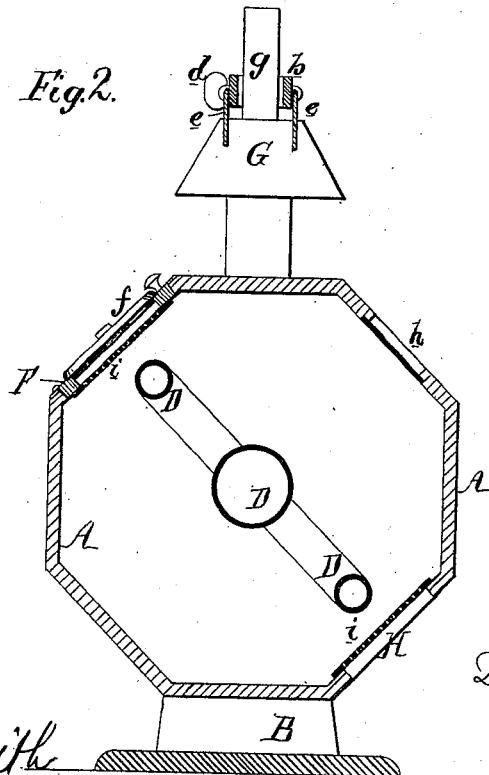
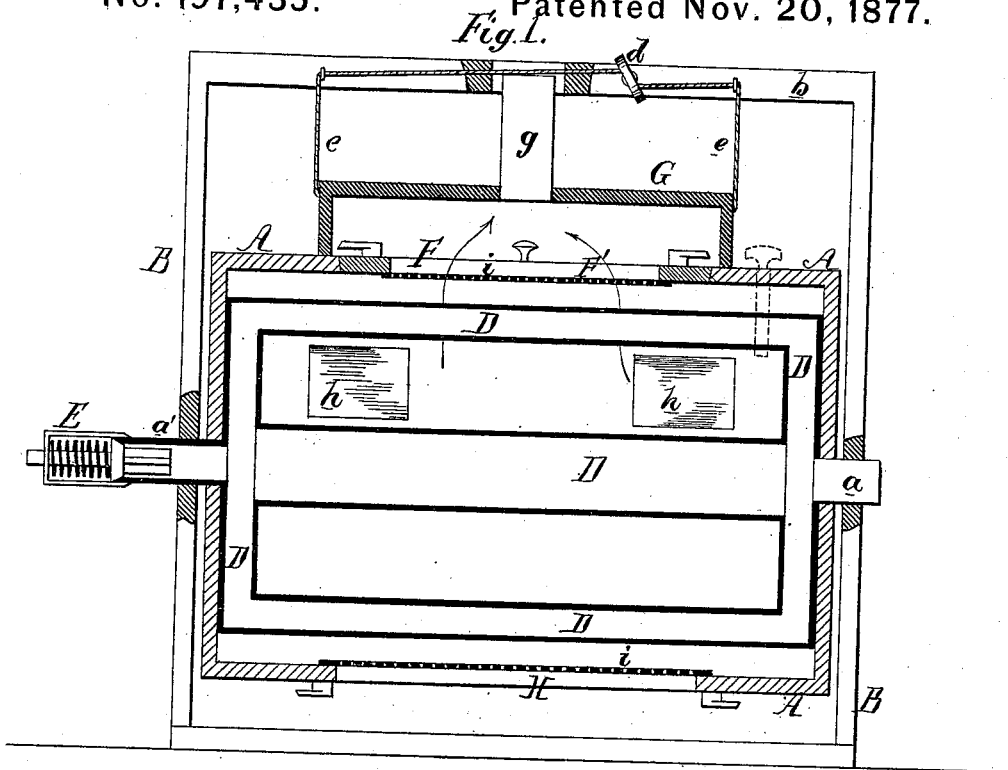


D. L. WEATHERHEAD.
Feather-Renovator.

No. 197,435.

Patented Nov. 20, 1877.



Witnesses,

Harry Smith
Hubert Howson

Inventor
D. L. Weatherhead
by his Attorneys,
Howson and Son

UNITED STATES PATENT OFFICE.

DAVIS L. WEATHERHEAD, OF MOUNT HOLLY, NEW JERSEY, ASSIGNOR TO HIMSELF AND THOMAS E. AKINS, OF SAME PLACE.

IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. **197,435**, dated November 20, 1877; application filed May 21, 1877.

To all whom it may concern:

Be it known that I, DAVIS L. WEATHERHEAD, of Mount Holly, Burlington county, New Jersey, have invented certain Improvements in Feather-Renovators, of which the following is a specification:

The object of my invention is to so construct an apparatus for renovating feathers as to allow for the ready escape therefrom of noxious vapors and refuse matter; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal section of my improved apparatus, and Fig. 2 a transverse section of the same.

A is a rotating vessel for receiving the feathers to be renovated, this vessel having central journals *a a'*, adapted to bearings in the frame B. The journals are hollow, and communicate with steam-chambers D, attached to the cylinder A, steam being admitted through the journal *a*, the journal *a'* being provided with a safety-valve, E.

The feathers are introduced into the cylinder through an opening, to which is adapted the hinged lid F, and this lid has a screened opening, F', which can be closed by a detachable cover, *f*. I also arrange in the opposite side of the cylinder another screened opening, H, which can also be closed by a cover.

The feathers having been introduced into the vessel, the covers *f* are removed from the screened openings H and F', so as to allow dust and other refuse matter to escape during the rotation of the cylinder.

The openings H and F' are now closed, and steam is then admitted among the feathers through a cock in the steam-chamber D, and during this operation of steaming noxious va-

pors emanate from the feathers, and especially from such as have been long in use.

To provide for the ready escape of these vapors, the vessel A is turned until either of the openings F' or H is immediately under the adjustable cap G. The covers *f* being then removed, the cap G is lowered, by means of the pin *d* and cords *e*, or other suitable mechanism, over the screened opening, when a draft will be created from the lower opening, and the vapors will immediately pass off through a chimney, *g*.

In one side of the vessel A, I arrange windows *h*, so as to ascertain when the feathers have been sufficiently steamed, as the down in the vessel will then adhere to the glass.

The steam is then shut off from the interior of the vessel and introduced into the steam-chamber D, in order that the feathers may be thoroughly dried.

To prevent accident during this operation, I provide a safety-valve, E, in the trunnion *a'*, communicating with these steam-chambers.

I claim as my invention—

1. The combination of the adjustable cap G with the screened openings H and F' in the rotating cylinder A, for the purpose set forth.

2. The combination of the spring safety-valve E with the hollow trunnion *a'* of the cylinder communicating with the steam-chamber D, all substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

D. L. WEATHERHEAD.

Witnesses:

HARRY SMITH,
HUBERT HOWSON.