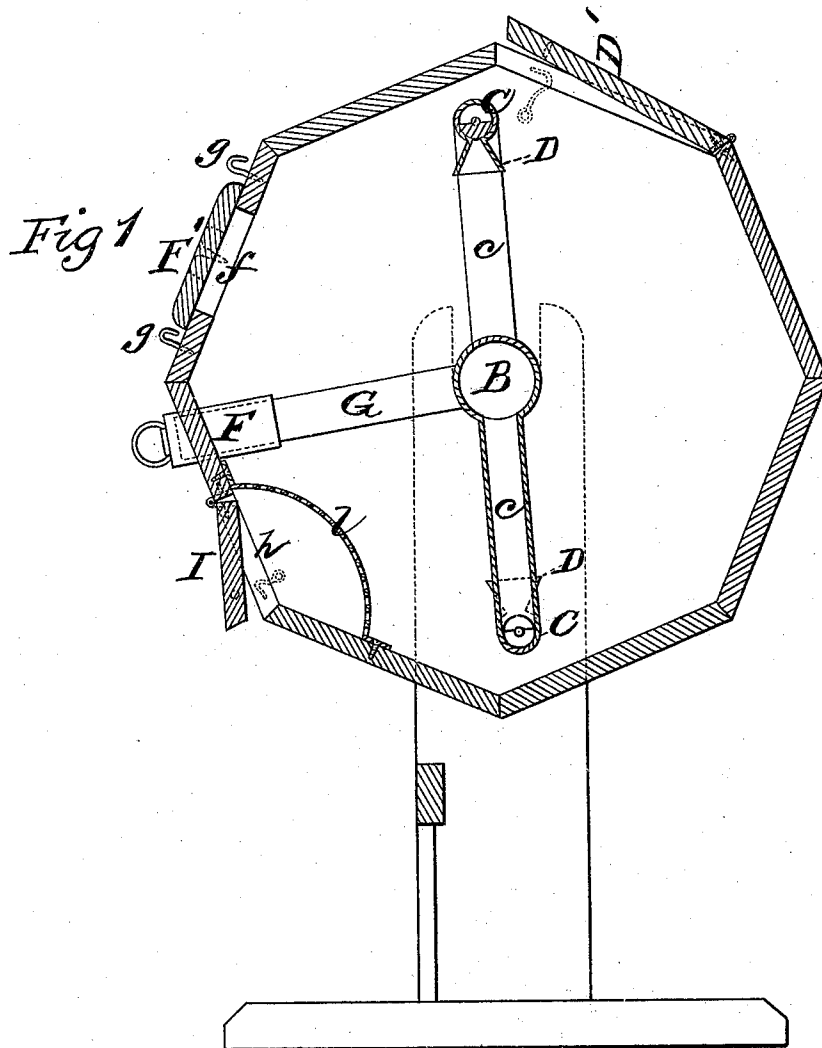


C. D. SMILEY.
FEATHER-RENOVATOR.

No. 173,359.

Patented Feb. 8, 1876.



WITNESSES

Villette Anderson
Francis J. Kasi

INVENTOR,

Charles D. Smiley
Chipman, Hosmer & Co.
ATTORNEYS,

C. D. SMILEY.
FEATHER-RENOVATOR.

No. 173,359.

