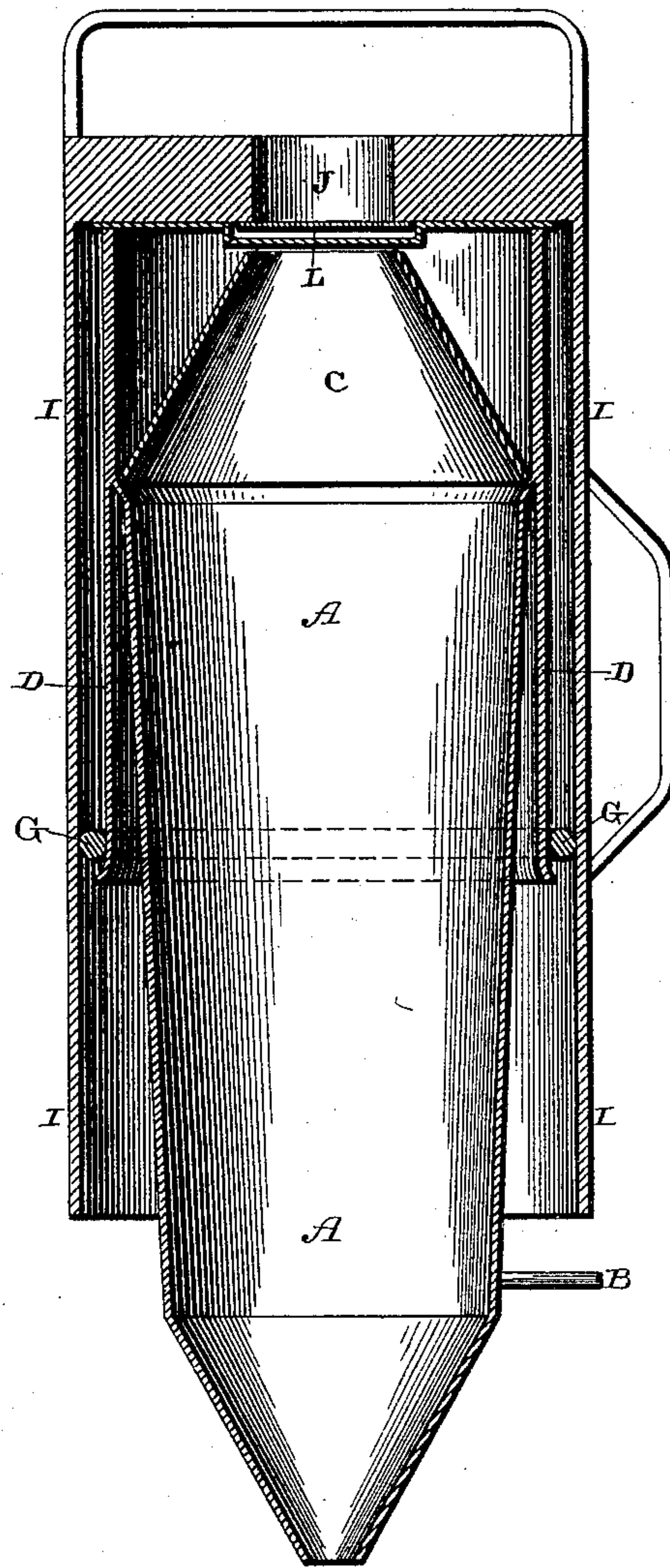


(No Model.)

C. Q. HAYES.
FUMIGATOR.

No. 430,018.

Patented June 10, 1890.



Witnesses:

E. P. Ellis,
P. Brackett.

Inventor:

C. Q. Hayes,
per
J. A. Lehmann, atty.

UNITED STATES PATENT OFFICE.

CALVIN Q. HAYES, OF GOLDFIELD, IOWA.

FUMIGATOR.

SPECIFICATION forming part of Letters Patent No. 430,018, dated June 10, 1890.

