





# UNITED STATES PATENT OFFICE.

THEODORE J. ADAMS, OF ANSONIA, CONNECTICUT.

## IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. 133,348, dated November 26, 1872.

*To all whom it may concern:*

Be it known that I, THEODORE J. ADAMS, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Renovator for Feathers, Moss, Hair, &c., of which the following is a specification:

Figure 1 is a detail longitudinal section of my improved renovator, taken through line *x x*, Figs. 2 and 3. Fig. 2 is a detail cross-section of the same, taken through the line *y y*, Fig. 1. Fig. 3 is a detail cross-section of the same taken through the line *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved apparatus for renovating feathers, moss, hair, &c., which shall be simple in construction, convenient in use, and effective in operation; and it consists in the construction and combination of the various parts, as hereinafter more fully described.

A B is a hollow cylinder, the sides A of which are made of sheet-iron, tin, or other suitable material, and the ends or heads B of which are made of wood or other suitable material. Within the cylinder A B is placed a hollow cylinder, C D, the sides C of which are made of sheet-iron, tin, or other suitable material finely perforated, as shown in Figs. 1 and 3, and the ends of which are made of wood or other suitable material. The cylinder C D is made shorter and of a less diameter than the cylinder A B, so as to have a space between the ends and the sides of the two cylinders, as shown in Figs. 1, 2, and 3. The upper part of the cylinder C D is cut away, and the edges of the remaining segment are secured to longitudinal strips E extending the whole length of the inner cylinder C D. In the outer cylinder A B, directly above the opening in the inner cylinder C D, is formed a door, F, for convenience in putting in and taking out the material to be operated upon. One of the heads D of the inner cylinder C D is made to fit into the outer cylinder A B, to the walls of which its edges are secured. The other head D is made of the same size as the inner cylinder, except the part opposite the opening in the upper part of the cylinder C D, where it extends to the cylinder A B, and is secured in place by being attached to the strips E and to the upper part of the cylinder A B. The annular space between the two

cylinders is thus open at one end and closed at the other. G is a gudgeon which passes through a hole in the center of the head B of the outer cylinder, and the inner end of which is flanged and is secured to the head D of the inner cylinder. H is a hollow gudgeon or pipe which passes through a hole in the center of the head B of the outer cylinder, and which is provided with two flanges by which it is secured to the heads B D of both cylinders. I is a pipe extending from center to center of the heads D of the inner cylinder C D, and which communicates with the interior of the hollow gudgeon H through a hole in the center of the head D. The pipe I is finely perforated, as shown in Figs. 1 and 3. In the pipe or hollow gudgeon H, between the heads B D, are formed two or more holes, and in the inner part of the said pipe, or between its inner end and the head D, is placed one or more cross bars or checks, J, to check the steam and cause it to pass out through the holes in the sides of the gudgeon H. In the upper part of the outer cylinder A B, over the space between the heads B D, may be formed a door, K, to allow access to said space when desired.

In using the machine, the substance to be renovated is placed in the inner cylinder C D through the door F, which is then tightly closed, and steam is admitted through the hollow gudgeon H which enters the inner cylinder C D through the perforations of the wall C and the pipe I, which insures the substance being thoroughly acted upon, the steam entering the substance both from the outside and center. When the substance has been sufficiently steamed the steam is shut off and the door F opened, allowing the moisture to escape, the heat communicated by the steam being sufficient to evaporate all the moisture and thoroughly dry the substance.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the outer cylinder A B F, inner perforated cylinder C D E, solid gudgeon G, perforated hollow gudgeon H, and perforated pipe I with each other, in substantially the manner herein shown and described, and for the purposes set forth.

THEODORE J. ADAMS.

Witnesses:

WM. H. DAYTON,  
THOMAS T. READER.