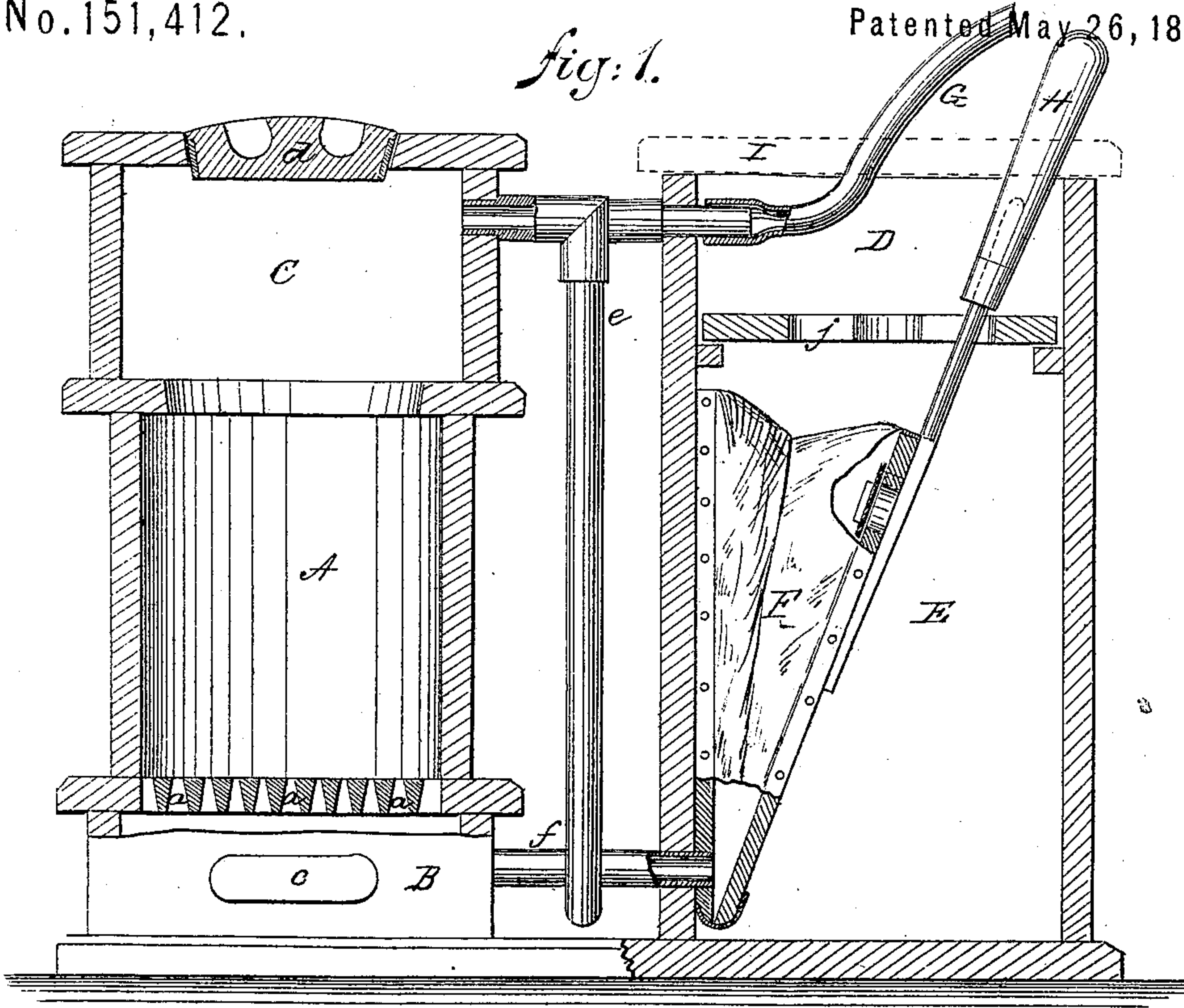


## Vermin Suffocaters.

