

O. W. BENNEY.  
Feather-Renovators.

No. 150,392.

Patented May 5, 1874.

Fig. 1.

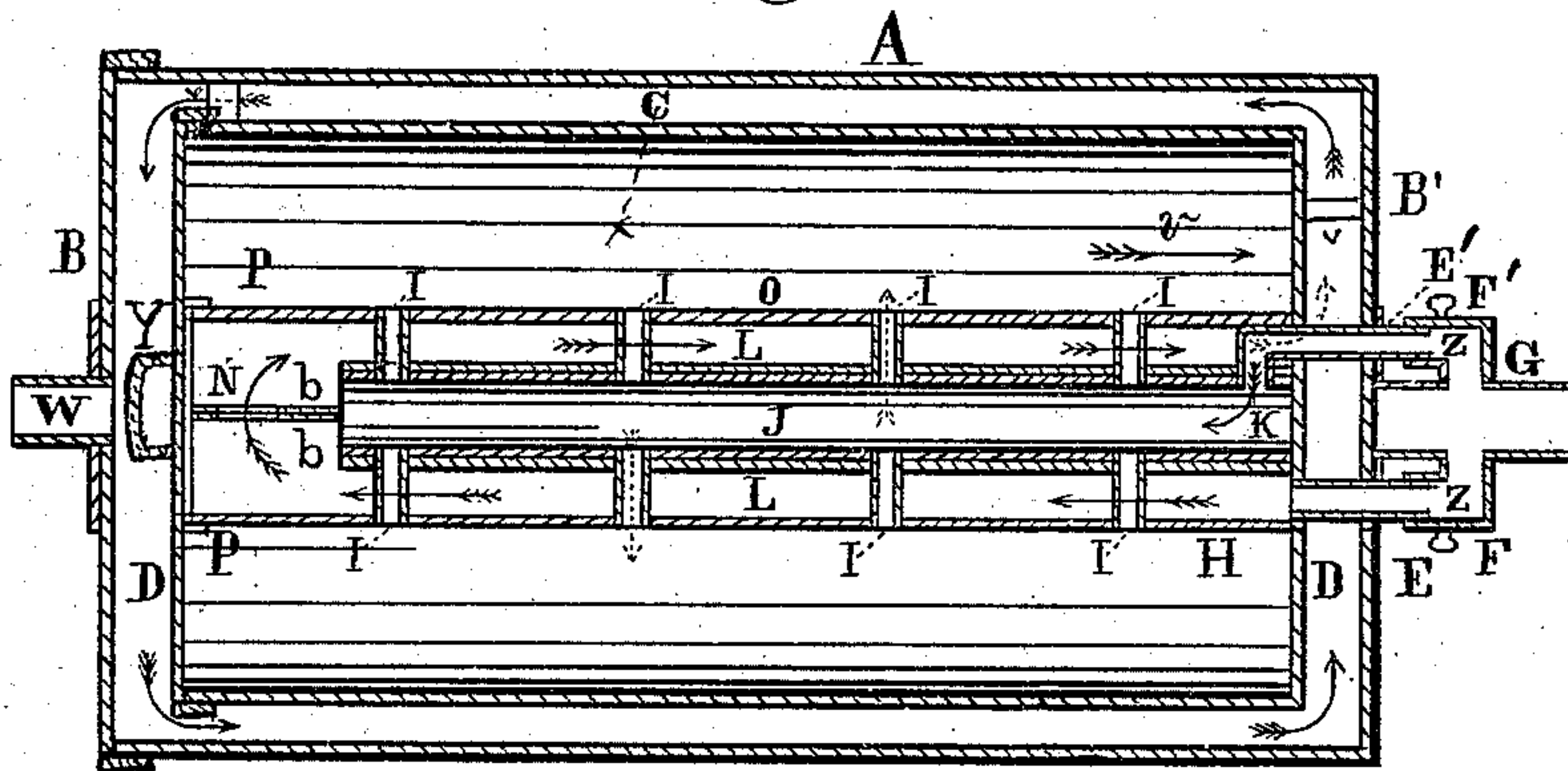


Fig. 2.

