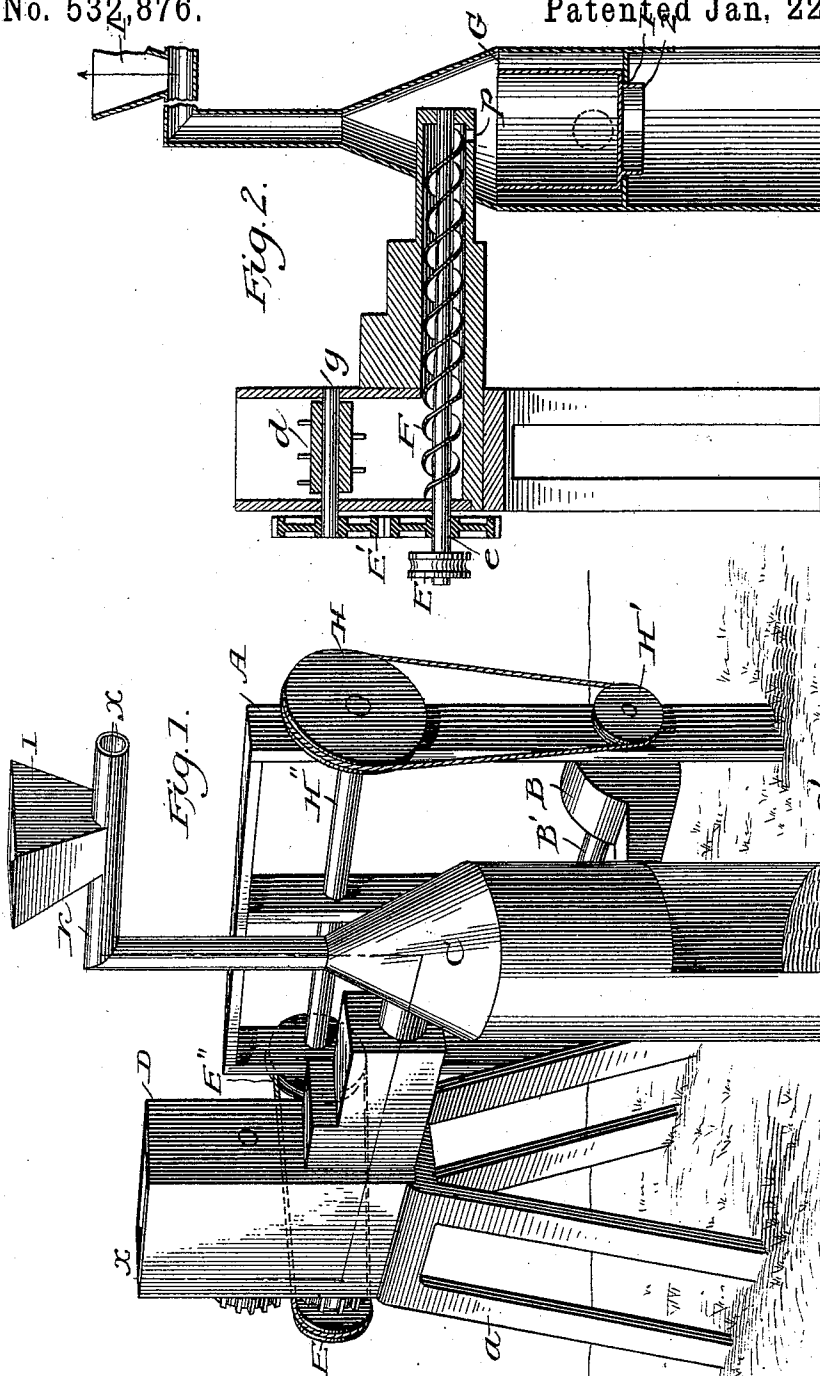


(No Model.)

J. W. HENDRIX & H. HOUGHTON.
FUMIGATOR FOR PLANTS, TREES, &c.

No. 532,876.

Patented Jan. 22, 1895.



