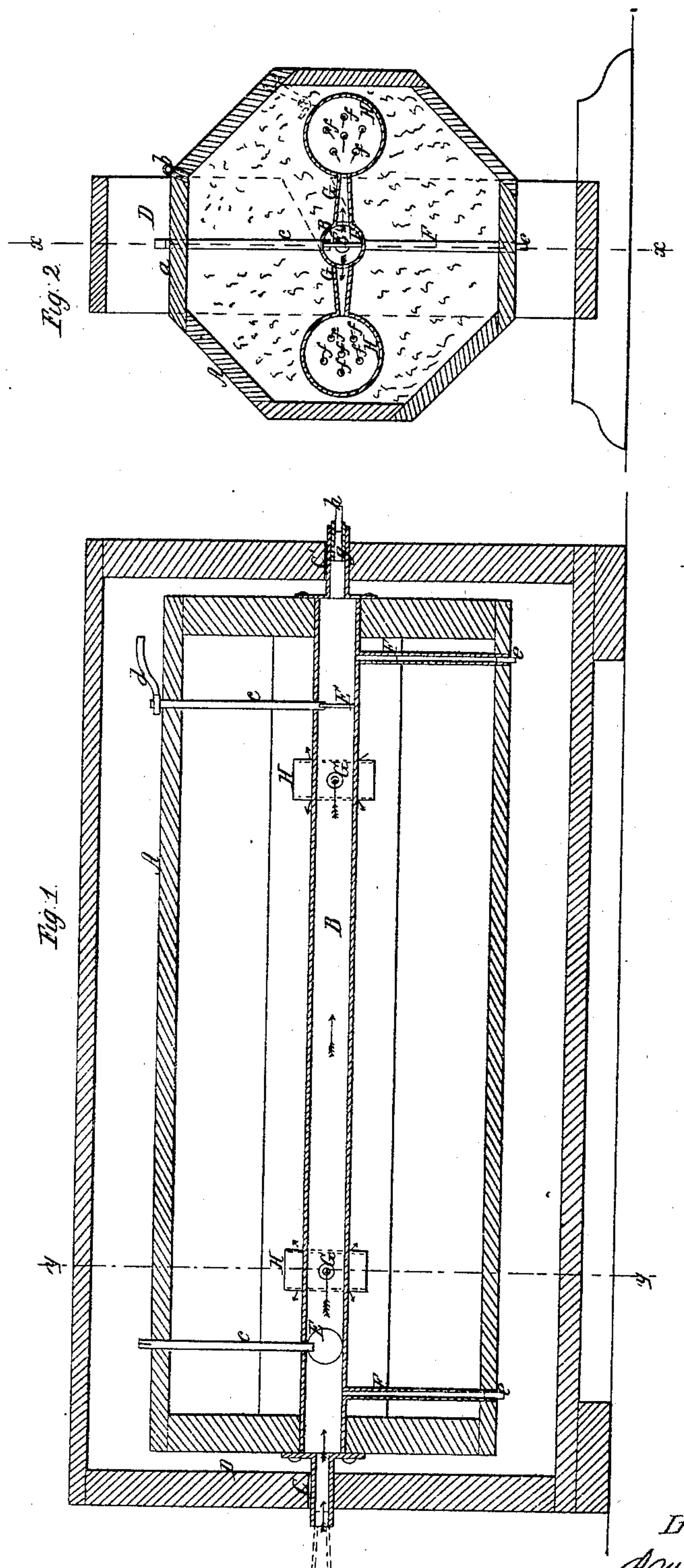


A. McKISSICK & C. M. FRENCH.
 APPARATUS FOR RENOVATING FEATHERS.

No. 34,975.

Patented Apr. 15, 1862.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR RENOVATING FEATHERS.

Specification of Letters Patent No. 34,975, dated April 15, 1862.

To all whom it may concern:

Be it known that we, A. McKISSICK, of Jordan, in the county of Onondaga and State of New York, and CHARLES M. FRENCH, of Weedsport, in the county of Cayuga and State of New York, have invented a new and Improved Machine for Renovating Feathers; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a longitudinal section of our invention, taken in the line *x, x*, Fig. 2. Fig. 2, a transverse section of the same, taken in the line *y, y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in the employment or use of a rotating feather-receiver of polygonal or other form in connection with a steam pipe provided with valves and induction pipes and fitted in and arranged with the receiver, substantially as hereinafter fully shown and described, whereby the feathers may be cleansed with great facility and in a thorough manner and afterward expeditiously and perfectly dried.