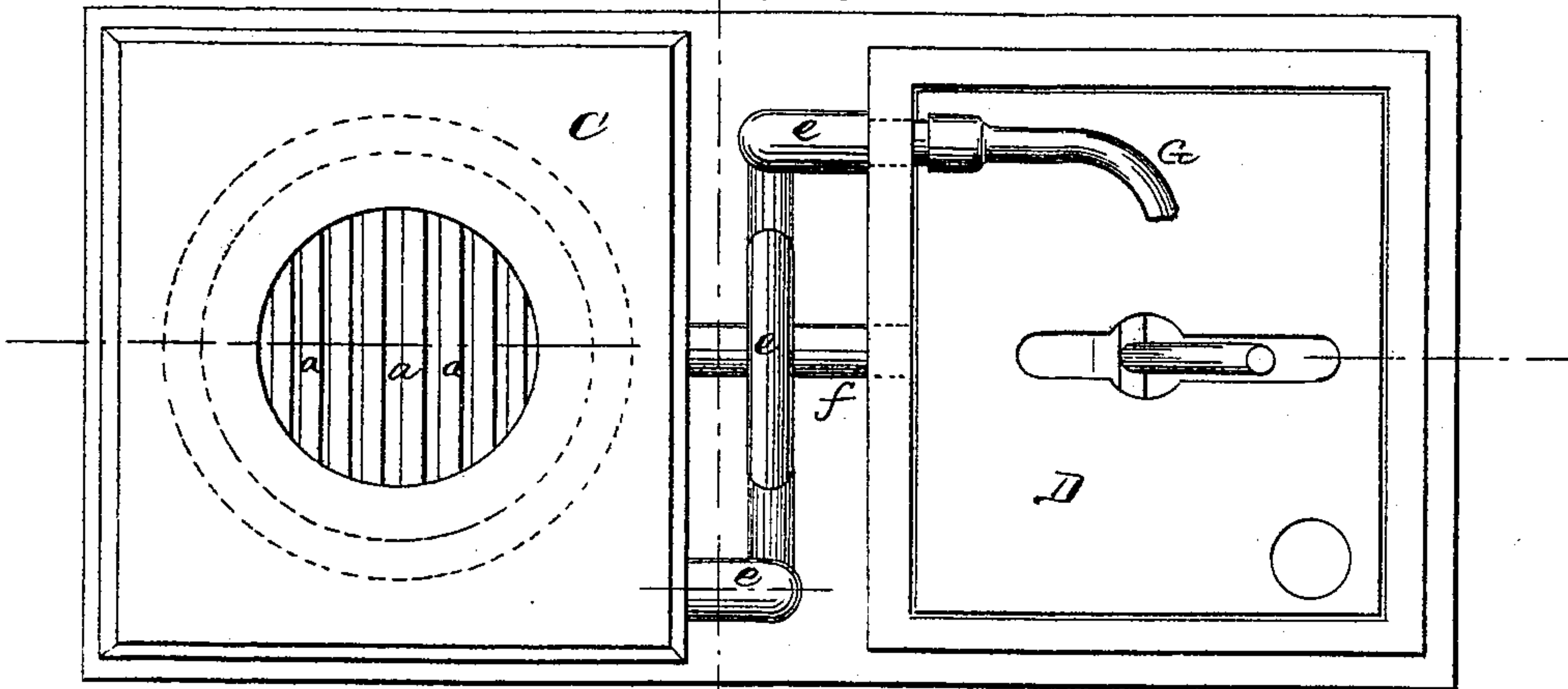
No. 151,412.

Patented May 26, 1874.

