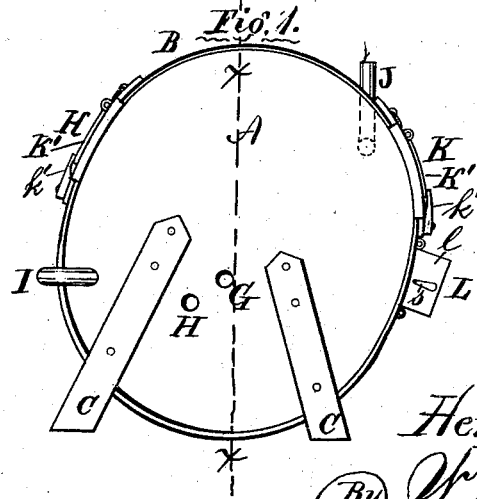
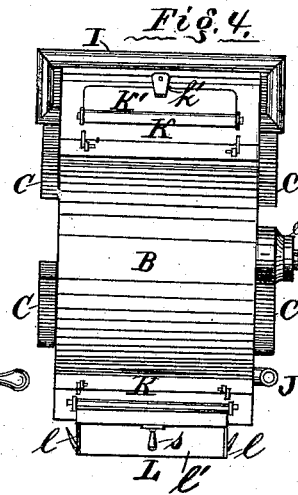
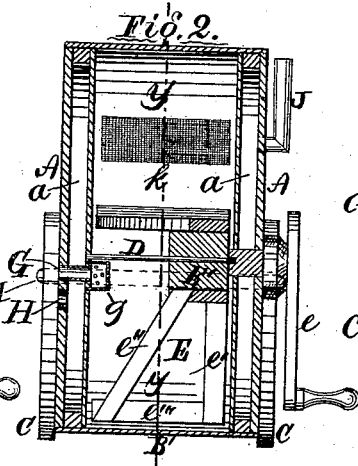
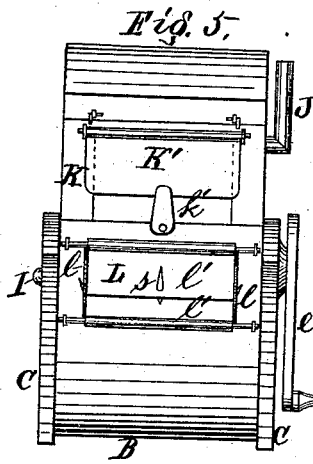
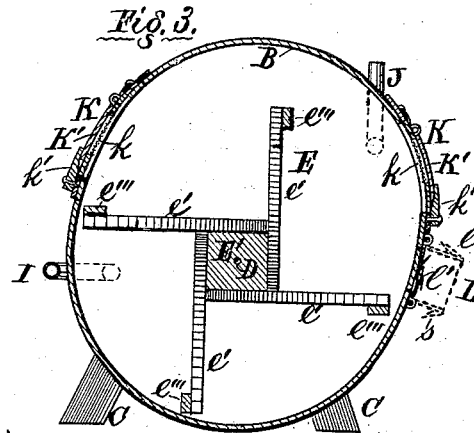


H. I. LINN.  
Feather-Renovator.

No. 168,571.

Patented Oct. 11, 1875.



Witnesses:  
P. P. Richards  
James Kennedy

Inventor:  
Henry I. Linn,  
By W. P. Richards,  
att'y.

# UNITED STATES PATENT OFFICE

HENRY I. LINN, OF GILSON, ILLINOIS.

## IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. 168,571, dated October 11, 1875; application filed August 31, 1875.

*To all whom it may concern:*

Be it known that I, HENRY I. LINN, of Gilson, county of Knox and State of Illinois, have invented certain Improvements in Feather-Renovators, of which the following is a specification:

The nature of my invention relates to improvements in feather-renovators; and the invention consists in certain improvements in the construction of the delivering-spout, and in improvements in the construction of the stirrer, and in its arrangement with the steam-pipe, all as hereinafter fully described.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a sectional view on the line *xx* in Fig. 1. Fig. 3 is a sectional view on the line *yy* in Fig. 2. Fig. 4 is a top view. Fig. 5 is a side elevation, showing the right-hand side of Fig. 1.

Referring to the parts by letters, letters A represent the two sides, oval in form, and connected by a rim, B. The sides A are each made double, so as to contain a steam-space, *a*, and their outer walls may be of wood, and inner walls of thin sheet metal. The sides A and rim B, constituting the chamber, are supported on legs C. D is a shaft extending centrally across the case, and on it, as a journal, is the hub E' of the stirrer E, on the outer end of which hub is provided a crank, *e*, and on the inner end radial arms *e'* and inclined arms *e''*, connected at their outer ends by a bar, *e'''*. G is a pipe extending through the walls of one side of the case, and is provided on its inner end with an enlarged and perforated head, *g*. H is an opening near the pipe G, and extending only through the outer wall of the case. I is a pipe extending from the cavity *a* in one side, A, around to the cavity *a* in the other side. J is a discharge-pipe leading outward from one of the cavities *a*. K K are hinged lids, provided with openings, which are covered with wire-cloth *k*, and over which are hinged supplemental lids K'. L is the discharge-spout, the sides *l* of which are stationary, and the sides *l'* hinged, so as to be turned outward, as shown at Fig. 3 by dotted lines and Fig. 4 by full lines, to form a spout, or turned down, as shown by full lines at Figs. 3 and 5, to close the discharge L. The sides *l l'* are each provided with the usual fastening-hooks *s*.

The operation is as follows: The lids K are opened to insert the feathers, then closed and secured by the buttons *k'*. A steam-pipe leading from any suitable generator of steam is then put in communication with the pipe G, and the steam passing to the interior of the case is distributed by the perforated head *g*. It will be seen that the inclined arms *e''* of the stirrer E, as it is now rotated, will tend to carry the feathers upward and allow them to fall directly over the steam-discharge *g*, and the continued rotation of the stirrer, and admission of steam to the feathers in the now closed vessel, will remove all effete matter from the feathers. When sufficiently steamed the hinged lids K' may be opened, and the steam-pipe from the reservoir removed from the pipe G and put in communication with the opening H. The steam and effete matters from the feathers will then pass out through the wire-cloth *k*, and the heat from the steam in the chambers *a* will dry the feathers. The steam-pipe being now removed, the spout sides *l'* may be turned outward, and a sack or tick hooked on the hooks *s* to receive the feathers, which are blown out in the usual manner by rotating the stirrer E. While drying the feathers the steam will escape at the pipe J, and no steam being in contact with the rim B during the operation of drying, it will cool off and render it free from excessive heat in opening and closing the hinged doors for inserting and removing the feathers:

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The spout L, having stationary sides *l*, and hinged sides *l'*, combined with the feather-renovator case and stirrer E, substantially as and for the purpose specified.

2. The stirrer E, constructed as described, with hub E' arms *e''* and *e'''*, combined with the chambers *a*, spout G, and doors K, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereunto subscribed my hand this 29th day of April, 1875, in presence of two witnesses.

HENRY I. LINN.

Witnesses:

THOS. MCKEE,  
W. B. RICHARDS.