

G. B. GRISWOLD & J. C. GIPSON.
Feather-Renovator.

No. 199,059.

Patented Jan. 8, 1878.

Fig. 1.

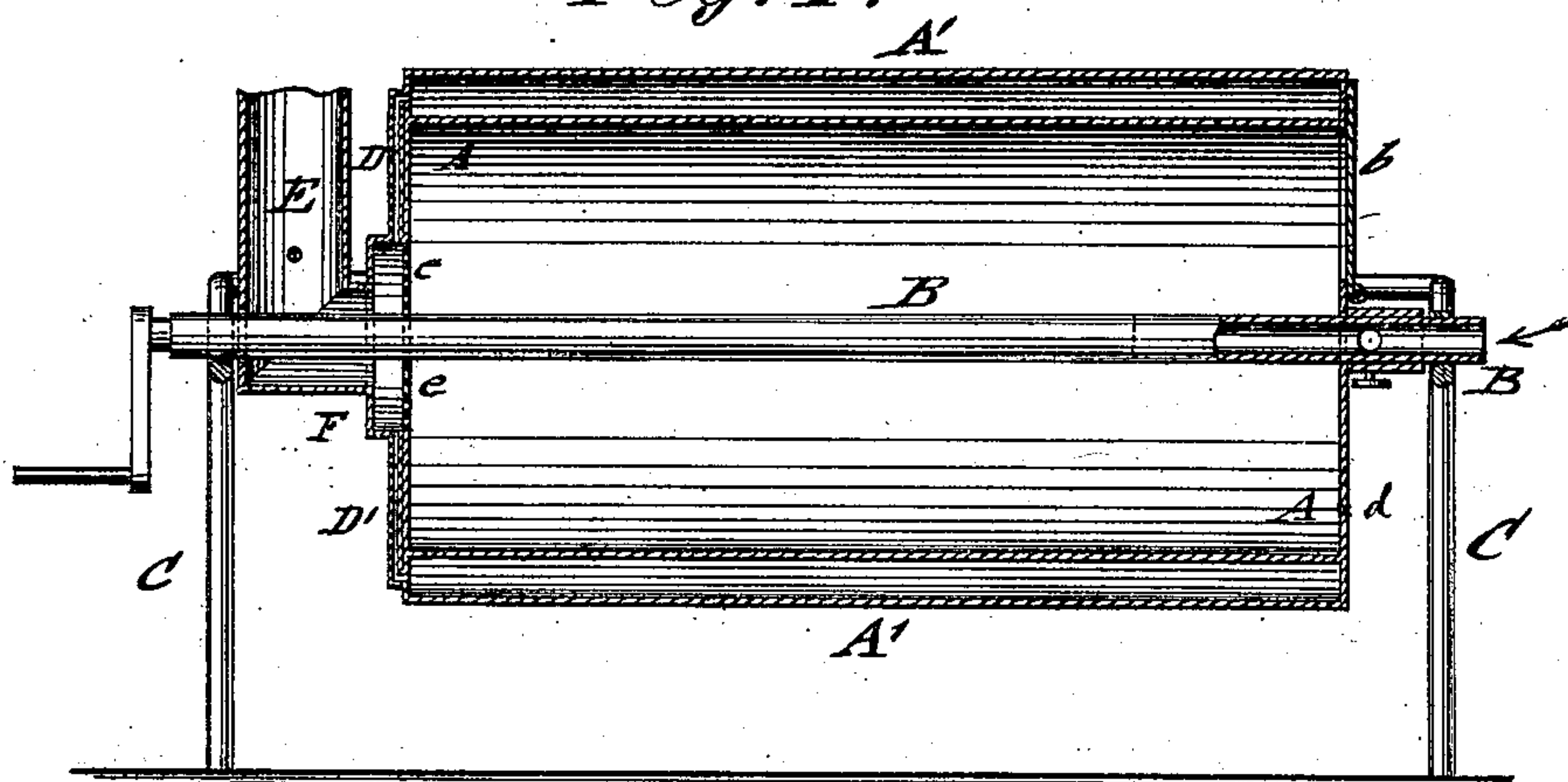


Fig. 2.

