M. K. Morris

Feather Renovator.

No. 107.944. Patented Oct. 4, 1870.

Fig. 1.

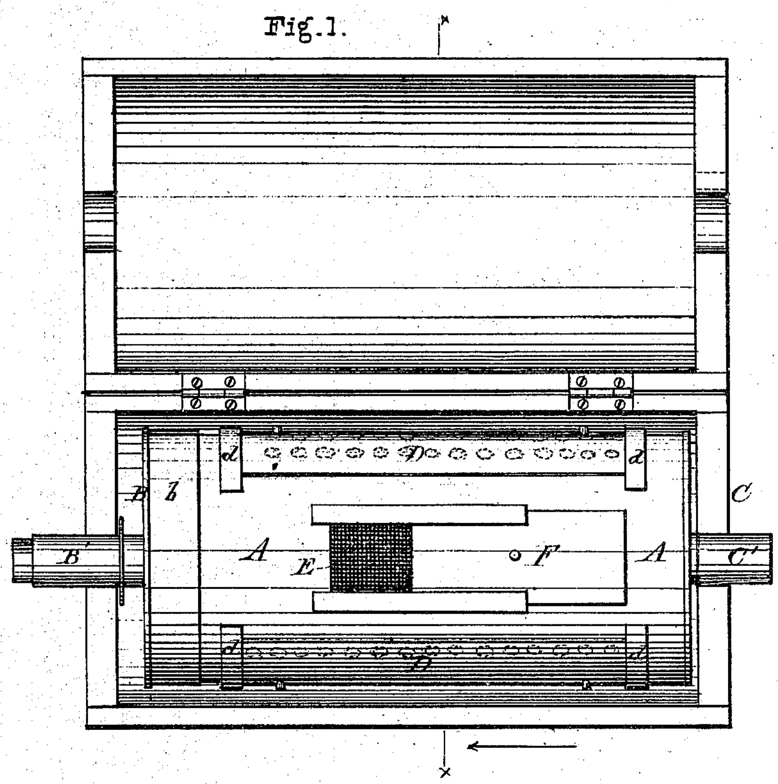
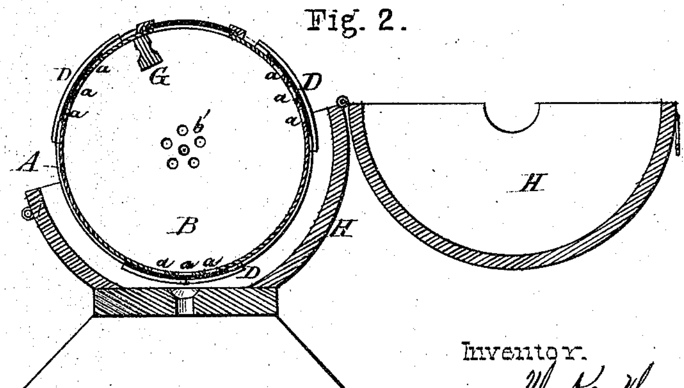


Fig. 2.



Witnesses.
A. E. Lehmann
Chas. H. Poole

Inventor.
M. K. Morris
by Prindle and Dyer
Attys.

United States Patent Office.

MATTHIAS K. MORRIS, OF COUNCIL BLUFFS, IOWA.

Letters Patent No. 107,944, dated October 4, 1870.

IMPROVEMENT IN FEATHER-RENOVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MATTHIAS K. MORRIS, of Council Bluffs, in the county of Pottawattamie and in the State of Iowa, have invented certain new and useful Improvements in Feather-Renovators; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of the device, with the cover opened, and

Figure 2 is a vertical cross-section of the same on the line *x x* of fig. 1.

Letters of like name and kind refer to like parts in each of the figures.

My invention belongs to a class of devices for cleaning feathers from impurities, and for restoring them to their original elastic condition; and

It consists, principally, in a reservoir or cylinder for containing the feathers, pivoted within a stationary steam-jacket, substantially as hereinafter set forth.

