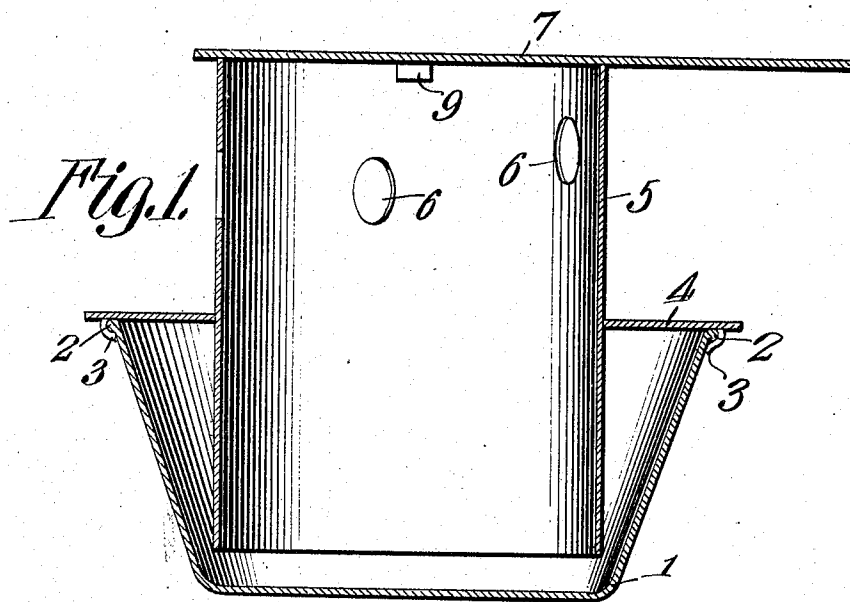
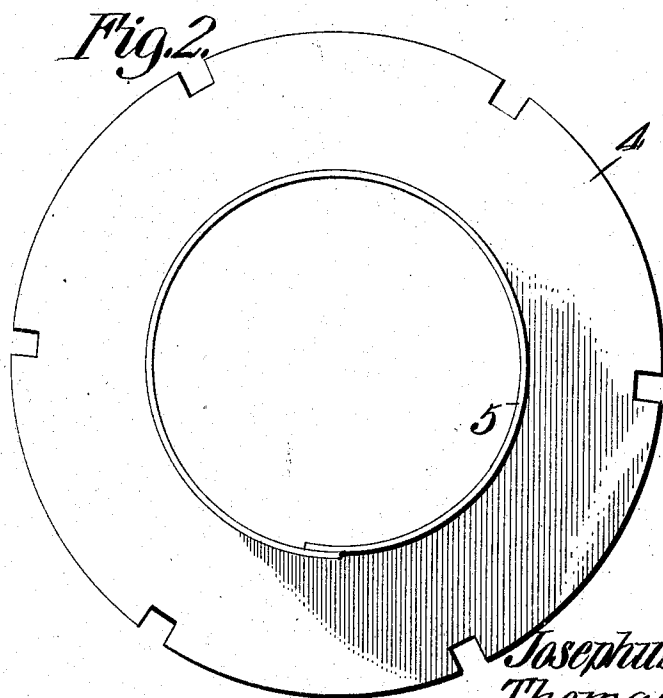
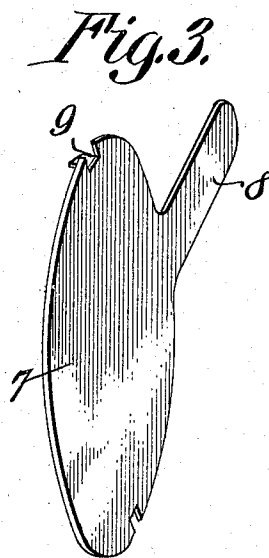


J. C. PLANK & T. E. FULGHUM.
HEATER.

APPLICATION FILED JUNE 18, 1908.

911,328.

Patented Feb. 2, 1909.



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UNITED STATES PATENT OFFICE.

JOSEPHUS C. PLANK AND THOMAS E. FULGHUM, OF GRAND JUNCTION, COLORADO.

HEATER.

No. 911,328.

Specification of Letters Patent.

Patented Feb. 2, 1909.

Application filed June 18, 1908. Serial No. 439,215.