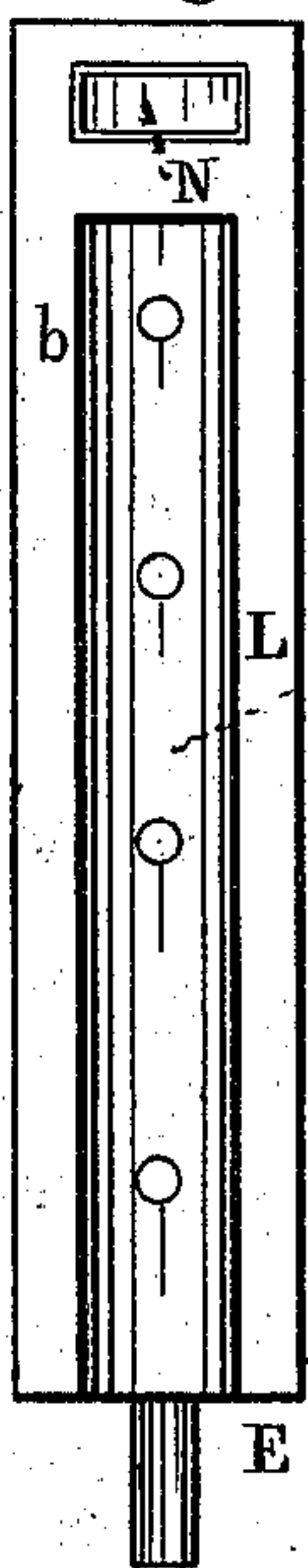


Fig. 3.

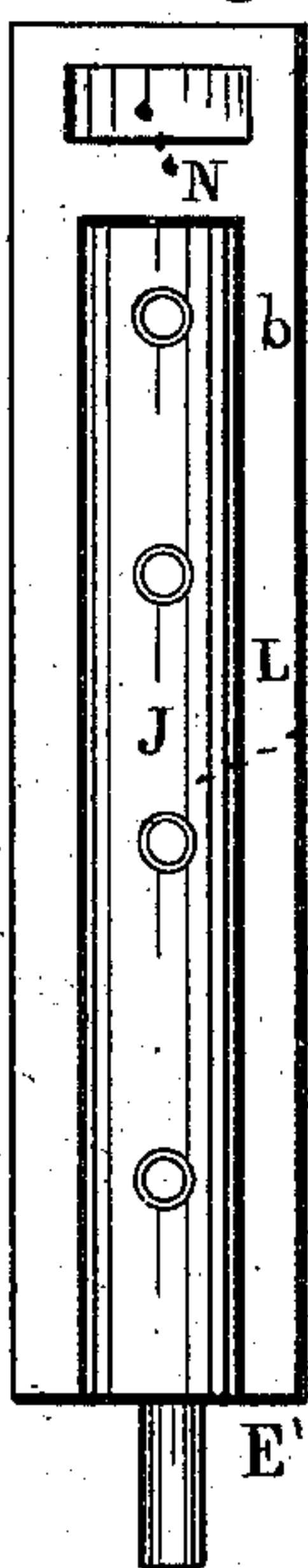


Fig. 4.