To enable those skilled in the art to fully understand and construct our invention we will proceed to describe it.

A, represents a polygonal box or receiver in which the feathers to be operated upon are placed, and B, is a tube which is fitted longitudinally and centrally within the receiver A, in line with its journals C, C', the latter being tubes smaller in diameter than B, having their bearings in a suitable framing D, see Fig. 1. One of the sides *a*, of the receiver A, is attached by hinges *b*, to each adjoining side to form a door which is secured in a closed state when necessary by means of hooks or other suitable fastenings.

The journals C, C', communicate with the tube B, and pass through the framing D, as shown in Fig. 1, and the tube B, is provided with two valves E, E', one near each end which are provided with stems *c, c*, that pass through one side of the receiver and are turned by a wrench *d*, when necessary.

F, F, are the tubes which communicate with the tube B, near its ends and project from it at right angles and extend through the side of the receiver at points opposite

to the valve stems *c, c*. The tubes F, F, are considerably smaller in diameter than B, and when necessary are stopped by plugs *e*, at their outer ends.

G, G, G, G, are tubes which communicate with the tube B, at right angles, there being two tubes G, near the ends of B, and projecting from it in line with each other at opposite points. At the end of each tube G, and within the receiver A, there is attached a small cylinder H, and these cylinders are perforated at each side with holes *f*, which form the only communication between the interior of the receiver A, and the tube B. The cylinders H, are nearly in contact with the sides of the receiver A, as shown in Fig. 2.

The receiver A, may be constructed entirely of wood, and also the framing D, the receiver being of any suitable dimensions, and the tubes B, G, and journals C, C', having their diameter proportionate to that of A, when the latter is two and a half feet in diameter the tube B, should be about four inches in diameter, the tubes G, about two inches at their junction with B, and about one inch at their extremities.

When necessary one of the journals C', is plugged with a hollow tube *g*, which has inserted in it a plug *h*, as shown in Fig. 1.

The operation is as follows: The feathers to be cleansed or renovated are placed in the receiver A, which is rotated by any convenient power and the journal C', being plugged by the tube *g*, and plug *n*, steam is admitted into tube B, through a tube inserted in the outer end of journal C, the valve E, being open and valve E', closed. The steam passes from B, into the tubes G, and thence into the cylinders H, and through the perforations *f*, in the sides thereof into the receiver A, the steam acting upon the feathers and thoroughly cleansing them as the receiver rotates. The receiver (owing to its polygonal form which is preferable to any other) as it rotates serves to raise the feathers and loosen them up and scatter them so that every one of them will be subjected to the action of the steam. After the feathers are thoroughly cleansed the valve E' is opened and the plug *h*, and also tube *g*, if necessary, are removed from the journal C' and the steam passes directly through B, heating the feathers in A, and expeditiously drying them, the passage of steam

through B, inducing a draft from A, through the perforations *f*, of the cylinders H, so that the vapor may escape from A, into B, and pass out through it with the main current or body of steam. The tubular plug *g*, it will be seen regulates the passage of steam through B. When a full body of steam is required the tubular plug is taken out of C' and the valves E, E', fully opened and when the passage requires to be restricted the plug *g*, is inserted and the valves E, E', may also be partially closed if necessary so that the latter may be used in connection with the tubes or plugs for the purpose above alluded to.

This machine has been practically tested and has been found to operate well. It may be constructed at a small cost and there are no parts liable to get out of repair nor rendered inoperative by use.

The tubes F, F, when their plugs *e*, *e*, are removed admit of the water of condensation being discharged from B.

We do not claim broadly the renovating or cleansing of feathers and drying them

by steam for that has been previously done, but,

We do claim as new, and desire to secure by Letters Patent.

1. The combination of the rotating feather receiver A, of polygonal or other form, in combination with the central steam tube B, tubular journals C, C', steam eduction tubes G, provided with the perforated distributing cylinders H, and the valves E, E', arranged for joint operation substantially as and for the purpose herein set forth.

2. The tubular plug *g*, and close plug *h*, when used in connection with the steam tube B, and with or without the valves E, E', for the purpose specified.

3. The waste tubes F, F, applied to the steam tube B, as shown in relation with the feather receiver A for the purpose set forth.

A. McKISSICK.

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Witnesses:

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