It also consists in a pivoted cylinder for containing the feathers, provided with hollow journals, and having portions of its periphery perforated, and provided with suitable slides for closing the openings, when desired, substantially as is hereinafter shown and for the purpose specified.

It also consists in the removable end of the cylinder, substantially as hereinafter shown and for the purpose described.

In the annexed drawing—

A represents a sheet-metal cylinder, having one of its ends inclosed by means of a fixed head, C, while its opposite end is provided with a head, B, having a flange, *b*, which embraces the outside of said cylinder, and secures said head firmly thereto.

Secured to, and projecting horizontally outward from, the center of each head B and C, is a short section of pipe, B′ and C′, respectively, the first of which, B′, is inclosed at its inner end by a reticulated diaphragm, *b′*, while the opposite pipe is unobstructed, and furnishes free communication with the interior of the cylinder.

Extending longitudinally along the periphery of the cylinder are several series of perforations, *a*, which are arranged in groups at equidistant points, and are each covered, when desired, by means of a slide, D, working radially upon said cylinder, and held in place by a strip, *d*, secured to the latter, and embracing the ends of the former.

An opening, E, passing through the wall of the cylinder, and closed by means of a longitudinal slide, F, permitting an inspection of the interior of the same when in use, and one or more cleats or ribs, G, secured longitudinally upon the inner side of said cylinder, for the purpose of shaking up and separating the feathers, complete this portion of the device.

As thus constructed, the cylinder is pivoted within a suitable casing, H, which is constructed of wood, in the general form shown, and divided at its center longitudinally, with the section hinged together, so as to permit of the ready insertion within of said cylinder, around which is left an annular chamber for containing steam.

In operating this device, the adjustable end B of the cylinder is removed, the latter filled with feathers, said head replaced, and the cylinder placed in position within the casing.

The nozzle of a pair of bellows is now inserted in the outer end of the pipe C′, the cylinder rotated slowly, and a strong blast of air caused to pass into the same, until all dust and loose dirt contained within the feathers are blown outward, through the diaphragm and the pipe B′, into the open air.

The ends of the pipes B′ and C′ are now closed, by means of plugs, the slides D are opened, the casing closed and secured, and steam admitted to its interior through a pipe attached to its end, and connected with any suitable generating apparatus, when, by slowly revolving said cylinder, each feather is brought in contact with the steam, until all impurities are removed and their natural elasticity is restored.

When sufficiently cleansed, steam is shut off, the slides D closed, the pipes B′ and C′ opened, and steam again admitted to the casing, where it imparts its heat to the cylinder, so as to cause all moisture contained therein to evaporate and pass outward through said pipes, leaving the feathers entirely dry and ready for use.

To remove the feathers, the cylinder is taken from its casing, its end B removed, and its contents quickly poured out.

The special advantages possessed by this device, are—

First, it enables the thorough and speedy removal of all dust from feathers, without the employment of other or special devices.

Second, it enables the employment of steam for the cleansing and drying of feathers, and thus avoids the use of other devices for accomplishing the last-named result.

Third, the device is so simple in its parts that any mechanic of ordinary skill can readily construct the same, in addition to which, said parts being comparatively inexpensive, the complete machine can be furnished at a low cost.

Having thus fully set forth the nature and merits of my invention,

What I claim as new is—

1. The metal cylinder or reservoir A, for containing feathers to be renovated, pivoted freely within a stationary casing or steam-jacket, H, substantially as and for the purpose shown.

2. The pivoted metallic cylinder A, for containing feathers, provided with hollow journals B′ and C′, and having portions of its periphery perforated and covered with suitable slides D D, for the purpose of controlling the admission of steam from the surrounding jacket to the feathers, substantially as shown and specified.

3. In combination with the cylinder A, constructed as described, the head or cover B, of the full diameter of said cylinder, and made removable, for the purpose of introducing and withdrawing the feathers, substantially as shown.

In testimony that I claim the foregoing, I have hereunto set my hand this 15th day of July, 1870.

MATTHIAS K. MORRIS.

Witnesses:

GEO. S. PRINDLE,

EDM. F. BROWN.