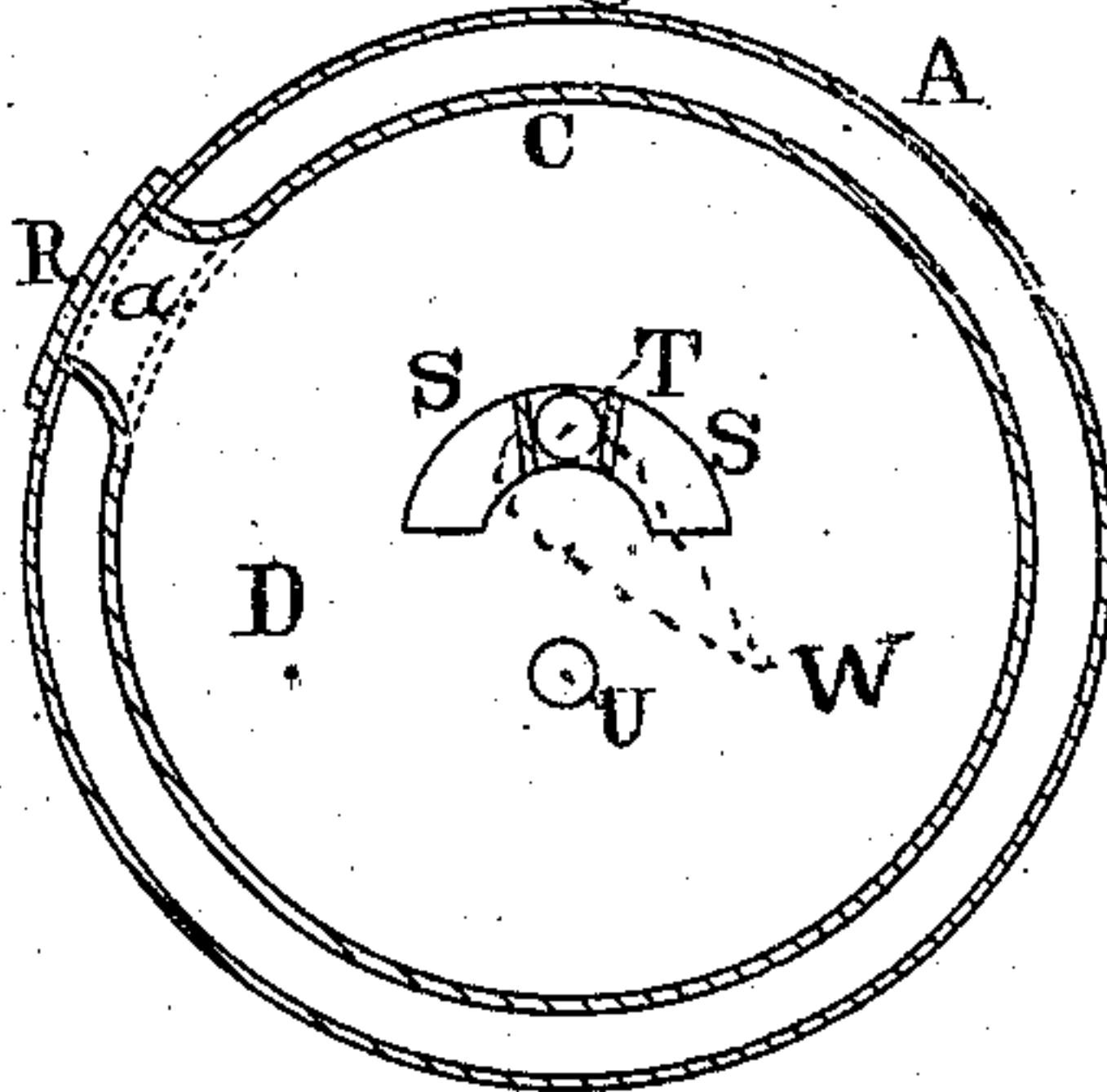
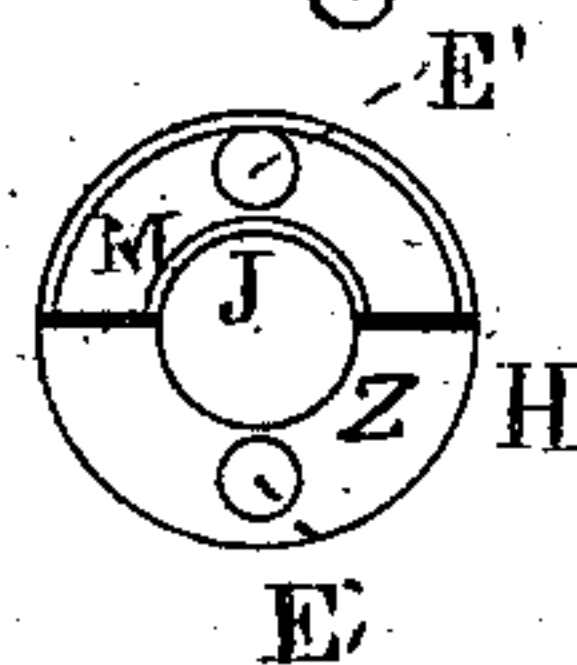


Fig. 5.



Attest.

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# UNITED STATES PATENT OFFICE.

OCTAVIUS W. BENNEY, OF VALPARAISO, INDIANA.

## IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. **150,392**, dated May 5, 1874; application filed April 7, 1874.

