May 5, 1925. 1,536,792

A. C. HOWARD ET AL.

BURNER FOR ORCHARD HEATERS OR THE LIKE

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Fig. 1.

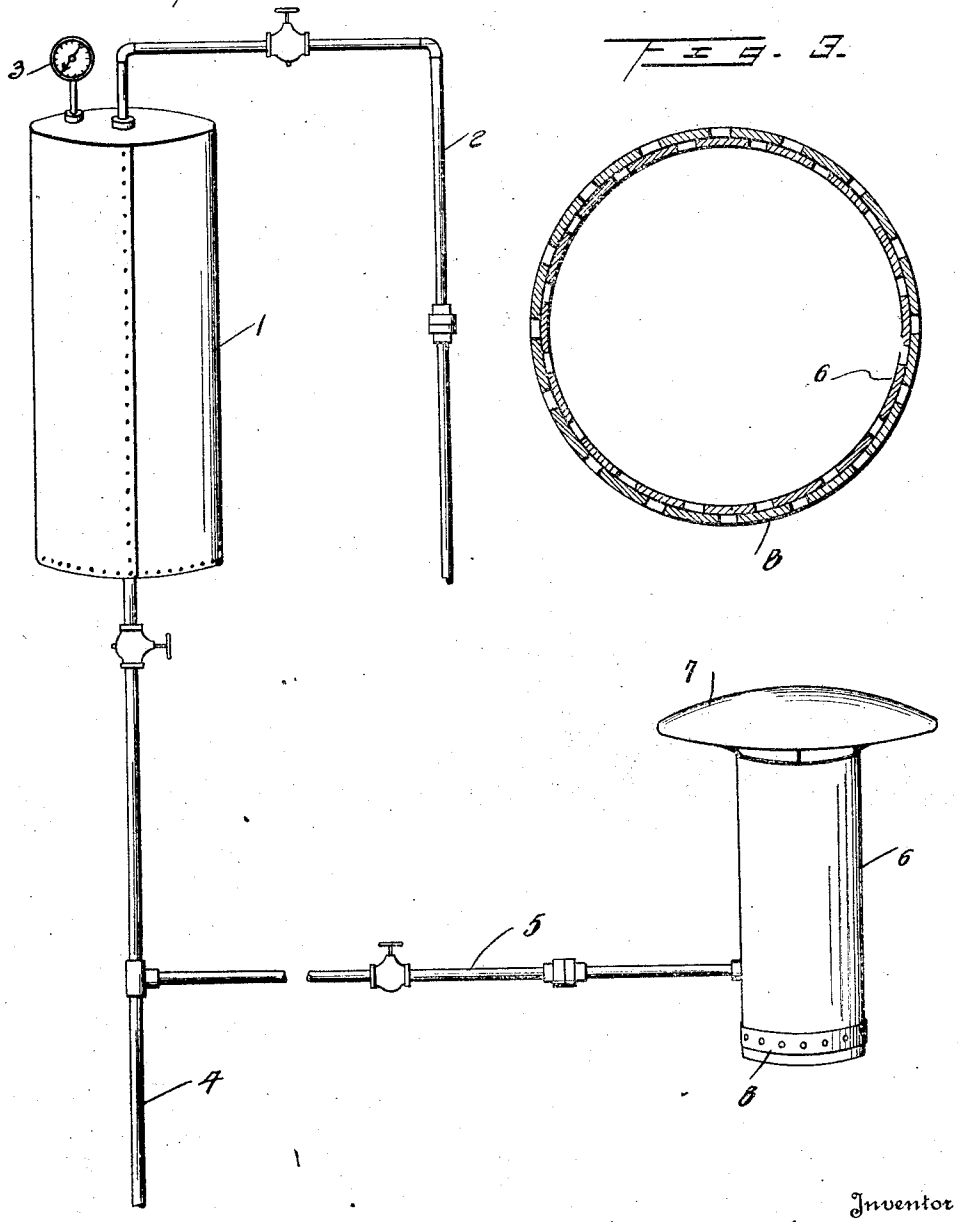


Fig. 3.

Inventor

A. C. Howard, G. E. Brittan & J. A. Cook.

By A. Randolph Jr. Attorney

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Fig. 2.

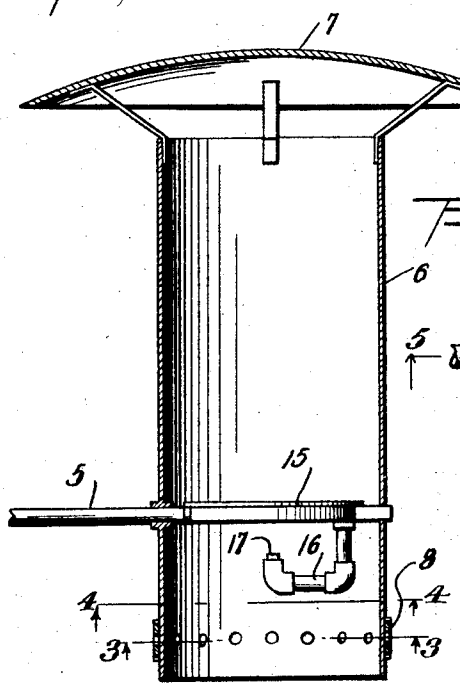


Fig. 5.