Patented Feb. 8, 1876

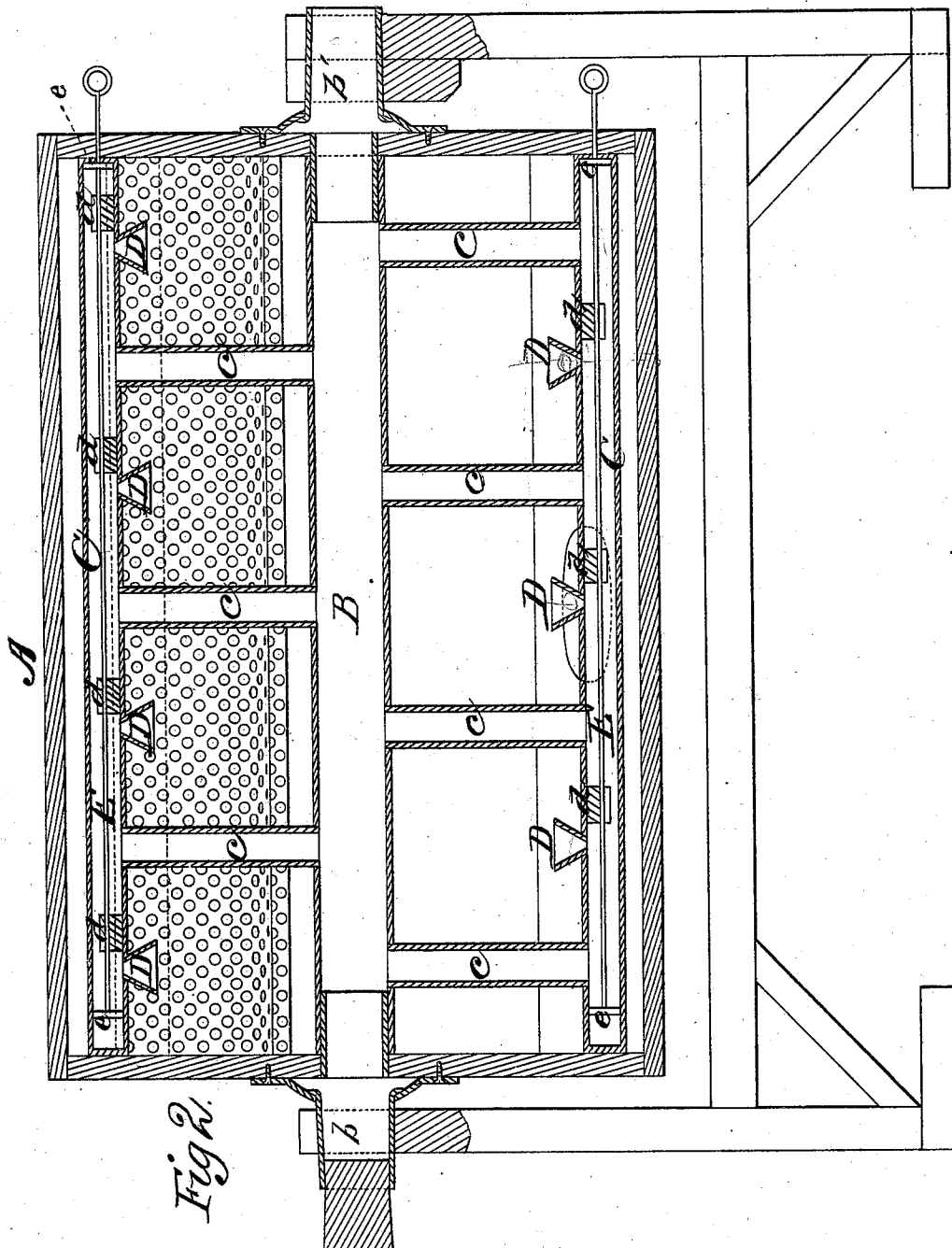


Fig. 2.

WITNESSES

Villette Anderson
Francis J. Massi

INVENTOR

Charles D. Smiley
Chipman, Housner & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES D. SMILEY, OF MADISON, WISCONSIN.

IMPROVEMENT IN FEATHER-RENOVATORS.

Specification forming part of Letters Patent No. **173,359**, dated February 8, 1876; application filed January 15, 1876.

To all whom it may concern:

Be it known that I, CHARLES D. SMILEY, of Madison, in the county of Dane and State of Wisconsin, have invented a new and valuable Improvement in Feather and Hair Renovators; 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my renovator, and Fig. 2 is a longitudinal vertical sectional view of the same.

This invention has relation to improvements in rotating steam feather and hair renovators; and it consists in a certain novel construction and arrangement of the various devices used, whereby very important and valuable results are obtained, as will be hereinafter more fully set forth and claimed.

In the annexed drawings, the letter A designates an octagonal, preferably wooden, case, which is mounted on hollow journals *b b'*, communicating with a centrally-arranged longitudinal pipe, B, extending inside of the case from end to end thereof. Pipe B communicates, by means of short pipes *c*, with other pipes C of less diameter than it, arranged near the sides of the case, as shown in Fig. 2, and provided with inwardly-projecting funnel-shaped educts D, through which steam will be discharged in a broad sheet upon the contents of the case, which are introduced into it through a hinged door, D'. Educts D are closed at pleasure, and simultaneously, by means of valves *d*, rigidly secured at a certain distance apart to a strong metallic rod, E, which is arranged in pipe C, and is sustained therein by means of disks *e* at each end, as shown in Fig. 2. This rod extends through one end of the box, and is provided with a handle, by means of which the valves *d* are operated, so as to cut off the escape of steam through the funnel-shaped educts D from pipes C, which is accomplished by thrusting

rod E inward. By again drawing the said rod outward the valves *d* will be drawn away from the lower ends of the said educts, thus allowing the steam to pour into the interior of the case upon the material arranged therein. In practice steam will be admitted to pipes B C through one of the hollow journals, and the case will be rapidly rotated while the articles are being steamed, thus continually subjecting fresh surfaces to the cleansing action of the steam, which will be spread over them in a broad sheet by the flaring educts D. The contents of the case having been subjected to the action of steam for a sufficient time, steam is cut off by thrusting rod E inward, and thus closing educts D, when, by removing a cap, F, upon a refuse-pipe, G, passing through the case, and communicating with the central pipe B, the condensed steam may be drawn off, and a current thereof of high temperature allowed to pass through the said central pipe and its connections, the effect of which will be to speedily dry the contents of the case, which being accomplished, a vibrating door, F', closing an aperture, *f*, in the side of the case, will be opened, allowing the cleansed feathers or hair to be delivered into a mattress or sack, which will be secured to the side of the case by means of hooks *g*, provided for the purpose. I represents a second hinged door, closing an opening, *h*, extending from end to end of the case, which opening is closed by a reticulated or sieve-like material, *l*, which is of curved form, and is designed to let out the freed dirt, broken feathers, and the like.

It will be seen from the above description that I have combined in one device means for steaming moss, hair, or feathers, and devices whereby the steamed materials may be subsequently dried and discharged into a mattress or sack without touching the floor.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a hair and feather renovator, the rotating case A, having a central tube, B, lateral tubes C, and communicating pipes *c*, in combination with the funnel-shaped educts D,

slide-valves *d*, and the operating-rod *E*, provided with disks *e e*, substantially as specified.

2. The steam-pipes *C*, having funnel-shaped educts *D*, in combination with the operating-rod *E*, provided with valves *d* and disks *e e*, substantially as described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES DENSIMORE SMILEY.

Witnesses:

WAYNE RAMSAY,
M. C. CLARKE.