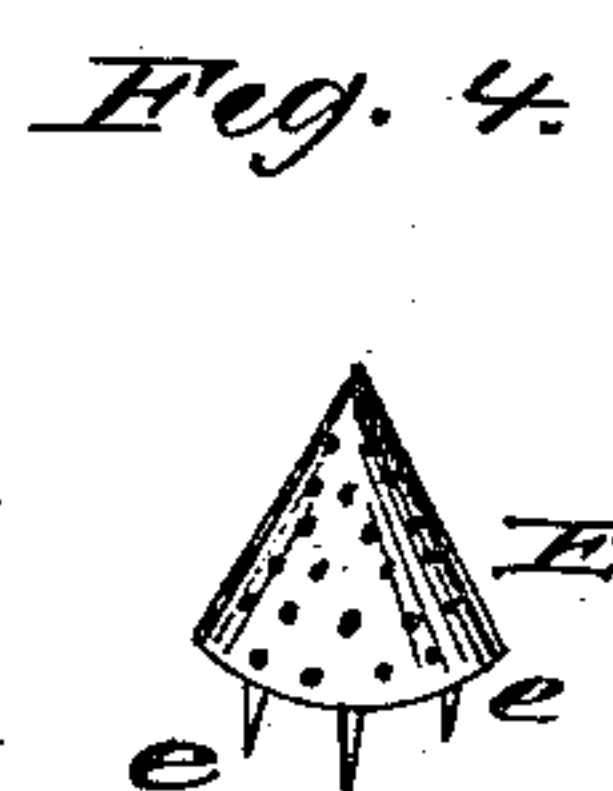