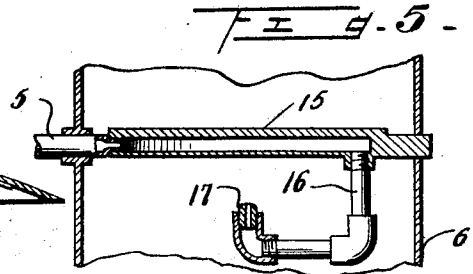
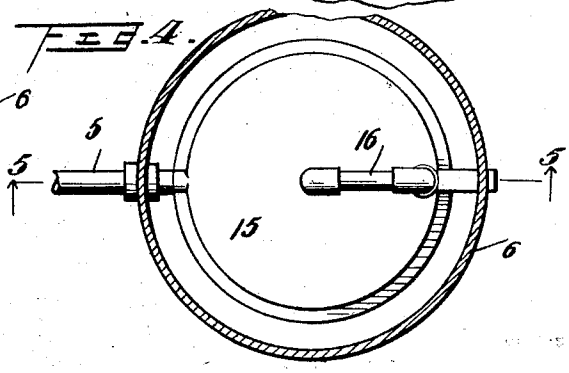


Fig. 4.



Inventor

A. C. Howard, G. E. Brittain
J. A. Cook.

By A. Randolph Jr. Attorney

Patented May 5, 1925. 1,536,792

UNITED STATES PATENT OFFICE.

ARTHUR C. HOWARD, GLENN E. BRITTAN, AND JOHN A. COOK, OF PHARR, TEXAS.

BURNER FOR ORCHARD HEATERS OR THE LIKE.

Application filed June 4, 1923. Serial No. 643,298.

To all whom it may concern:

Be it known that we, ARTHUR C. HOWARD, GLENN E. BRITTAN, and JOHN A. COOK, citizens of the United States, residing at Pharr, in the county of Hidalgo and State of Texas, have invented certain new and useful Improvements in Burners for Orchard Heaters or the like; and we 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 appertains to make and use the same.

The object of this invention is to prevent frost from killing fruit and truck farm products and in accordance with the invention oil burners are distributed throughout the orchard or truck farm and are supplied with fuel from a conveniently disposed storage tank, the feeding of the fuel being effected either by gravity or air pressure.

Other objects and advantages will be apparent and suggest themselves as the nature of the invention is understood.

While the drawings illustrate an embodiment of the invention it is to be understood that in adapting the same to meet different conditions and requirements, various changes in the form, proportion and minor details of construction may be resorted to without departing from the nature of the invention.

Referring to the accompanying drawings forming a part of the application:

Figure 1 is a diagrammatic view in perspective of a heating apparatus for orchards and truck farms embodying the invention,

Figure 2 is an enlarged sectional view of one form of heater,

Figure 3 is a horizontal section on the line 3—3 of Figure 2 showing the parts on a larger scale,

Figure 4 is a horizontal section on the line 4—4 of Figure 2,

Figure 5 is a sectional detail on the line 5—5 of Figure 4.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawing by like reference characters.

The numeral 1 designates a tank which may be of any capacity and conveniently disposed for effective distribution of the oil to the various heaters. When the tank 1 is elevated to a proper height, the fuel may be fed therefrom by gravity, but when located close to the ground, the fuel may be fed therefrom by compressed air which may be supplied thereto from a suitable source, or air compressor by means of a pipe 2. A gage 3 applied to the tank 1 indicates the pressure therein. A distributing pipe 4 extends from the bottom of the tank 1 and a suitable number of branch pipes 5 extend therefrom. These pipes connect with suitably disposed heaters (but one of which is shown) which may be located as may be deemed most advantageous. Each heater comprises a drum or casing 6 which may be formed of any preferred material. A deflector 7 is applied to the upper portion of the drum or casing 6 and serves to distribute the heat laterally to warm the air to a degree to prevent injury to the budding or blossoming fruit trees, or to the truck when the frost would otherwise blight the same. A damper 8 applied to the lower portion of the drum or casing 6 regulates the supply of air to the burner. This damper consists of a band provided with openings adapted to register with corresponding openings in the drum or casing and by turning the band, the effective size of the openings may be regulated.

As shown in Figure 2 and the detail views thereof a flame spreader and generator are combined in a flat hollow member 15 of circular outline. The fuel pipe 5 connects with the member 15 and a burner pipe 16 also connects with the member 15 at a point remote from the pipe 5. A tip 17 is detachably fitted to the burner tip 16 to be replaced by a tip having a different sized outlet according to the required flame.

What is claimed is:

A device of the class described having a drum, a one-piece hollow member affording a flat cylindrical chamber located in the drum and operating as a spreader and as a

generator, a portion integral with and extending from said member and connecting said member to the drum, a fuel supply pipe in communication with the hollow of said member and connected to said member and also connecting said member to said drum, and a burner pipe depending from the bottom of the cylindrical chamber said member having its outlet below the member.

In testimony whereof we affix our signatures in presence of two witnesses.

ARTHUR C. HOWARD.
GLENN E. BRITTAN.
JOHN A. COOK.

Witnesses:
T. E. JASPERSON,
B. N. JOHNSON.