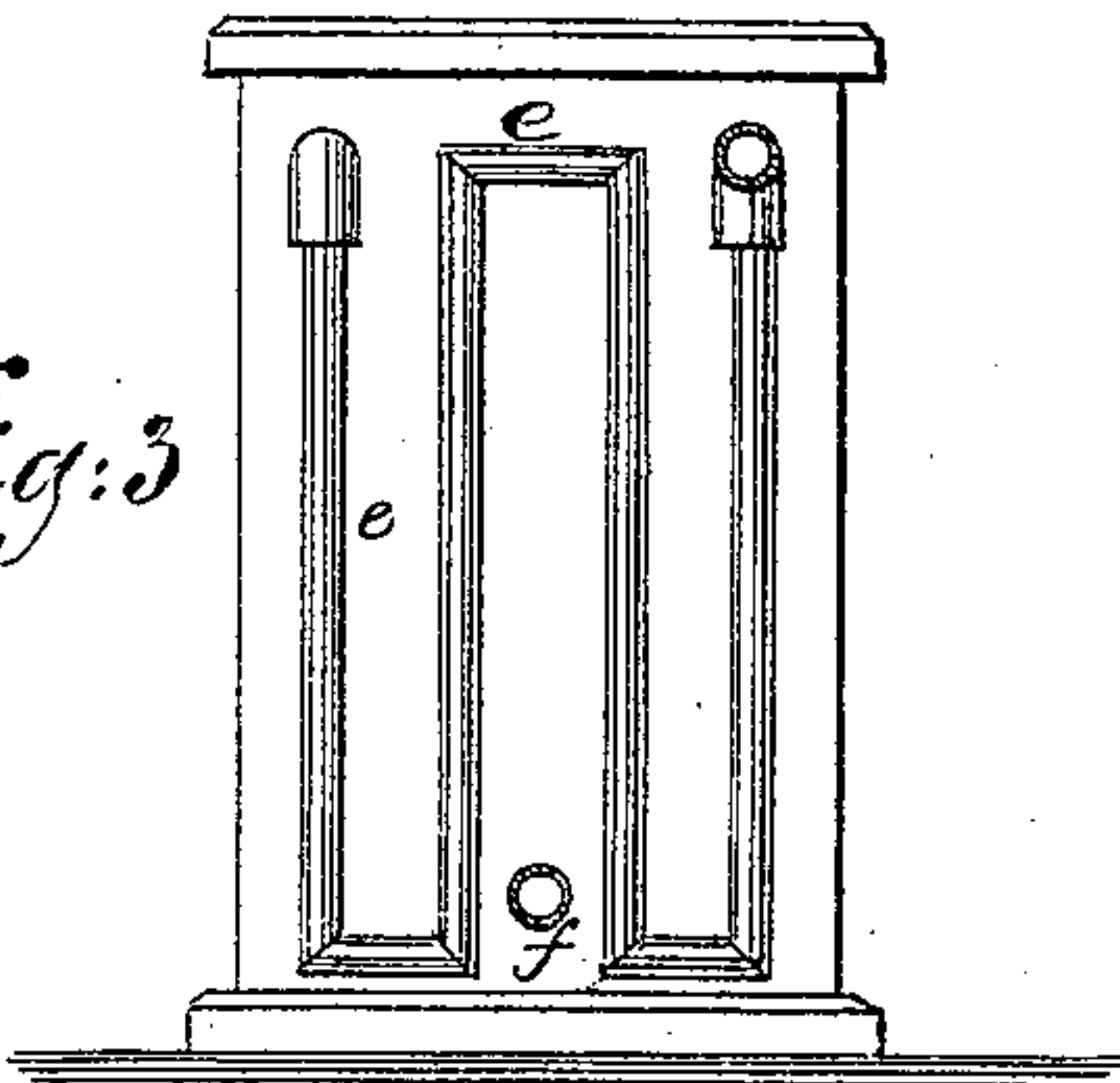
*fig: 1.*



*fig: 2.*



*fig:3*



*Witnesses:*

H. L. Mattenberg

*M. L. Bruce*

*Inventor:*

Isaac Mast.

*per G. M. Zumpfen.*

Atty.



# UNITED STATES PATENT OFFICE.

ISAAC MAST, OF ROXBOROUGH, PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN VERMIN-SUFFOCATORS.

