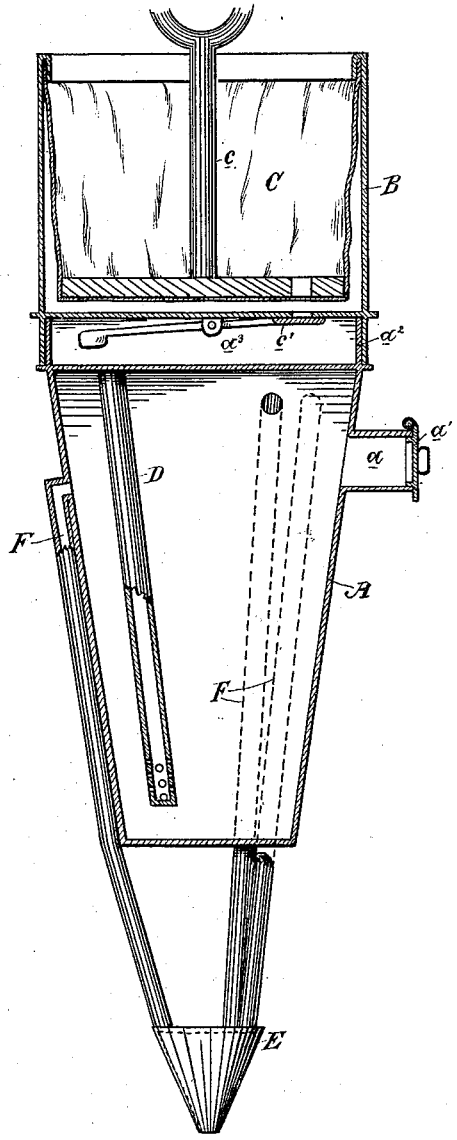
(No Model.)

H. ESBORN.

ANIMAL EXTERMINATOR.

No. 345,373. Patented July 13, 1886.



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UNITED STATES PATENT OFFICE.

HOMER ESBORN, OF PETALUMA, CALIFORNIA.

ANIMAL-EXTERMINATOR.

SPECIFICATION forming part of Letters Patent No. 345,373, dated July 13, 1886.

Application filed April 9, 1886. Serial No. 198,381. (No model.)

To all whom it may concern:

Be it known that I, HOMER ESBORN, of Petaluma, county of Sonoma, and State of California, have invented an Improvement in Animal-Exterminators; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of animal-exterminators in which some combustible material within a cylinder is subjected to a blast of air, whereby the noxious fumes or products of combustion are driven out through suitable pipes into the hole or burrow of the animal; and my invention consists in the novel arrangement of the operative parts, and particularly of the independent nozzle which is inserted in the burrow and the exterior pipes connecting the nozzle with the combustion-chamber, one of said pipes being shorter than the others, whereby sufficient ventilation is obtained, all of which I shall hereinafter more fully describe.

The object of my invention is to provide a simple and effective animal-exterminator.

Referring to the accompanying drawing, the figure is a vertical section of my animal-exterminator, the nozzle being shown in elevation.

A is the main cylinder, which forms the combustion-chamber, being supplied with suitable fuel through an opening *a*, in its side, said opening being guarded by a cap, *a'*. The top of the cylinder has a flange, a^2, over which fits a top cylinder, B, in which is arranged the bellows C, having a handle, *c*, by which they are operated, and a valve, *c'*, in the base. The top of the cylinder A is closed, and there is, therefore, formed between it and the base of the bellows a chamber, a^3, from which a pipe, D, extends downwardly into the combustion-chamber. This pipe is perforated near its lower end, so that the air is admitted to the combustion-chamber from it.

E is the discharge-nozzle, consisting of a conically-shaped chambered casting having its upper end closed and its lower end open.

F are three pipes, which connect the nozzle with the cylinder A, and said pipes communicate with both, so that the noxious vapors may be carried to the nozzle. One of these pipes is shorter than the other two, and enters the cylinder A at a point below the entrance-points of the others, which latter enter well toward the top of the cylinder. This short pipe provides for the proper ventilation in order to assist combustion.

The operation of the machine is as follows: Combustible materials of suitable character which will give off smoke or other noxious vapors are placed within the chamber A, and are ignited. The bellows C are then worked and a blast of air forced down through pipe D into the combustion-chamber, whereby the vapor is forced upwardly and passes out through the pipes down into the nozzle E, from which it is discharged into the animal's burrow. At the beginning of the operation most of the heated vapor rises to the top of the combustion-chamber, and is carried off by the two longer pipes, F, thus creating a suction through the shorter pipe, whereby air is drawn from the nozzle up through said pipe in sufficient quantity to assist combustion. This of course ceases either wholly or partially after the machine has got under headway.

In machines of this class the conical nozzles are usually attached directly to or form a part of the main cylinder; but in my machine it is removed some distance from the cylinder, and is practically independent of it. This gives me an advantage not only in lightness of construction, but also enables me to hold the machine steady by placing the foot upon the nozzle.

I am aware that it is not new to force the vapor up in the cylinder and out through pipes emerging from its upper portion; but these pipes have generally been arranged upon the inside of the cylinder. My object in arranging them upon the outside is to give a clear space on the inside of the cylinder, at the same time providing for the attachment and communication of the nozzle, besides affording convenience in cleaning and repairing.

By having three pipes an equal support is given to the nozzle and a more equal and effective discharge is provided for the vapor.

The chamber a^3 in the top of the cylinder serves as a sort of store-receptacle for the air.

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

1. In an animal-exterminator, the combina-

tion, with the combustion-cylinder A, of an independent nozzle, E, and the exterior pipes, F, connecting the nozzle with the cylinder, one of said pipes entering the cylinder at a point lower than the entrance-point of the others, whereby ventilation is provided, substantially as herein described.

2. In an animal-exterminator, the combustion-cylinder A, the bellows C, and the pipe D, extending from the bellows down into the cylinder and perforated near its lower end, in combination with the independent nozzle E and the pipes F, emerging from the cylinder near its upper portion, extending downwardly outside of the cylinder, and communicating with and supporting the nozzle, substantially as described.

3. In an animal-exterminator, the combustion-cylinder A and the bellows C, communicating therewith through pipe D, in combination with the independent nozzle E and the exterior pipes, F, connecting the nozzle with the cylinder, one of said pipes entering the cylinder at a point lower than the entrance-points of the others, whereby ventilation is provided, substantially as described.

4. An animal-exterminator comprising the combustion-cylinder A, the bellows C in cap B, whereby a chamber, a^3, is formed between the base of the bellows and the top of the cylinder, the pipe D, leading from the bellows downwardly into the cylinder and perforated near its lower end, the independent nozzle E, and the exterior pipes, F, connecting the nozzle with the upper portion of the cylinder, one of said pipes being shorter than the others, substantially as described.

In witness whereof I have hereunto set my hand.

HOMER ESBORN.

Witnesses:
J. A. SOLDATE,
B. H. SILVERSHIELD.