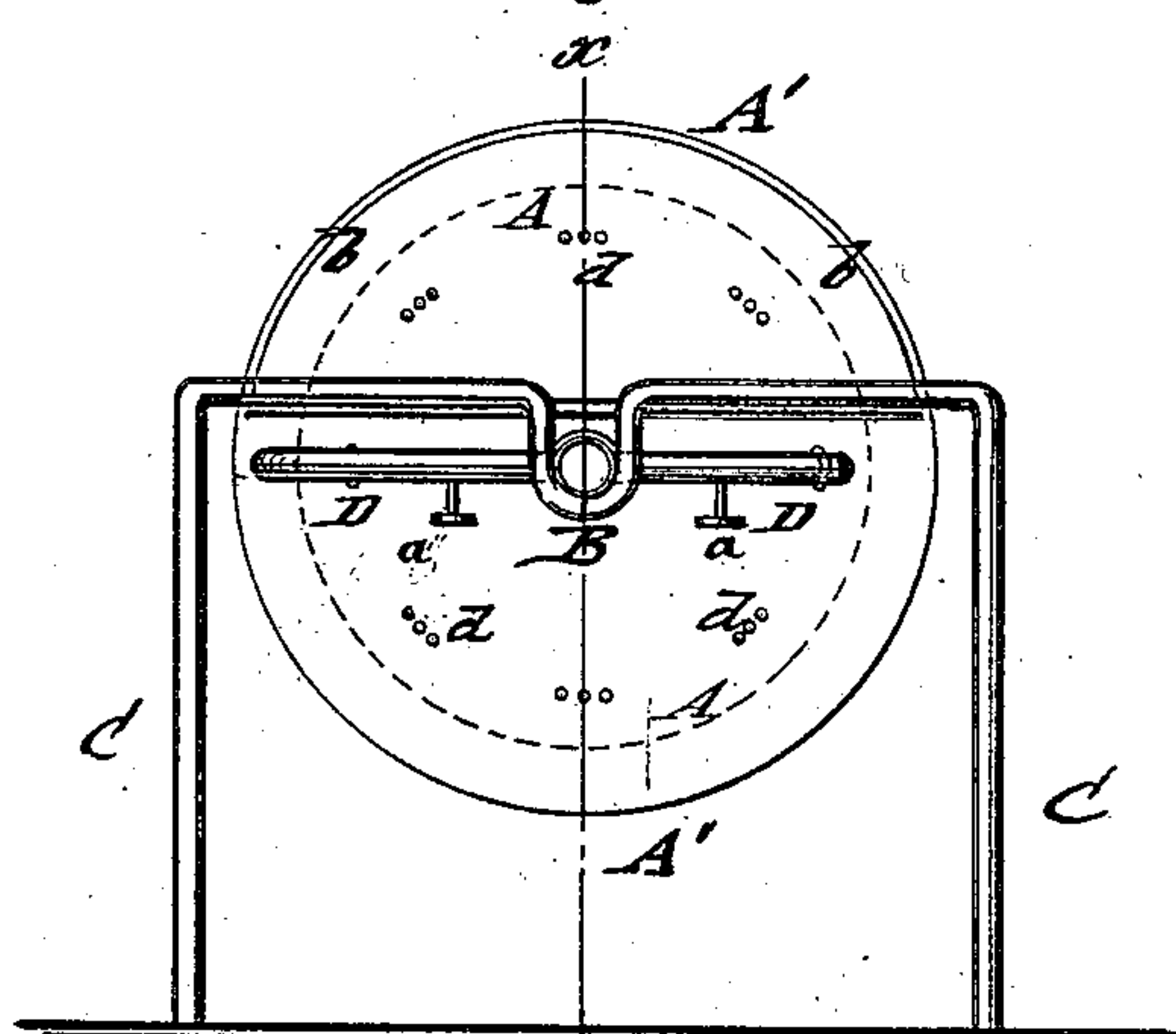