Application filed January 31, 1890. Serial No. 338,713. (No model.)

To all whom it may concern:

Be it known that I, CALVIN Q. HAYES, of Goldfield, in the county of Wright and State of Iowa, have invented certain new and useful
5 Improvements in Fumigators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being
10 had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in fumigators; and it consists in the combination of a cylinder or chamber in which the
15 fire is made, an outside cylinder, which is separated a suitable distance therefrom at every point except its upper end to prevent it from becoming heated, a conical perforated cover placed inside of the top of the fire-chamber, a valved cylinder, which is used to
20 force the products of combustion into the animal's burrow, and a suitable packing, as will be more fully described hereinafter.

The object of my invention is to provide a
25 fumigator by means of which poisonous fumes can be forced into an animal's burrow, and in which the parts are so constructed and arranged that the cylinder upon which the packing is placed and has a sliding or
30 rolling movement never becomes so heated as to injure the packing.

The accompanying drawing represents a vertical drawing of a fumigator which embodies my invention.

35 A represents a cylinder or fire-chamber, which is made conical in form, and which has its lower end contracted, as shown, so as to adapt it to be inserted into the upper end of an animal's burrow. Secured to one side of
40 the lower end of this cylinder is a foot-support B, by means of which the fire-chamber is held in position while in use. In this chamber is built a fire, upon which are placed the poisonous substances of any kind for the
45 purpose of producing poisonous fumes or vapors which will destroy animal or insect life. After the fire has been built in this chamber there is placed in its upper end a conical perforated cap or cover C, which serves to prevent the fire from being drawn or sucked out
50 of the chamber A while the fumigator is be-

ing operated, but which does not interfere with the free downward passage of the air to the fire. Secured rigidly to the upper end of this vertical chamber A is the cylinder D, 55 which has straight sides and which does not come in contact with the chamber A at any other point than its upper end. These two cylinders being separated, as shown, and the space between them communicating with the
60 outer air at the lower end of the cylinder D, the cylinder D is always kept cool, so that the packing G, which is placed around it, does not become injured by the heat.

Passing down over the upper end of the fire- 65 chamber A, the cylinder D, and the packing is the operating-cylinder I, which serves as a piston or plunger to force air down through the fire into the fire-chamber, and which makes a tight joint with the packing G. As 70 this cylinder is worked up and down over the cylinder D, the packing, of any suitable construction or material, has a rolling or sliding movement over the outer surface of the cylinder D, so as to correspond to the motion 75 of the cylinder I. This packing being made round to adapt the packing to roll between the two cylinders D and I, it is not worn out as rapidly as it would be if it remained stationary, nor could such a long movement of 80 the cylinder I be so readily given. In the upper end of the cylinder I is formed an air-opening J, and this opening J is controlled by the valve L, which is placed inside of the cylinder and adapted to open inwardly. This 85 cylinder I is provided with suitable handles, by means of which the cylinder can be operated and the fumigator carried around.

When the cylinder I is worked up and down, the valve opens at each upward stroke, 90 so as to admit air, and then closes as the downward stroke begins, and thus forces the air through perforated cap or opening and through the cylinder, thus forcing the deadly fumes directly into the burrow for the pur- 95 pose of destroying burrowing animals of all kinds.

This fumigator is very light, cheap, simple in construction, and especially adapted for the destruction of ground-hogs, prairie-dogs, 100 and destructive burrowing animals or insects of every kind. All sorts of poisonous sub-

stances or compounds may be placed in the fire so as to produce the fumes or vapors which are to destroy animal or insect life.

Having thus described my invention, I
5 claim—

The combination of the cylinder in which the fire is made, the cylinder D, which is secured thereto at its upper end and which is separated therefrom by means of an air-
10 chamber, the packing G, placed around the

cylinder D, and the valved chamber or cylinder I, which forms a tight joint with the packing, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

CALVIN Q. HAYES.

Witnesses:

J. H. HAYES,

S. C. FARMER.