*To all whom it may concern:*

Be it known that I, OCTAVIUS W. BENNEY, of Valparaiso, in the county of Porter and State of Indiana, have invented an Improvement in Feather-Renovators, of which the following is a specification:

The object of the present invention is to provide a more convenient method for renovating feathers by means of the better introduction of steam into the cylinders. The nature of my invention consists in a two-part heating-cylinder, inclosing an inner cylinder or pipe, which is provided with a series of pipes extending through the two-part cylinder, for introducing steam to the receiver containing feathers, and with a pipe communicating with a steam-receiving pipe. One part of the two-part cylinder is also provided with a pipe communicating with the same receiving-pipe, by means of which, and a stop-cock in each respective pipe, steam can be turned wholly into the feather-receiver, or into the steam-chambers surrounding it. A further novelty consists in the construction and connection of the two-part cylinder with the head of the feather-receiver, whereby steam can enter the outer compartment, as the whole is hereinafter described and shown.

In the drawing, Figure 1 is a longitudinal section of a feather-renovator constructed on my improved plan; Figs. 2 and 3, plan views of the two-part cylinder detached from the other parts, the inner cylinder lying in the semicircular groove in the part shown at Fig. 3; Fig. 4, an elevation of the end of the feather-receiver, looking in the direction of the dart *v*, Fig. 1; Fig. 5, an end elevation of the two-part cylinder.

A represents the outer cylinder, which is made of galvanized iron in the ordinary manner with heads B B', except such parts as are formed to fit the devices hereinafter named, and it is provided at the end B with a hollow journal, W, on which it rotates. At the opposite end B' it is provided with holes to receive pipes E' E, which, in practice, are to be provided with right and left hand screws, so as to be turned into the elbows Z of a steam-receiving pipe, G, Fig. 1, and into the two-part cylinder L H L O. These elbows are provided with stop-cocks F' F, or

suitable globe-valves for controlling the admission of steam, as hereinafter described. The two-part cylinder is composed of two half-cylinders, covered on their radial surfaces with plates *b b*, in which are formed port-holes N N facing each other, Figs. 1, 2, and 3, by means of which steam is admitted from one half of the cylinder to the other, said ports being packed, in practice, steam-tight. The semicircular parts L L, Figs. 1, 2, and 3, are formed to inclose an inner cylinder or steam-pipe, J, which communicates with the pipe E' by means of a short pipe, K, Fig. 1. The pipe J is provided with a series of pipes, I, extending through both plates of the two-part cylinder L H L O, to conduct steam into the feather-receiver C. The two-part cylinder is held to the head D by means of a flange, P, or it may be secured by lugs and bolts, and the other end is fast to the head D', and the joint is to be steam-tight.

To use the device, the receiving-pipe G and journal W are to be hung in suitable bearings, and the device rotated by any suitable mechanism. Feathers are to be put in receiver C by means of a door, R, and steam first admitted to them by means of a cock or valve, F', the steam passing through pipe E', pipe K, into cylinder or pipe J, and out through pipes I.

I am aware that feather-renovators have been constructed with pipes for introducing steam to feathers, and then to a surrounding chamber for drying them. I therefore confine myself to the mechanism shown.

When the feathers are sufficiently steamed, and are to be dried, the valve F' is closed and the valve F opened. This will admit steam into the lower half of the two-part cylinder, from which it passes through the port N, back through the upper half of said cylinder, and into the outer steam-chamber by means of the openings M, Fig. 5, and a corresponding opening, S S, Fig. 4, the pipes E E', Fig. 5, passing through the holes T U for that purpose. The steam may exhaust through the hollow journal W.

I claim and desire to secure by Letters Patent—

1. The two-part cylinder L O L H, provided with a port, N, in combination with the inner

cylinder or pipe J, provided with pipes I passing through the two-part cylinder, the pipes E E', and receiving-pipe G, with its elbows Z and valves F F', as and for the purpose set forth.

2. The two-part cylinder L O L H and pipes J E E', pipe G, elbows Z, valves F F', receiv-

ing-cylinder C, and case A, as described and shown.

OCTAVIUS W. BENNEY.

Witnesses:

IKE CROSS,  
JAMES G. SMITH.