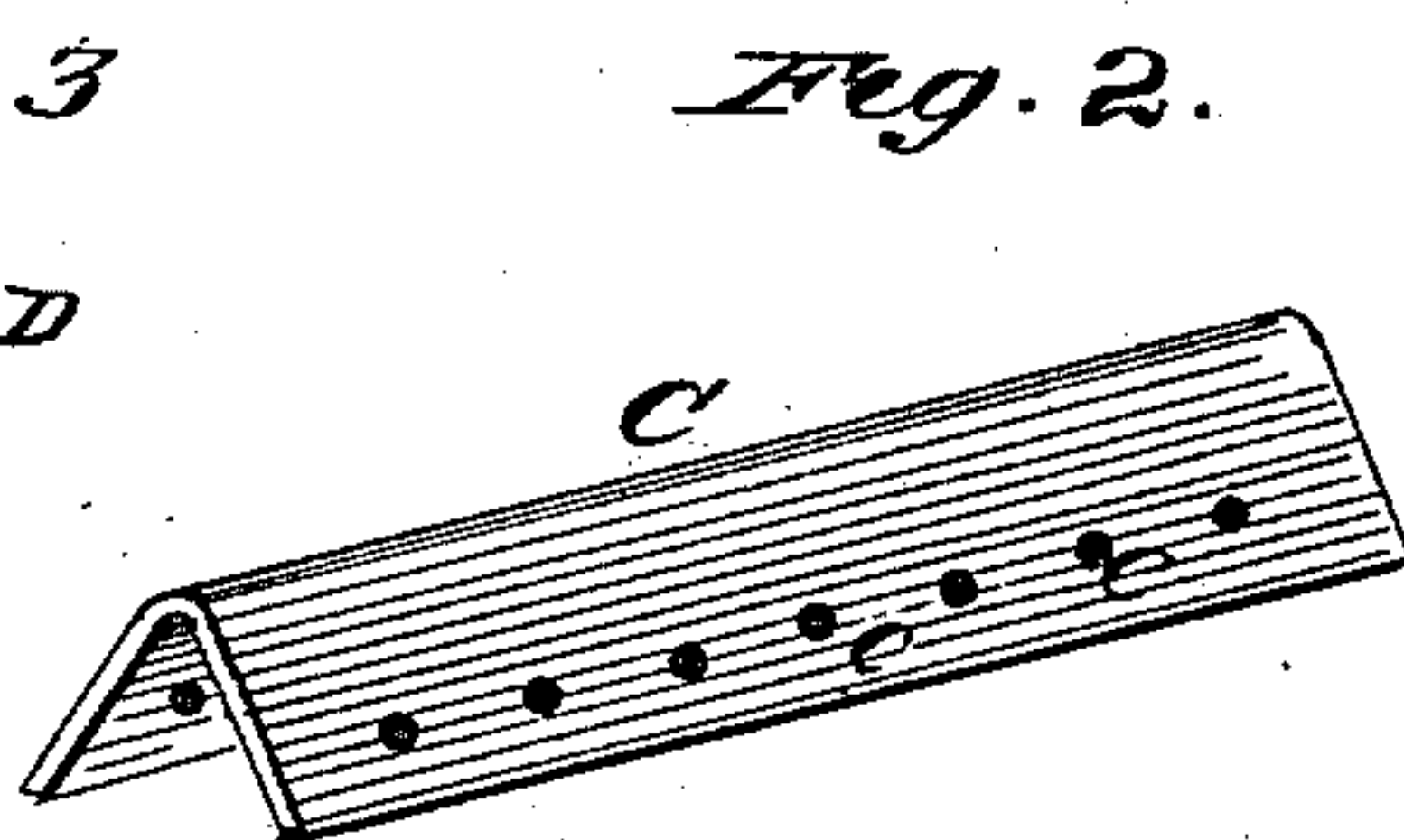
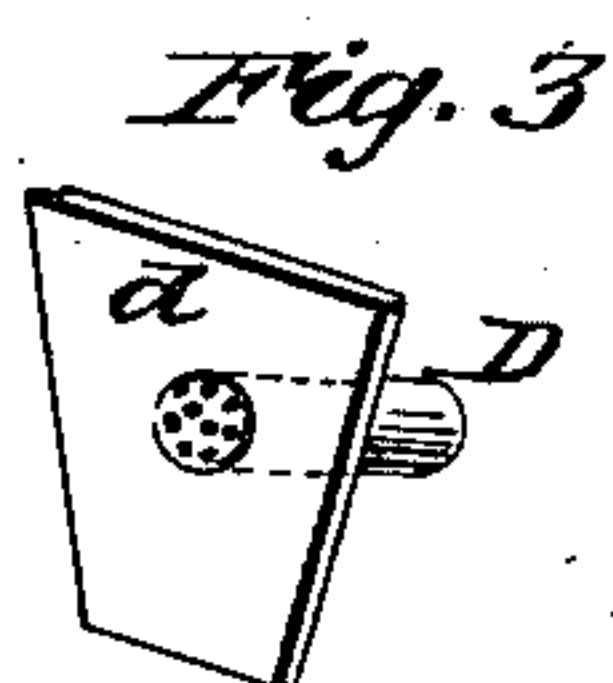
