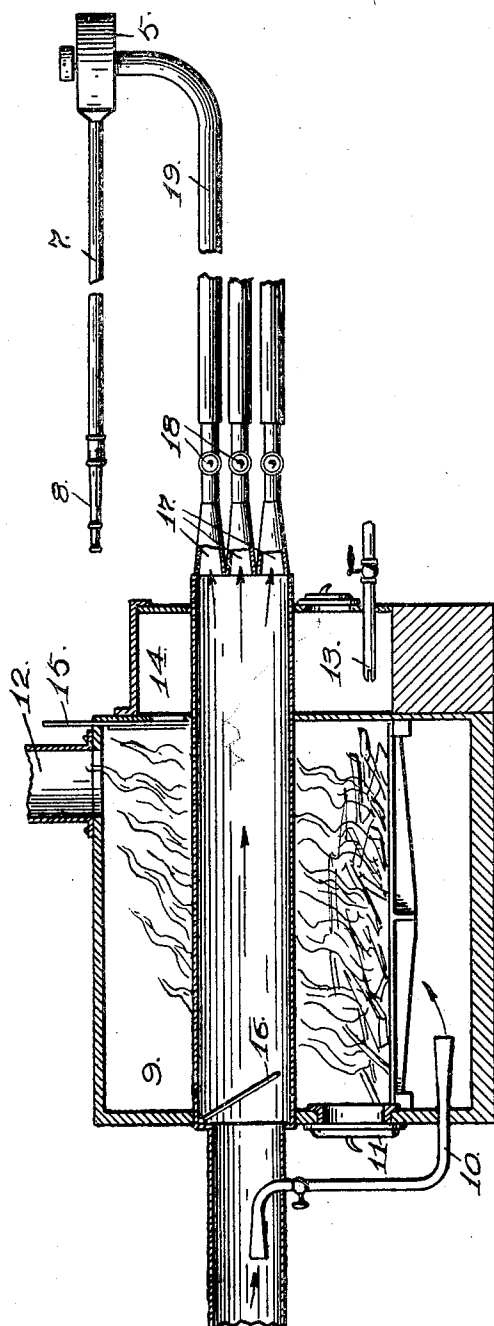


937,952.

Patented Oct. 26, 1909.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HARLEY A. HARDINGE, OF LOS GATOS, AND EDWARD A. PAGEL, OF CAMPBELL,
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MEANS FOR OVERCOMING FROST.

937,952.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed August 10, 1908. Serial No. 447,918.

To all whom it may concern:

Be it known that we, HARLEY A. HARDINGE and EDWARD A. PAGEL, citizens of the United States, residing, respectively, at Los Gatos and Campbell, both in the county of Santa Clara, State of California, have invented new and useful Means for Overcoming Frost, of which the following is a specification.

10 The object of the invention is to provide apparatus which may be used to preserve vegetation of all kinds from the injurious effects of frost; and which may furthermore be used to distribute insect powder over
15 plants and trees.

In the accompanying drawing, the figure is a broken side view, partly in vertical section, of our improved apparatus.

Referring to the drawing, 1 indicates an
20 air inlet tube, which passes through a furnace 9 provided with an air inlet tube 10 and having a charging door 11 and the stack 12. The air inlet tube leads from the entrance of the heating tube 1, thus producing an automatic blower for the furnace. 16
25 indicates a valve for controlling the passage of the air through said heating tube.

14 indicates an auxiliary heating furnace in which an oil burner 13 may be used, the

outlet from said furnace 14 to the stack 12 30 being controlled by a shutter 15, which may be raised or lowered as desired.

17 indicates connections from the tube 1 to smaller tubes 19, (one only being shown), which lead to different parts of an orchard, 35 and which are controlled by valves 18. Each of the tubes 19 is connected with a blower 5, and from said blowers 5 lead hose pipes 7 terminating in nozzles 8.

20 is a door through which fuel may be 40 supplied when the furnace is otherwise heated.

We claim:—

The combination of a stationary furnace, an air tube leading therethrough, a plural- 45 ity of nozzles, a blower for each nozzle, a connection from said air tube to each blower, independent valves for said connections, and an air supply tube for the furnace, the inlet end of said air supply tube being located 50 within the inlet end of the air tube and pointing in the same direction, substantially as described.

HARLEY A. HARDINGE.
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Witnesses:

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