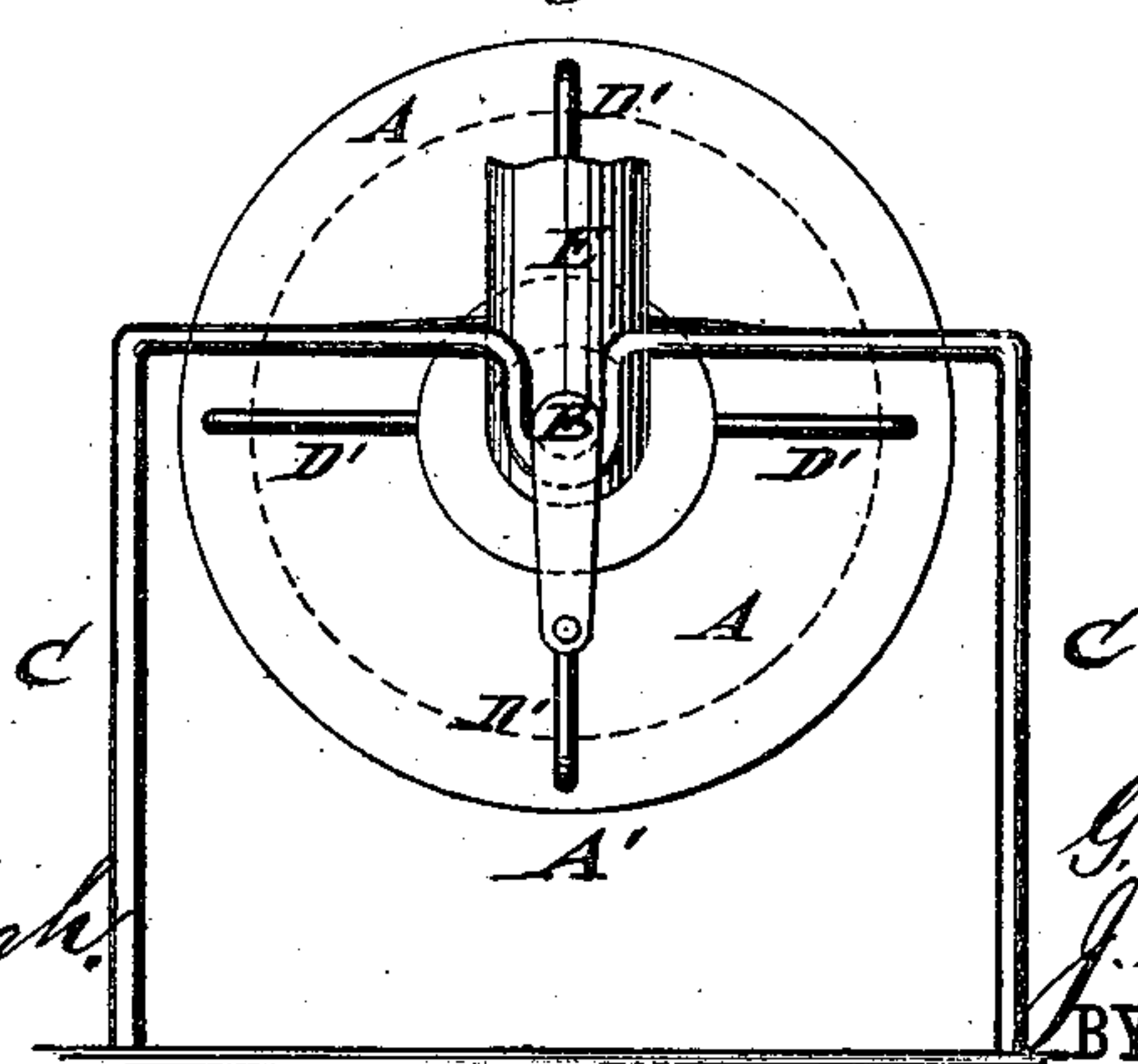