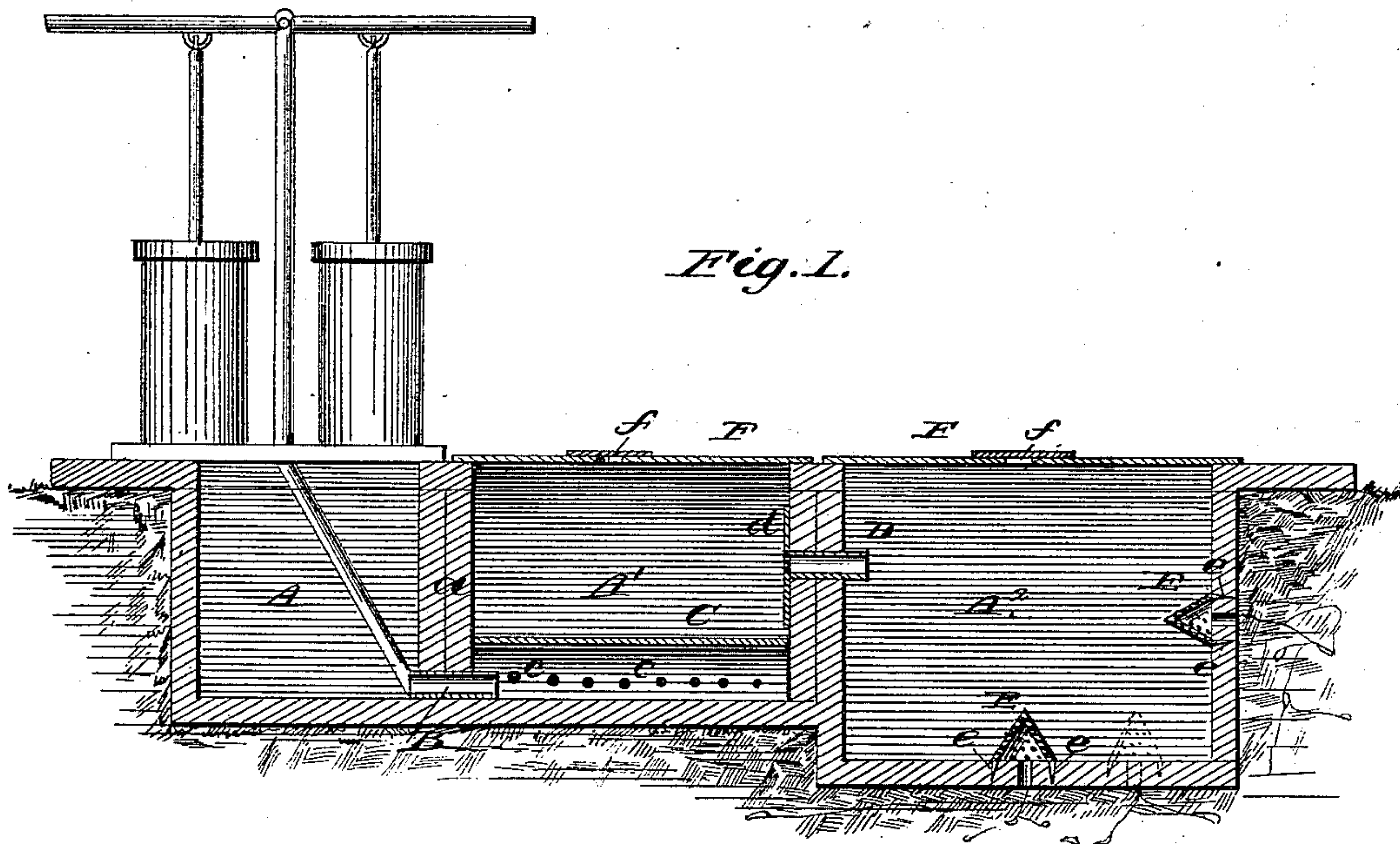


