

W. BIGGAR & G. MURWIN.
FEATHER RENOVATOR.

No. 179,151.

Patented June 27, 1876.

Fig. 1.

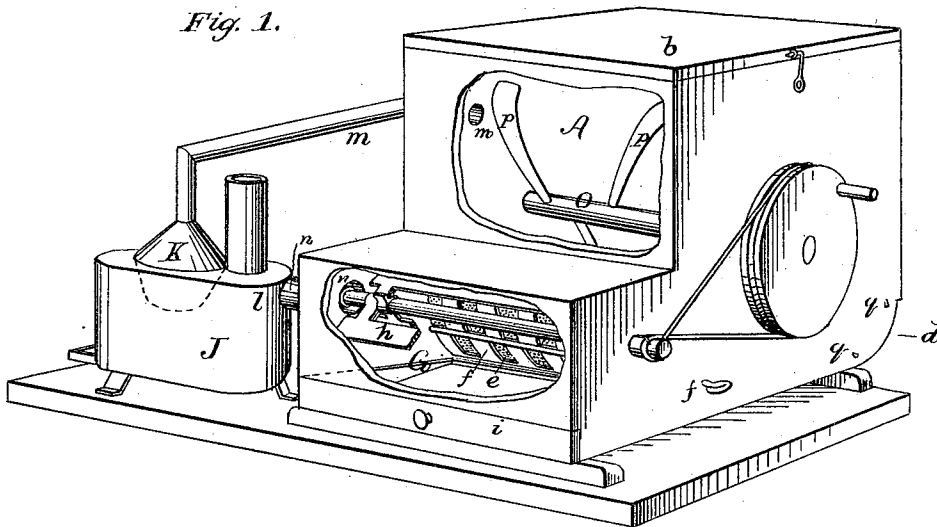
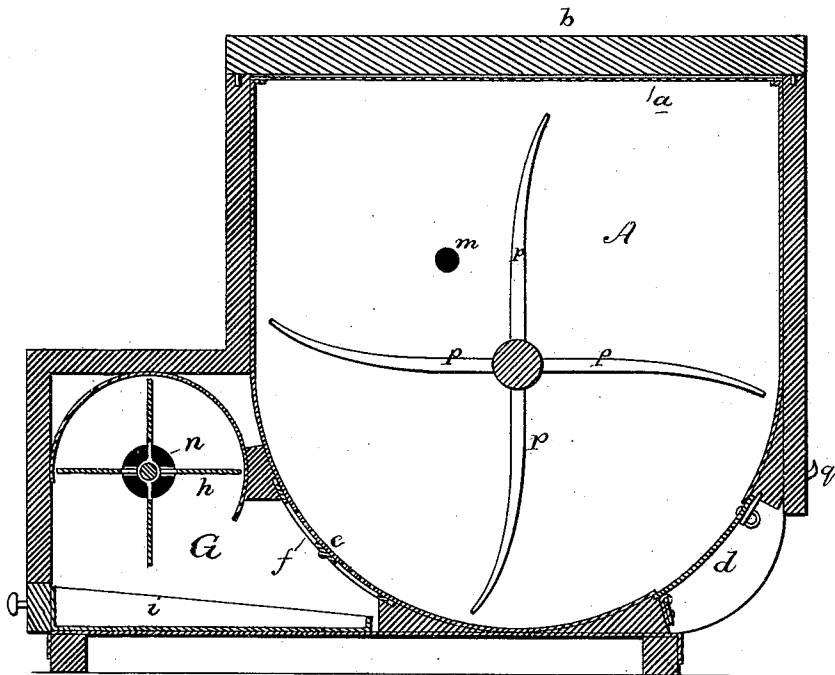


Fig. 2.



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WILLIAM BIGGAR AND GEORGE MURWIN, OF FULTON, WISCONSIN.

IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. **179,151**, dated June 27, 1876; application filed April 5, 1876.

To all whom it may concern :

Be it known that we, WILLIAM BIGGAR and GEORGE MURWIN, of Fulton, Rock county, Wisconsin, have invented a Feather-Renovator, of which the following is a specification:

This invention relates to an improvement in feather-renovators; and it consists in the construction and arrangement of the mechanism whereby the renovation of the feathers is carried into effect.

That others may fully understand our improvement we will particularly describe it, having reference to the accompanying drawings, wherein—

Figure 1 is a perspective view of our apparatus. Fig. 2 is a transverse section of the same.

A is the renovating-chamber, closed at top by a perforated plate, *a*, and provided with a close lid, *b*, which covers the perforated plate *a*. The plate *a* and cover *b* are both removable, and provided with fastenings, wherewith they may be secured in place. At the bottom of the chamber A there is a door, *d*, through which the feathers may be withdrawn when the process of renovation has been completed. Opposite the door *d* there is a grating, *e*, with a covering-slide, *f*, to open or close said grating, which communicates with the fan-chamber G, in which the fan *h* is mounted. The bottom of the fan-chamber G is composed of a removable receptacle or drawer, *i*. J is a furnace, provided with a steam-generator, K, and with hot-air chamber *l*. The steam-generator communicates with the chamber A by means of a steam-pipe, *m*, and the hot-air chamber *l* communicates with the fan-chamber by means of the pipe *n*.

A shaft, O, provided with beater-arms *p*, is mounted longitudinally through the center of the chamber A. The beaters *p* are narrow and curved forward at their outer ends, so that they not only push the feathers aside as they revolve, but they also scoop or gather them up from the vicinity of the wall, and thus effectually stir them up and commingle them. Motion is communicated to the stirrer O *p* and to the fan *h* by belts or other convenient method of applying power.

In operation, the feathers are placed in the chamber A, the slide *f* is opened, and the cover *b* is removed. The shaft O and the fan *h* are then set in motion. Air is

thereby forced through the mass of feathers, carrying away through the perforated plate *a* much of the foul air which is adherent to the dirty feathers, as well as much of the dust which has accumulated upon them, while the heavier impurities will fall through the grating *e* into the drawer *i*.

After submitting the feathers to this air-blast for a few minutes the cover *b* is put on, the grating *e* is closed, and steam is admitted from the generator K.

After being thoroughly steamed, and the adhering dirt and impurity thus removed from the feathers, the steam is cut off, the cover *b* is removed, and the fan *h* is started again.

The object now is to dry the feathers as expeditiously as possible, and therefore the cover *b* is again removed and the grating *e* opened. The hot air thus admitted and passed through the feathers rapidly removes the condensed water, and carries it off through the perforations in plate *a*.

When the feathers are dry the door *d* is opened and the feathers removed into the tick or a sack attached to the hooks *g*. This may be conveniently accomplished by revolving the stirrer backward until the feathers are nearly all pushed through the door, and the remainder may be quickly expelled by a blast of air from the blower.

This machine, when properly manipulated, makes neither steam, drip, nor dirt in the apartment where it is used.

Having described our invention, what we claim as new is—

1. The chamber A, provided with a stirrer and a steam-inlet pipe, *m*, combined with a fan, *h*, and an air-heating furnace, substantially as set forth.

2. The chamber A, provided with a revolving stirrer, and a perforated plate, *a*, and close cover *b*, combined with the fan *h* and chamber G, provided with the intervening grating *e* and slide *f*, and with the removable drawer *i*, substantially as set forth.

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Executed in presence of—

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