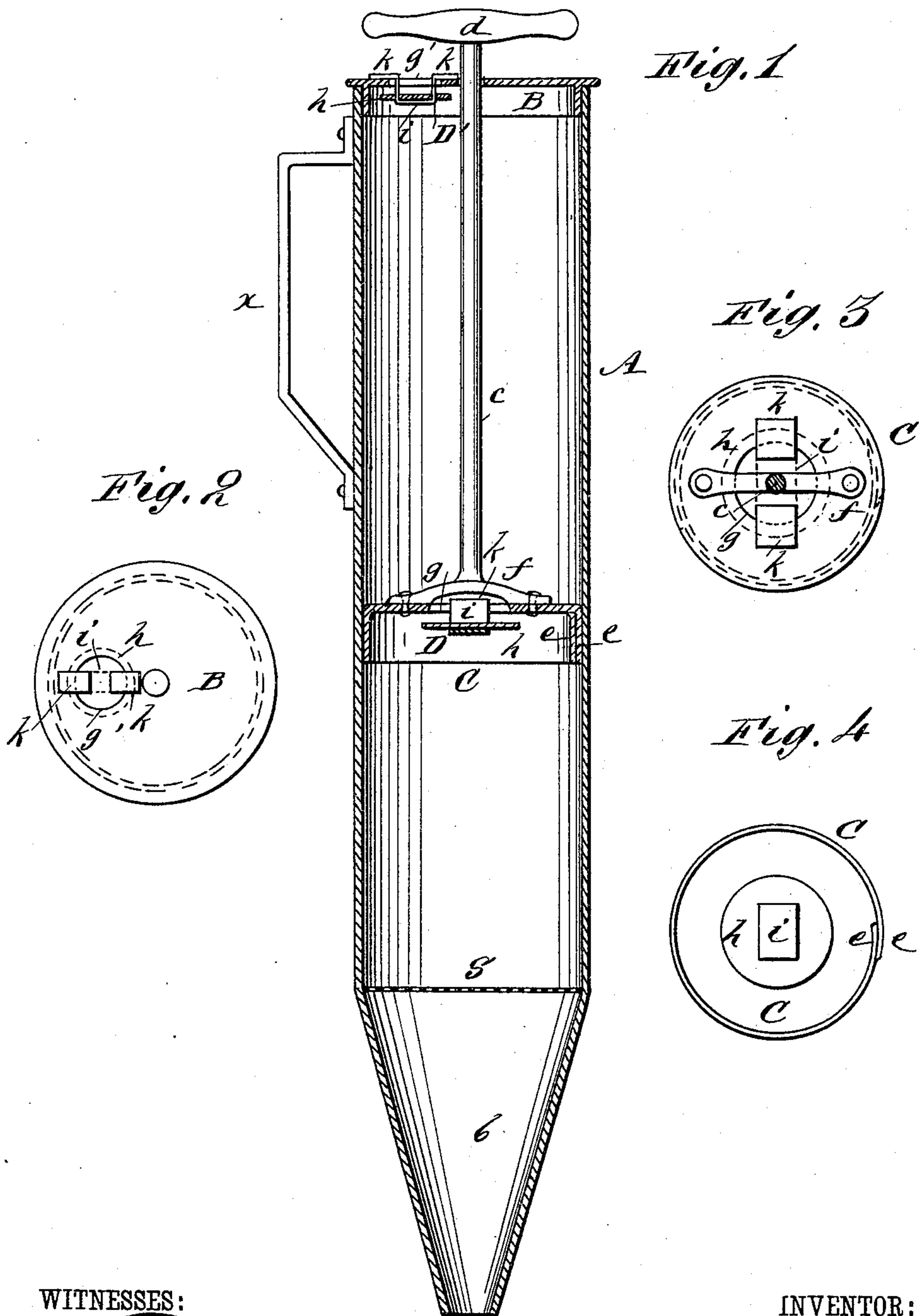


(No Model.)

W. A. LOUGHRY.  
FUMIGATOR.

No. 372,477.

Patented Nov. 1, 1887.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

WILLIAM A. LOUGHRY, OF ODESSA, NEBRASKA.

## FUMIGATOR.

SPECIFICATION forming part of Letters Patent No. 372,477, dated November 1, 1887.

Application filed August 22, 1887. Serial No. 247,563. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. LOUGHRY, of Odessa, in the county of Buffalo and State of Nebraska, have invented a new and useful Improvement in Vermin-Exterminators, of which the following is a full, clear, and exact description.

