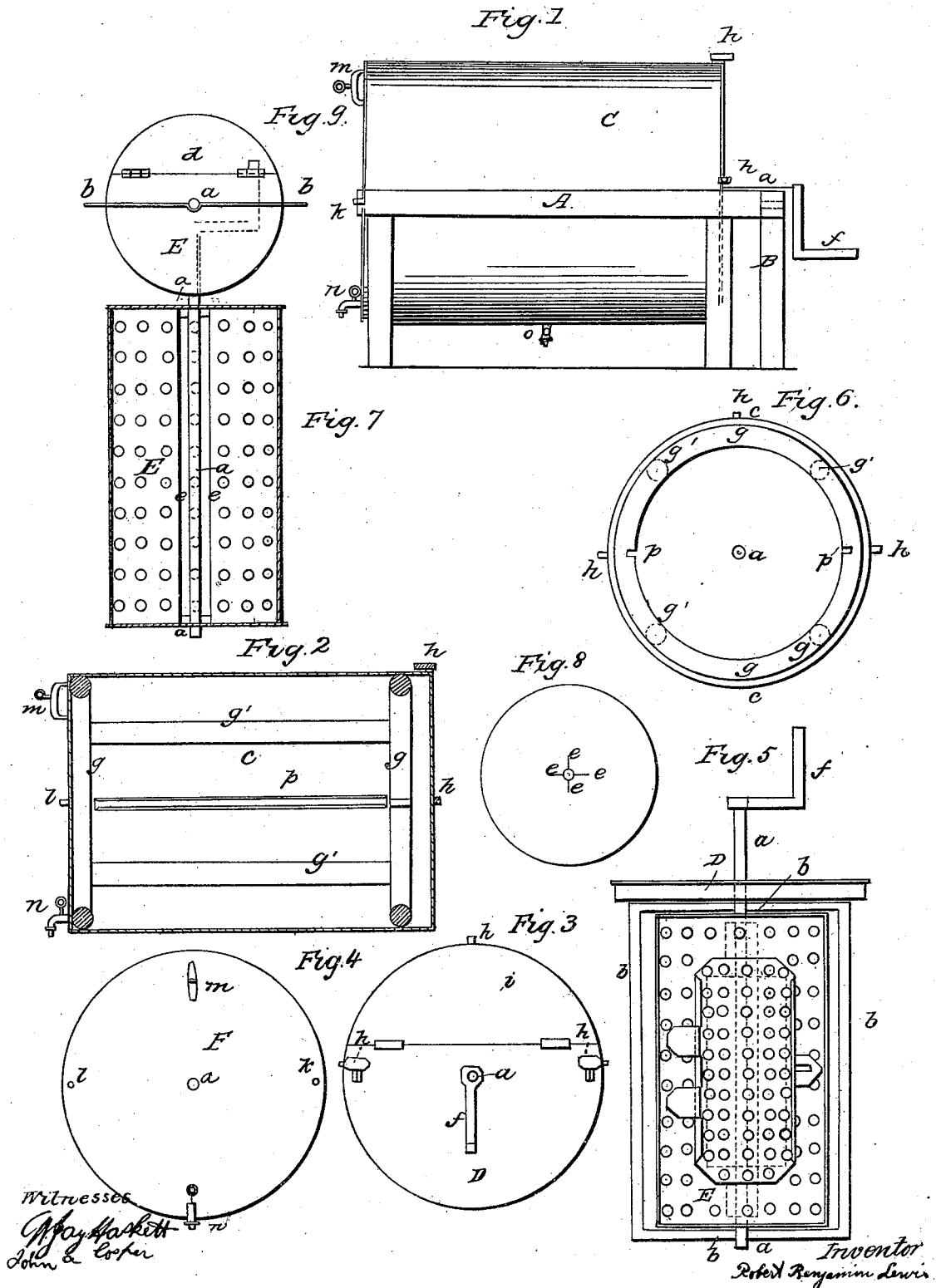


R. B. LEWIS.
Feather Renovator.

No. 1,655.

Patented June 27, 1840.



UNITED STATES PATENT OFFICE.

ROBERT B. LEWIS, OF HALLOWELL, MAINE, ASSIGNOR TO JOHN H. STEVENS, OF NEW YORK, N. Y.

MACHINE FOR CLEANING AND DRYING FEATHERS.

Specification of Letters Patent No. 1,655, dated June 27, 1840.

To all whom it may concern:

Be it known that I, ROBERT BENJAMIN LEWIS, of Hallowell, in the county of Kennebec and State of Maine, have invented, 5 made, and applied to use certain new and useful improvements in the arrangement and combination of mechanical means for the dusting, cleansing, and drying of feathers by steam and steam heat, which means are 10 alike available for dressing over old feathers or for preparing new feathers for any domestic purposes, and for which improvements I seek Letters Patent of the United States, and that the said improvements and 15 the mode of constructing and using the same are fully and substantially set forth and shown in the following description and in the drawings annexed to and making a part of this specification, wherein—

20 Figure 1 is a side elevation of the machine ready to attach the steam pipe and power for use. This consists of a principal fixed cylinder and an interior revolving perforated cylinder and auxiliary pipes and parts. 25 Fig. 2 is a vertical longitudinal section of the principal cylinder and interior steam pipes and other parts. Fig. 6 is a vertical cross-section of the same. Fig. 5 is a plan of the interior revolving perforated cylinder and its appendages, and Fig. 7 is a vertical section of the same. The other figures are consecutively referred to hereafter and 30 the same letters as marks of reference apply to the same parts in all the several figures.