O. MUELLER.
Fumigating Apparatus for Exterminating Insects.

No. 213,235

Patented Mar. 11, 1879.



Witnesses

George. Binkenburg

And G. Düttench

Inventor

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by Louis Bagger & Co
his attorney

UNITED STATES PATENT OFFICE.

ONNO MUELLER, OF LA GRANGE, TEXAS.

IMPROVEMENT IN FUMIGATING APPARATUS FOR EXTERMINATING INSECTS.

Specification forming part of Letters Patent No. **213,235**, dated March 11, 1879; application filed September 25, 1878.

To all whom it may concern:

Be it known that I, ONNO MUELLER, of La Grange, in the county of Fayette and State of Texas, have invented certain new and useful Improvements in Insect-Exterminators; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical section through my improvement, showing its respective parts. Fig. 2 is a detail perspective view of the fire-pit bottom plate or tube. Fig. 3 is a similar view of the gas-conducting tube, with one end covered with a perforated plate; and Fig. 4 is a like view of one of the conoidal-headed covers for the ant or insect holes, whose surface is perforated and provided with points or pegs for securing the same in a fixed position over said holes.

The same part in the several figures is denoted by the same letter.

This invention relates to certain improvements in insect-exterminators; and it consists of a number of communicating chambers connected together, two of them by a tube, and having an inverted-V-shaped perforated plate; and, secondly, in the employment, in connection with these chambers, of perforated cone or dome shaped caps covering the entrances to the ant-passages, substantially as hereinafter more fully set forth.

In the drawings, A A¹ A² refer to three trenches made in the ground—one the chamber to which is connected a bellows or air-pumping apparatus; the middle one, A¹, whose sides taper or converge downwardly toward its bottom, the fire-pit, or chamber, and the third a chamber or hole made at a point embracing two or more or several entrances to as many ant-nests. These trenches or excavations may be made of varying dimensions, as shown.

In the lower part of the dividing-partition *a*, between the air-chamber A and the fire-pit or chamber A¹, is a passage or tube, B, which serves as a passage-way for the air to the fire blown through the same by a bellows or air apparatus suitably connected with the first-

named chamber. This tube also prevents the caving in of and the stopping up of said passage-way by the dirt or earth.

In the narrow bottom of the fire-pit or chamber A¹ is disposed lengthwise therewith an inverted-V-shaped tube or plate, C, having its flaring portions provided with apertures or perforations *c c* for the passage from said tube of the air entering the same through the passage-way or tube B into the fire-pit, and thence in contact with the fire built in the latter. Sulphur or other poisonous substance is thrown into the combustible matter, and its fumes or gas carried off by the intruding air through a second tube, D, placed in the dividing-wall between the fire-chamber A¹ and the ant-nest hole or ditch A², and thence through the perforated covered heads or caps E placed over the entrances to the ant-nests, which fumes or gas will destroy or exterminate the ants or insects.

By converging or tapering the side walls of the fire-pit or chamber, it will act to feed the coal to the fire and concentrate the fuel, and thus thoroughly consume the same without the usual waste. The tube C also serves to prevent the choking up of the air-passage tube B at that end next to the fire-pit.

To prevent the ashes, &c., entering and passing through the tube D into the chamber A², it is covered with a perforated plate, *d*, which also serves to hold it in a fixed position.

The ant-hole entrance covers or heads E are conoidal in shape and perforated, by which construction the ashes or other extraneous particles blown or coming in contact therewith will be precipitated therefrom, and thus be prevented from entering the holes therein with the air. These covers or caps are also provided with points or pegs *e e* for securing them in a fixed position over the ant hole or nest entrances.

I am aware that simply perforated ordinary plates have been used for covering the entrances to the ant-passages; but these are objectionable, in that they are not provided with any means to throw off or deflect extraneous particles or ashes that may be blown upon said plates, which particles or ashes if allowed to accumulate thereon, as would be the case in the use of said plates, would obstruct the smoke-passages in said plates.

The trenches $A A^1 A^2$ are covered with metal plates F , having inspection - openings f in them, to inspect the trenches without the removal of said plates, and whose openings may also be covered and their edges well packed with earth to prevent the escape of air at those points. The trench or excavation A^2 is to be only sufficiently deep to confine and serve as a conductor for the noxious and poisonous gases to the ant-holes without interfering with the ants or their nests.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the communicating chambers $A A^1 A^2$, connected together, two of

them by a tube, B , and the inverted- V -shaped perforated plate C , substantially as and for the purpose set forth.

2. The combination of the communicating chambers $A A^1 A^2$, one having perforated cone or dome shaped caps E , covering the entrances to the ant-passages, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ONNO MUELLER.

Witnesses:

FREDRERICH C. STREITHOFF,
ALPHONSE J. ROSENTHAL.