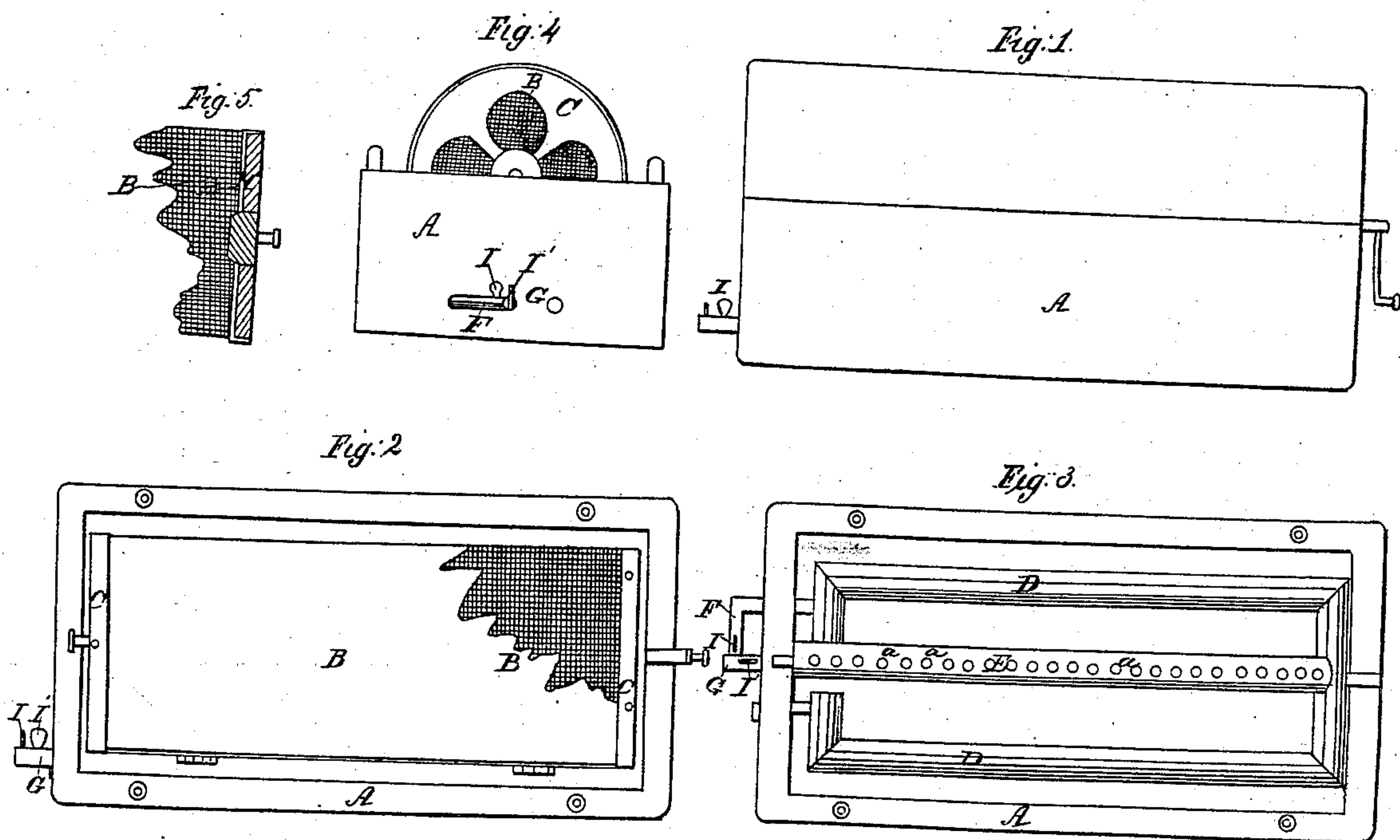


MASON & BELL.
Feather Renovator.

No. 79,668.

Patented July 7, 1868.



Witnesses,
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United States Patent Office.

C. E. MASON AND G. F. BELL, OF WELLINGTON, OHIO.

Letters Patent No. 79,668, dated July 7, 1868.

IMPROVEMENT IN FEATHER-RENOVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, C. E. MASON and G. F. BELL, of Wellington, in the county of Lorain, in the State of Ohio, have invented certain new and useful Improvements in Feather-Renovators; and we do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the machine.

Figure 2, a view of the inside and cylinder.

Figure 3, a view of the inside with the cylinder detached.

Figure 4, an end view.

Figure 5, a detached section.

Like letters of reference refer to like parts in the several views.

In fig. 1, A represents an oblong square box or case; B, a cylinder, having its bearings in the ends of the same, as shown in figs. 2 and 3. Said cylinder consists of the heads C, to which is secured the wire netting or gauze B', and which constitutes the sides of the cylinder, a longitudinal section of which is made as a door, whereby access is had to the inside.

In the bottom of the box, immediately under the cylinder, is an arrangement of steam-pipes, D E. The side pipes, D, are put in communication with an outside steam-boiler, by the induction-pipe F, and the central perforated pipe E, by the induction-pipe G, each of which is furnished by a stop-cock, I, the purpose of which will hereinafter be shown.

It will be observed that the gauze at the ends of the cylinder does not touch the heads, but that there is a space, H, fig. 5, between the head and netting, the netting serving as a lining to the heads, so that the inner side of the cylinder is entirely of gauze.

Having thus described the construction and arrangement of the machine, the practical operation of the same is as follows, viz:

The feathers on being put into the cylinder are then sifted by revolving the cylinder, whereby the dust and broken feathers fall through the netting, leaving only the most valuable portion for further treatment and use. The cover of the case is then put on, and steam thereinto inducted through the pipes G and E, from which it issues through the perforations *a* in the central pipe, thereby filling the box with steam, in which the cylinder and feathers are made to revolve, the steam permeating the mass of feathers while being agitated by tumbling about in the revolving cylinder, at the same time sifting out the worthless stuff therefrom.

The feathers being sufficiently treated in this way, the steam is shut off from the perforated pipe by means of the stop-cock I', and allowed to flow into the side pipes D, which, by their heat, soon dry the feathers, by keeping them constantly agitated by the revolution of the cylinder.

To facilitate the process of drying, a section of the cover of the case is removed, and draught-holes in the sides or bottom opened, thereby producing a current of heated air through the feathers, which in a short while fits them for removal.

We are aware that feathers are renovated by heating them with steam, and that they are put into a cylinder for that purpose, but such cylinders are made tight, so that the dust and waste of the worn feathers cannot escape from the cylinder, hence are retained and mixed up with the steamed mass of feathers, therefore the work of renovation is necessarily incomplete, and if the feathers are much worn, the treatment is of little value to them, as all the dust and dirt are left among them.

This, however, is not the case when treated in a cylinder constructed and operated in the manner as above described, as the feathers are first sifted by tumbling them about in the cylinder, removing by this means the dirt and worthless stuff, and which sifting is continued through the entire time of steaming and drying, so that nothing is left of value, and the feathers in a much better condition then can be obtained for them in the ordinary way of treatment.

We do not confine ourselves to the use of a wire gauze in the construction of the cylinder, as sheets of perforated tin can be used for this purpose.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A cylinder constructed of wire gauze or netting, substantially as and for the purpose set forth.
2. The cylinder B, in combination with the box A, in the manner as and for the purpose described.
3. The pipes D E, as arranged in relation to the cylinder B and box A, substantially as and for the purpose set forth.

C. E. MASON,
G. F. BELL.

Witnesses:

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J. H. BURRIDGE.