Fig. 3.



WITNESSES:

H. Rydquist
J. H. Scarborough

INVENTORS

G. B. Griswold.
J. C. Gipson.
BY *Mumford*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

GARDNER B. GRISWOLD AND JOHN C. GIPSON, OF FELT'S MILLS, NEW YORK.

IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. **199,059**, dated January 8, 1878; application filed July 23, 1877.

To all whom it may concern:

Be it known that we, GARDNER B. GRISWOLD and JOHN C. GIPSON, of Felt's Mills, in the county of Jefferson and State of New York, have invented a new and Improved Feather-Renovator, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of our improved feather-renovator on line *xx*, Fig. 2, and Figs. 2 and 3 are end views of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a simple and effective apparatus for steaming and then drying feathers, so as to thoroughly clean or renovate them; and it consists of a revolving cylinder with inclosing jacket or casing, arranged in connection with a radial steam pipe and valves, so that the steam may be first admitted into the cylinder for steaming, and afterward into the jacket for drying. Air enters through holes at one end of the cylinder, and passes through the perforated center portion of the opposite head into a draft-pipe connected with the chimney. The steam-jacket connects, by radial exit-pipes, with the draft-pipe.

Referring to the drawing, A represents a cylinder of suitable sheet metal, which revolves, by a hollow shaft, B, that serves as a steam-supply pipe, on suitable bearings of the supporting-standards C.

The cylinder A is surrounded by a jacket or casing, A', and this jacket is connected at one end, by a radial pipe, D, with the steam-supply pipe B, and at the other end, by radial pipes D', with a chamber, F, communicating with a fixed draft-pipe, E, by loose connection, to allow rotation of the cylinder A.

The steam-pipe D is radially extended beyond the supply-pipe, and connected, through the head, with the interior of the cylinder. Suitable valves *a* of pipe D control the admission of steam to the cylinder and jacket or casing, one valve being opened and the other closed, as required. One end of pipe D thus discharges into the feather-chamber and another into the drying-chamber.

The feathers are placed in the cylinder through a hinged door, *b*, of one head, which, like the remaining part of the head, is provided with small holes *d*, for the admission of air to the interior of the cylinder. The

opposite head of the cylinder communicates, by a central perforated part, *e*, with the draft-pipe E, which is connected to a chimney, so as to form a continuous draft of steam through the cylinder when the steam is admitted to the feathers on the same, and expose them thoroughly to the cleaning action of the steam as they are revolved with the cylinder.

When steam is admitted into the jacket A' for drying the feathers, the pipe connecting with the cylinder is closed, and then the feathers are quickly dried by the joint action of the heat exerted by the steam in the jacket on the circumference of the cylinder, and of the draft of air that is kept up by the air-holes of one head and the exit-holes and draft-pipe at the other head of the cylinder. The draft through the cylinder is increased by the escape of steam through the radial pipes D into the exit-pipe.

Thus the feathers are quickly steamed and dried by simple appliances, the steam being first used for cleaning and then for drying the feathers, during which time the revolutions of the cylinder are kept up by a hand-crank or pulley-and-belt connection with a power-shaft.

When the desired effect has been produced, the feathers are drawn out through the end door *b*, the cylinder being in such case rotated to bring the said door on the lower side, which is the reverse of the position (indicated in Fig. 1) required when the feathers are put into the cylinder.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The rotating jacketed drum, having perforations *d* at one end and central perforated portion *e* at the other, in combination with the draft-pipe E, communicating with both the drum and its jacket, and steam-pipe B, connected with the cylinder and its jacket by radial pipe D, having valves *a a*, substantially as specified, whereby steam may be admitted into the cylinder to wet the feathers, or into the jacket to dry the same, a current of air being maintained through the cylinder during both operations, as set forth.

GARDNER B. GRISWOLD.
JOHN C. GIPSON.

Witnesses:

WM. H. CLARK,
WILLIAM WOULD.

Handwritten signature/initials