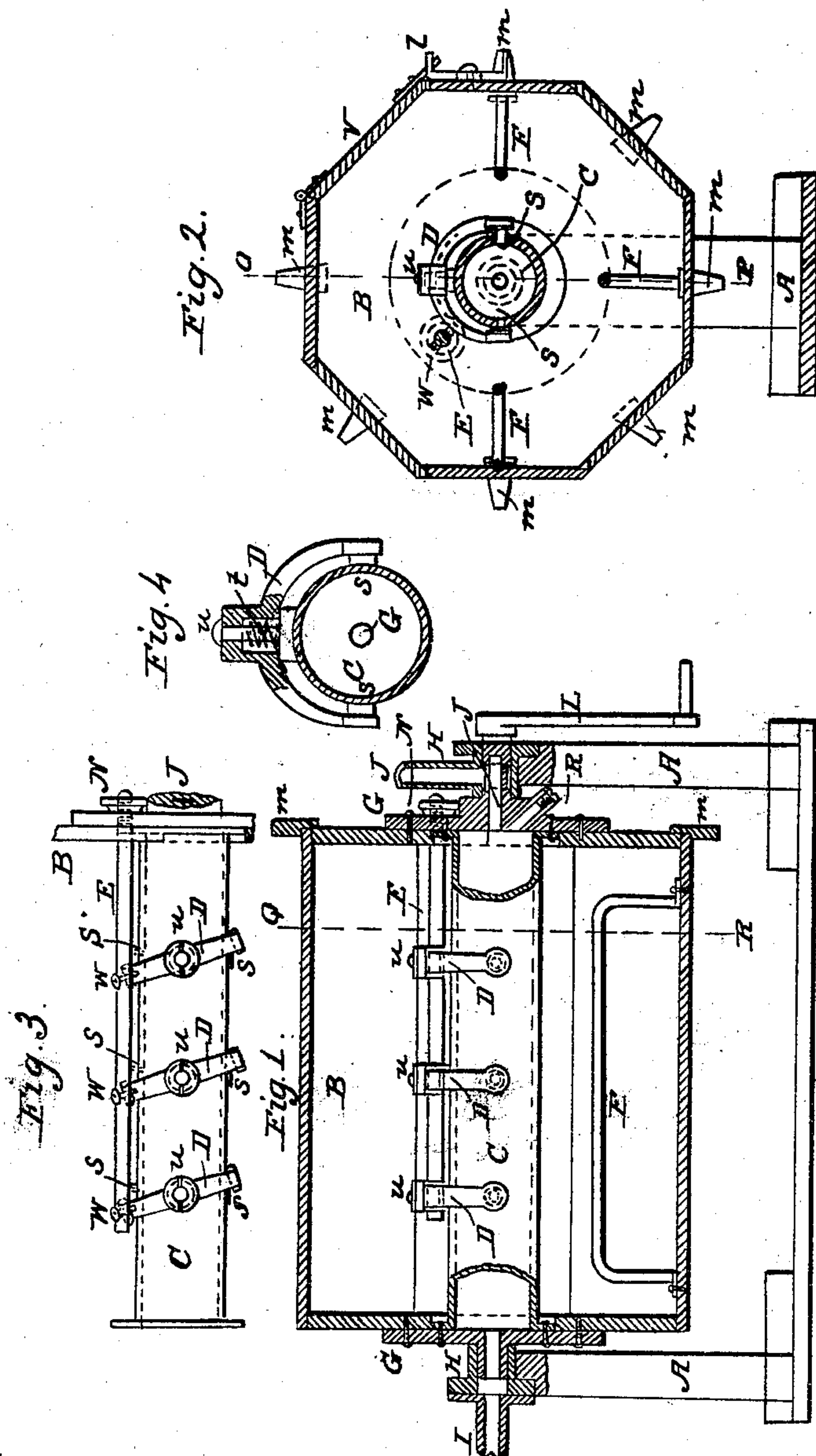


C. E. HENDRICK.
Feather Renovator.

No. 79,975.

Patented July 14, 1868.



Witnesses:
C. Hendrick.
Herbert Knox

Inventor:
Charles E. Hendrick

United States Patent Office.

CHARLES E. HENDRICK, OF CHICOPEE, MASSACHUSETTS.

Letters Patent No. 79,975, dated July 14, 1868.

IMPROVEMENT IN FEATHER-RENOVATOR.

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, CHARLES E. HENDRICK, of Chicopee, in the county of Hampden, and State of Massachusetts, have invented a new and useful Improvement on a Machine for Renovating Feathers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section, taken on the line O P, fig. 2.

Figure 2, a transverse section, taken on the line Q R, fig. 1.

Figure 3, a plan view of steam-receiver, showing the valve D, arrangement, &c.

Figure 4, a sectional elevation, showing a modification of the valve D.

Similar letters of reference indicate corresponding parts.

This improvement comprises a new valve-arrangement for feather-renovating machines, and wires as used for stirring and separating feathers.

A represents stools supporting box B, of octagon shape, with steam-receiver, C, in centre, as seen in fig. 1, having outlets, S, attached to swinging valves D by shouldered supports *u*, valves D, swinging and closing outlets S on opposite sides, set in motion by rod E united by connections *w* mortised to valves playing in holes on rod E, operated by nut N on outside of machine, as will be understood by referring to figs. 1 and 3.

Flanged trunnions, G G, united with box B by bolts turning on bearings H.

Steam introduced through inlet-pipe I to receiver C, passing in feather-box B, when outlets S are opened, steaming feathers, when closed, drying them, by sending out heat, and passing off through outlet-pipe J J.

The wires F separate the feathers coming in contact with them, as the machine is turned, either by crank L or by the steps *m*, enabling a person using the foot on steps to accomplish two things; turn and sew at the same time. V, door-opening to admit feathers, closed by latch *l*, water-pipe, K.

D, fig. 4, swinging spring-valve, a modification of valve D, showing it acting by means of spiral spring *t* resting on supports *u* in hollow in centre of valve, closing up outlets, when open, by springing back.

The operation is as follows: The turning of nut N on rod E sets in motion the swinging valves D, united by connections *w* with rod E, and swinging on supports *u* connected with receiver C, shutting or opening the outlets by acting in concert.

What I claim, is—

1. Three or more valves D D D D, rod E, nut N, in combination with the receiver C, the whole arranged and operated substantially in the manner herein shown and described for the purpose set forth.

2. The swinging valve D with the spiral spring *t*, substantially as described, and for the purpose set forth.

CHARLES E. HENDRICK.

Witnesses:

S. PALMER,

CHAS. P. FIELD.