower end of the drip-pipe. This spring-valve is opened automatically at every revolution of the drum by coming in contact with a cam, W, thereby allowing the condensed steam to escape.

The letter Q indicates perforated partitions, forming, in connection with the drum-heads, steam or hot-air chambers. The rotating drum and its parts are supported in the bearings L of frame N.

The operation is as follows: The feathers to be renovated are placed in the interior of the drum through the hinged door. Steam is admitted from the generator to the central perforated shaft E' by operating the valve *e'* and to the pipe G, by opening the valve R. The latter pipe, being perforated, allows the steam to escape to the end chambers of the drum and mingle with the feathers within the drum. The passage of the steam through the central shaft and its casing is regulated by the valve K. When the feathers have been steamed enough, the damper *p* in escape-pipe P is opened, and hot air is forced through the machine, driving out all steam, and at the same time drying the feathers.

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

1. The exhaust-pipe I, with valve J, in combination with central pipe E', provided with valve K and escape-pipe P, substantially as and for the purpose set forth.

2. In a feather-renovator, the combination of central perforated shaft E', casing F, valve K, exhaust-pipe I, and valve J, substantially as and for the purpose set forth.

In witness that I claim the improvement in feather-renovators as above, I have hereunto set my hand.

RANSFORD B. WIGHTMAN.

Witnesses:
J. D. HENDERSON,
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