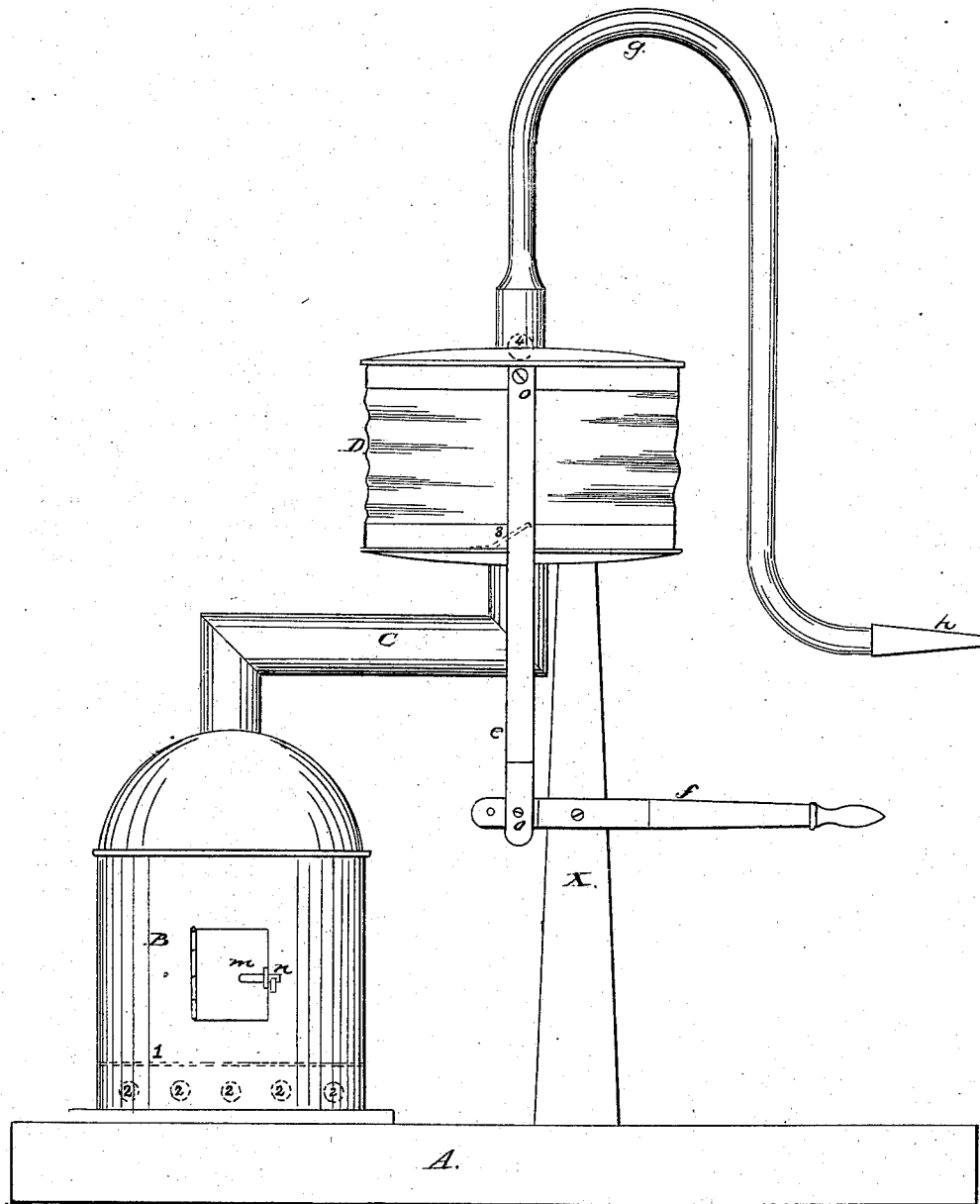


E. GILLIAM.
Insect-Destroyer.

No. 54,528.

Patented May 8, 1866.



Witnesses,
James Johnston
Alexander Hogg

Inventor.
Edward Gilliam

UNITED STATES PATENT OFFICE.

EDWARD GILLIAM, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVED APPARATUS FOR EXTERMINATING INSECTS.

Specification forming part of Letters Patent No. 54,528, dated May 8, 1866.

To all whom it may concern:

Be it known that I, EDWARD GILLIAM, of Allegheny city, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Exterminating Curculio or Insects; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in an arrangement of furnace, bellows, and conducting-pipes, so arranged that the bellows shall draw the smoke or gas formed in the furnace and force it out through a flexible pipe attached to the top of said bellows, the whole being constructed, arranged, and operating substantially in manner hereinafter described.

In the accompanying drawings, A represents the base of the apparatus. B represents a furnace, which is furnished with a grate, as indicated by the dotted lines marked 1, and with air-holes, as indicated by the dotted lines marked 2. *m* represents the door of the furnace. *n* represents the door-latch. C represents a pipe, which connects the furnace B with the bellows D, which is furnished with valves, as indicated by the dotted lines marked 3 and 4. The bellows D is mounted on a column marked X, and is operated by means of levers *e* and *f*. The joints of said levers are indicated by *o*. On the upper side of the bellows, over the valve marked 4, is attached a gum hose, *g*, which is furnished with a suitable nozzle, marked *h*.

The object of my invention is the destruction of curculio or insects on fruit-trees, vines, and plants. This is accomplished by forcing a smoke or gas on, around, and about the tree, vine, or plant, and into the hiding-places of the curculio or insects.

The smoke and gas which I have found the

best for the purpose named is the smoke of burning hydrocarbon oil and carbonic-acid gas formed by burning wood charcoal; but I wish it clearly understood that I do not confine myself to any one kind of smoke or gas, nor to any one device or apparatus for forcing the smoke or gas.

When I desire to destroy or drive bugs, roaches, or other insects from a house or bed, I use the smoke and vapor of burning brimstone.

Care should be taken in the use of the smoke, gas, or vapors, so as not use such as will destroy the plant, vine, or tree.

The operation of my improved apparatus is as follows: The article from which I desire to make the smoke, gas, or vapor is placed in the furnace B, and then fire applied. The bellows D is then operated by the levers *f* and *e*, and the smoke, gas, or vapor is drawn up through the pipe *c* into the bellows D, from which it is forced out through the hose *g*, and the gas, vapor, or smoke is directed to the place, plant, vine, or tree by the operator by means of the nozzle *h*.

I wish it clearly understood that I do not claim, broadly, the use of a furnace, bellows, and conducting-pipes, for these things have been used in constructing devices for destroying insects; but,

Having thus described the nature, object, construction, and operation of my improvement, what I claim as of my invention is—

The arrangement of the furnace B, bellows D, pipes *c* and *g*, and levers *e* and *f*, constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

EDWARD GILLIAM.

Witnesses:

JAMES J. JOHNSTON,
ALEXANDER HAYS.