35 A. is the principal frame carrying the machine. B. is a shifting frame at the working end. C. is the principal or exterior metal cylinder. D. is a shifting end to the outer cylinder with a flap door *i* at the upper 40 part. This end is held in place when in use by latches *h h h*. These parts are shown detached in Fig. 3.

Inside the cylinder C. a set of circular pipes *g* are connected throughout by horizontal pipes *g*¹, these are to be filled with 45 steam from a boiler by a connecting pipe at the aperture *l* at the back end F, of the main cylinder and a nipple pipe *k* is intended to receive a common safety valve which may be 50 loaded to any convenient pressure but is not shown in the drawing; a double ended curved cock *m* allows the steam to pass from the pipes into the main cylinder or shuts it off and a cock *n* is placed to draw off the 55 water of condensation from the pipes, and

a cock *o*, is placed to draw off the water of condensation and any dirt from the outer cylinder, these parts are severally shown in the Figs. 1, 2, 4, and 6. A shaft *a* passes through the centers of the ends of the main 60 cylinder and carries on it an interior revolving metal cylinder E, perforated all over with holes to admit the steam and allow the dust and dirt and water of condensation to escape below, and to facilitate the with- 65 drawing this cylinder when it is to be filled with feathers or to enter it into place for use a pair of slide ways *p* are fitted into the main cylinder as shown in Figs. 2 and 6, these receive a square frame *b*, which sur- 70 rounds the cylinder E, and has at each end a hollow serving as a bearing to receive the shaft *a* as shown in Figs. 5 and 9.

c, is a door on the cylinder E, to enter and withdraw the feathers. At the front end is 75 a flap door *d* to facilitate the examining of the feathers when cleaning and allow of cleaning the cylinder when needful. Inside of the cylinder on the shaft *a*, a set of wide longitudinal ribs *e* serve the purpose of agi- 80 tators to separate and tumble the feathers, these parts are all severally shown in the Figs. 5, 7, and 9. A crank handle *f* on the shaft *a*, or a drum or pulley communicates rotary motion to the inner cylinder when 85 acted on by any sufficient power.

When thus prepared and fitted this machine is to be used as follows: The shifting frame B, is to be drawn off the tenons on the ends of the main frame A, and carried 90 back with the shifting end D, of the main cylinder and the interior revolving cylinder E, and frame *b* until access can be had to the door *c* in this situation the frame B, and slide frame *b* will support the shaft *a* and 95 shifting end D and cylinder E, until the feathers are put in and the door *c* fastened the whole is then to be put back into the main cylinder and the latches *h* on the shifting end D, secured. Rotary motion is now 100 to be given to the interior cylinder which will separate and dust the feathers and any dust or dirt will fall through the holes or perforations. At the same time steam is to be admitted into the pipes *g*, *g*¹, by the pipe 105 or aperture *l*, and when the feathers are somewhat dusted and separated steam is to be admitted into the cylinder C, by the cock *m*, this will operate to destroy any offensive smell or insects, and further cleanse the 110

feathers. The cock *o* being opened allows the steam to force out the water of condensation and dirt that collects in the lower port of the main cylinder. When the feathers
5 are steamed enough, the cock *m* is to be shut and the flap door *i* in the shifting end D, is to be opened this will allow the steam in the cylinder to escape and when this is gone off the door *i* is to be partly shut and
10 the rotary motion of the cylinder E, is to be continued until no steam escapes from the feathers when they will be sufficiently dried and may be removed by withdrawing the cylinder E as before described and turning
15 the door *i*, downward to open it and allow the feathers to be taken out, then turn the door upward and repeat the operation with other feathers.

20 What I claim as new and of my own invention is:

1. The combination of the horizontal steam pipes *g* and circular steam pipes *g*¹, with the cylinder C, and with the means of letting the steam into the cylinder C through

the pipes and the cock *m* and shutting off 25 the same when used for cleansing and drying feathers by steam and steam heat, substantially as the same are described.

2. The perforated revolving cylinder E, in combination with the slide frame *b* and 30 slide ways *p* when used for dusting feathers and cleansing and drying the same by steam and steam heat substantially as the same are described.

3. The combination of the shifting frame 35 B, with the shaft *a* and shifting end D, and cylinder E when used in the process of cleansing feathers substantially as the same are described.

In witness whereof I have hereunto set 40 my hand, in the city of New York, this sixth day of December, one thousand eight hundred and thirty-nine, in the presence of the witnesses signing hereto.

ROBERT BENJAMIN LEWIS.

Witnesses:

W. JAY HASKETT,
JOHN M. COOPER.