This invention relates to that class of vermin-exterminators which forcibly eject sulphurous or other destructive fumes or acid smoke into the holes or places where the vermin resort or are concealed, said fumes or smoke being generated within the exterminator and being mechanically expelled therefrom, as by a piston or plunger action.

The invention consists in a device of this description of novel construction, substantially as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a mainly sectional longitudinal view of a vermin-exterminator embodying my invention. Fig. 2 is a rear end view of the device with the plunger-operating rod removed. Fig. 3 is a back view of the plunger with its rod in section, and Fig. 4 a front view of the same.

A is a single cylinder or tube of metal or other suitable material, terminating at its forward end in a funnel-shaped nozzle, *b*, and fitted at its rear end with a removable cap, B, also provided with a handle, *x*.

C is a piston fitted to work within the cylinder A, and provided with a rod, *c*, adapted to pass through a hole in the cap B, and having either a metal or wooden handle, *d*, on its outer end for operating the piston, as required. This piston, which may also be made of metal, is of an inverted cylindrical cup shape, being left open in front and free or loose, with its side split or divided, and so that the ends *e e* thereof overlap one another in a scroll fashion, whereby the piston more readily conforms to the interior of the cylinder, and all packing is dispensed with.

The rod *c* is secured to the back of the piston C by a cross arm or brace, *f*, extending over a central aperture, *g*, in the back of the

piston, and riveted on opposite sides of the aperture to the piston. The aperture *g* is controlled by a self supporting valve, D, adapted to close in the forward stroke of the piston, and composed of a disk, *h*, and a saddle-like bent metal strip or carrier, *i*, the sides of which, that are of a suitable length to provide for the opening and closing operation of the disk relatively to the aperture *g*, pass through perforations or slots in the disk and terminate in bent ends *k k*, extending beyond opposite sides of the aperture *g*, so that they are free to rest upon the back of the piston. The cap B is similarly fitted with a like self-supporting valve, D', adapted to control an aperture, *g'*, in the cap on one side of its center, *h* being the disk of said valve, and *i* the bent metal strip or carrier, having its ends *k k* resting upon the exterior of the cap. This construction of the valves D D' is both simple and efficient, and neither the valves nor the piston are fitted with packing liable to be injured by the flame, smoke, or products of combustion, and all sticking of parts consequent upon expansion, as when duplicate elongated cylinders fitting one within the other are used, and escape of smoke between the joints is avoided.

In the operation of the exterminator, the cylinder A is charged with the necessary combustible and medicated material—as, for instance, with hay, straw, or other light material—sprinkled with sulphur or carbolic acid, when the instrument is used to exterminate rats, mice, prairie-dogs, and other like vermin. This material having been fired, the piston C is operated to force the fumes or smoke into the holes or places where the vermin resort or are concealed, the valve D' in the cap B closing and preventing all suction of air through the front or nozzle end of the cylinder when the piston is being drawn out, and opening when said piston is being forced in or forward when the valve D in the piston closes. This causes a continuous stream of smoke to flow from or through the nozzle *b*, and there is no back suction of the smoke.

If desired, a wire screen, S, may be fitted in the lower end of the cylinder A, to prevent fire from passing out of the cylinder; but such attachment is not absolutely necessary, and the same forms no part of this invention.



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

1. In a vermin-exterminator, the combination, with the cylinder A, having a forward nozzle, *b*, of the inverted cylindrical cup-shaped and apertured piston C, split or divided at its sides, and having overlapping ends *e e*, the valve D, controlling the aperture in said piston, and the reversely-operating valve D', applied to the rear end of the cylinder, substantially as specified.

2. In a vermin-exterminator, the combination of the cylinder having a forward nozzle, *b*, the removable cap B, having a valve-aper-

ture, *g'*, the valve D', controlling said aperture, 15 the cylindrical cup-shaped piston C, having a valvular opening, *g*, and its side split or divided, forming overlapping ends *e e*, the piston-rod *c*, with its attached handle, and the valve D, controlling the aperture *g*, said valves 20 D D' consisting of disks *h* and saddle-like penetrating strips or carriers *i*, constructed to terminate in bent supporting ends *k k*, essentially as shown and described.

WILLIAM A. LOUGHRY.

Witnesses:

G. E. DIPPO,

W. D. WORRELL.