Specification forming part of Letters Patent No. 151,412, dated May 26, 1874; application filed March 30, 1874.

*To all whom it may concern:*

Be it known that I, ISAAC MAST, of Roxborough, Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Vermin-Suffocator; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

This invention has for its object the extermination of vermin, particularly burrowing rodents; and the invention consists in a generator, wherein are generated carbonic-acid and other gases obnoxious to animal life, and a device combined therewith, whereby the noxious gases are forced into the holes and other hiding-places of the vermin.

In the accompanying sheet of drawings, Figure 1 is a longitudinal section of my apparatus; Fig. 2, a plan or top view of same; and Fig. 3, an end view partly in section, showing the arrangement of pipes.

Similar letters of reference indicate like parts in the several figures.

A is a cylindrical vessel of sheet metal or otherwise, lined with fire-brick, and provided with small grate-bars or openings *a*. This cylindrical vessel rests upon a base, B, the base B being provided with a hand-hole covered by an air-tight plate, *c*. Fitted on the top of the cylinder A is a box or drum, C, with a hand-hole tightly secured by a screw-cap, *d*, or otherwise. Extending from the box or drum C, and also from the base B, are two pipes, *e f*. The pipe or tube *e* extends downward and upward, again downward, again upward, (see Fig. 3,) entering into a space, D, over the bellows-box E, the pipe *f* extending from the base B into the lower part of said bellows-box E. Within the box E is fitted a bellows, F, into the lower part of which the pipe *f* enters, as shown in Fig. 1. To that end of the pipe *e* that enters into the space above the bellows-box E is fitted a flexible hose, G. Secured to the bellows F is a handle, H, and between the bellows-box E and space D is a movable partition, *j*.

My apparatus being constructed substantially as above described, it is operated as fol-

lows: A charcoal or other fire being kindled on the grate-bars *a*, sulphur or any other substance that will generate noxious vapors sufficient to destroy animal life is placed on the fire, through the opening in the top of the box or drum C, the opening being then tightly closed by the cap *d*. The bellows is operated by the handle H, when a blast of air is driven through the pipe *f* into the base B, through the grate-bars *a*, and the superincumbent substances forcing the noxious vapors generated in the cylinder A into the box or drum C, whence it issues through the pipe *e* and its several convolutions or lengths, finally finding exit through the flexible pipe G, which may then be inserted into any hole or crevice which is suspected of being the hiding-place of the vermin, and in this way a continuous stream of noxious vapors may be forced into what would otherwise be the inaccessible retreats of the vermin it is sought to exterminate.

The passage of the heated vapors through the several extensions of the pipe *e* will in a great measure cool the vapors, so that they will not be dangerously hot when forced into combustible hiding-places.

The pipe *f* has fitted within it a valve, which opens to allow the current of air to be forced through said pipe, and closes when the bellows is being filled with air.

The opening in the base B covered by the plate *c* is intended to admit air while the fire is burning on the grate-bars, after which it is closed, and also to permit the ashes to be moved from under the grate-bars *a*.

When the apparatus is not in use the handle H of the bellows is unshipped and placed within the space D over the bellows-box, and the flexible pipe G is coiled away within said box, over which may be placed a cover, I.

It is evident that any kind of a jointed or flexible pipe will answer the purpose of the rubber or elastic tube G.

The whole apparatus is very small and readily moved from place to place, occupying but very little room, and is thoroughly efficacious for the purpose for which it is designed.

I am aware that it is not new to use noxious vapors in destroying insects, &c.

Having thus described my invention, what

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

The herein-described portable apparatus for generating and applying noxious vapors for destroying insects, &c., composed of the generating-chamber and its reservoir, cooling-pipes, bellows, and discharge pipe or nozzle,

combined, arranged, and operating as specified.

ISAAC MAST.

Witnesses:

J. P. DELANEY,  
P. J. TAYLOR.