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UNITED STATES PATENT OFFICE.

JOEL WIGFALL HENDRIX AND HIRAM HOUGHTON, OF PALMETTO, FLORIDA.

FUMIGATOR FOR PLANTS, TREES, &c.

SPECIFICATION forming part of Letters Patent No. 532,876, dated January 22, 1895.

Application filed March 2, 1894. Serial No. 502,157. (No model.)

To all whom it may concern:

Be it known that we, JOEL WIGFALL HENDRIX and HIRAM HOUGHTON, citizens of the United States, residing at Palmetto, in the county of Manatee and State of Florida, have invented a new and useful Machine for Fumigating Trees, Vines, or Plants, of which the following is a specification.

The object of our invention is to destroy the noxious insects which infest fruit trees, vines, and plants.

To carry our invention into effect we burn sulphur or other insecticides and propel the smoke of such insecticides by the application of the blower through a hose or pipe directly into the trees, vines or plants, striking the leaves with force or we may by the device shown force the insecticides as powder by the force. We obtain this object by the mechanism as set forth in the accompanying drawings.

Referring to the drawings, which form a part of this application, Figure 1 is a perspective view of our improved fumigator, and Fig. 2 is a longitudinal section thereof, through the line *x-x*, Fig. 1.

A represents the frame work and supports of the entire structure including the legs *a*; B, the casing of the fan blower which is of the usual construction; C, the furnace having a chamber G therein which will be more fully hereinafter described.

D represents the hopper for the reception of the fumigating material, and *d* represents the rotary agitator which is designed to prevent the material from clogging the said hopper.

E represents a grooved pulley on the shaft *e* of the conveyer F. This pulley is actuated by a belt which engages the grooved pulley E'' on the counter shaft H''. The belt *h* couples the driving shaft B' with the counter shaft by means of the pulleys H and H'.

The gear wheels E' E' are located, one on the prolongation of the agitator shaft *g*, the other on that of the spiral conveyer F, and as these gear wheels intermesh, the conveyer and agitator are thereby rotated in unison.

The furnace C has an opening *c* therein for the introduction of a lamp, when the machine is to be used on a small scale, or for the use of fuel when one built on a more extensive plan is to be employed in out door work. In the upper part of the furnace is located the vaporizing pan, or receptacle G, which rests upon the circular flange *l* therein. A flange 2, on the pan, projects below the flanged opening, the better to concentrate the heat upon the bottom of the pan, directly. The top of the furnace is surmounted by a conical dome which merges into the pipe K and it is through this pipe K that the noxious fumes are converged through any desired length of hose which may be attached thereto, to the object to be treated.

Any suitable prime motor may be employed to actuate the drive shaft B', and through it the connection of the fan blower, and feed mechanism.

An additional hopper N is located on the pipe K, and communicates therewith through a suitable opening. This hopper is designed to contain a powder which may be diffused upon plants, and the like, by means of the air current, whether heated or not, from the fan blower.

From the foregoing description the operation of our improved fumigator will be readily understood. The fumigating material is supplied to any one of the hoppers, as may be desired, and if fumigating is the object, the material is placed in the hopper D from which it passes through a properly regulated exit to the conveyer by which it is fed to the pan, or receptacle, through the outlet P. As soon as the material strikes the hot surface of the pan it becomes vaporized, or consumed, according to the nature of the material used, and the products are forced by means of the air currents from the fan blower. These currents reach the chamber containing the vapors, through the duct *p*, and from this chamber it is forced out through the pipe K, and diffused upon any desired object.

Having thus described our invention, what we desire to secure by Letters Patent is—

A fumigator comprising a hopper provided with an agitator a spiral conveyer geared to the agitator and beneath said hopper, and with which it communicates, a vaporizing
5 chamber at one extremity of said conveyer, an eduction tube for conveying the fumes from said chamber, a fan blower communicating with the latter, and suitable mech-

anism for simultaneously driving both the fan blower, and the feed mechanism.

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