To all whom it may concern:

Be it known that we, JOSEPHUS C. PLANK and THOMAS E. FULGHUM, citizens of the United States, residing at Grand Junction, in the county of Mesa and State of Colorado, have invented a new and useful Heater, of which the following is a specification.

This invention relates to heaters for use in orchards for the purpose of preventing injury such as often results from the early frosts.

The object of the invention is to provide a heater designed to use crude oil, pitch, and similar combustible materials as a fuel, the parts of the heater being so assembled as to reduce to the minimum the amount of smoke produced as a result of the combustion.

Another object is to provide a heater of this character the parts of which can be readily disconnected and compactly stored so as to be transported at comparatively slight cost.

Another object is to provide a heater which is cheap to manufacture and which can be quickly set up or taken apart.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a central vertical section through the device. Fig. 2 is a plan view thereof with the cover removed. Fig. 3 is a perspective view of the cover.

Referring to the figures by characters of reference, 1 designates a receptacle preferably tapered toward the bottom thereof and formed of any suitable sheet metal. Said receptacle may be provided with an annular bead 2 at its upper edge, said bead being designed to be engaged by a series of bendable ears 3 formed in the peripheral portion of a top ring 4 also preferably formed of sheet metal. This ring is designed to fit snugly upon the top of the receptacle 1 and the opening therein is disposed to receive a tube 5 formed of a sheet of metal rolled into cylindrical form with its end portions lapping but disconnected. This tube frictionally engages the ring 4 and is supported thereby with its lower end preferably removed a short distance from the bottom of the receptacle 1. That portion of the tube

arranged above the ring 4 is preferably provided with a series of openings 6 constituting air inlets. These openings may be arranged at any desired elevations. A cover 7 in the form of a metal disk is designed to be placed upon the top of the tube 5 and has a handle 8 projecting therefrom whereby it may be conveniently manipulated. A desired number of ears 9 are preferably bent downward from the cover and are designed to project into the tube and prevent displacement of the cover.

It is designed to use a large number of these heaters at the same time, they being positioned at desired distances apart so that when fuel is burned within them the surrounding atmosphere will be sufficiently heated to prevent the trees within the orchard from being injured by sudden early frosts. It is designed to use heavy oils as a fuel and after the receptacle 1 has been filled therewith the ring 4 is secured thereon by means of the ears 3 and the tube 5 is then inserted into the ring so as to assume the position shown in Fig. 1. The fuel is then ignited within the tube and air entering the openings 6 will commingle with the smoke passing outward through the tube so that the same will be burned. As the fuel within the tube 5 is burned additional fuel will be supplied by gravity to the bottom portion of the tube from the receptacle 1, this fuel feeding downward into the lower end of the tube. It will be apparent therefore that after the device has once been charged with oil it will be possible to maintain combustion for some time. By manipulating the cover 7 the combustion of the oil may be readily controlled.

It will be seen that the parts of the burner can be readily taken apart and large numbers of them can be stored in a small space inasmuch as the tubes 5 can be unrolled, the rings 4 detached and the receptacles 1 nested while being transported or stored.

The device is very cheap to manufacture, simple, and durable and can be readily set up or taken apart by anyone and without requiring the services of a mechanic.

What is claimed is:

1. A heater comprising a receptacle for liquid fuel, a ring detachably secured thereon and constituting a top therefor, and a burner tube extending through and frictionally engaging and supported by the ring, the lower portion of the tube being spaced from

the bottom of the receptacle and that portion of the tube above the ring having air inlets, said tube being open at its ends.

2. A heater comprising a receptacle for liquid fuel, a ring detachably secured thereon, and a rolled metal sheet insertible into and supported by the ring, said sheet constituting a tubular burner, and having air inlets.

10 3. A heater comprising a receptacle for liquid fuel, a ring mounted thereon, said ring having integral ears bendable into engagement with the receptacle, a rolled sheet within and supported by the ring, said sheet con-

stituting a burner tube and having its inner end spaced from the bottom of the receptacle, said tube having air inlets above the ring, and a closure detachably mounted upon the outer end of the tube.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

JOSEPHUS C. PLANK.
THOMAS E. FULGHUM.

Witnesses:

J. ERNEST LEAVERTON,
CHARLES B. RICH.