T. SILK.

PRIMING APPLIANCE FOR ORCHARD HEATERS.

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1,153,178.

Fig. 1

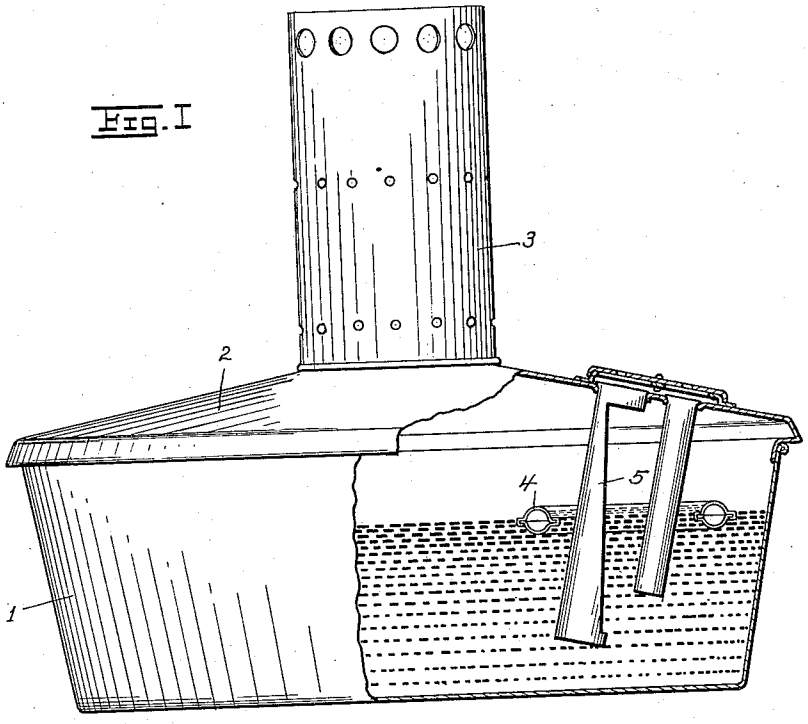



Fig. 2

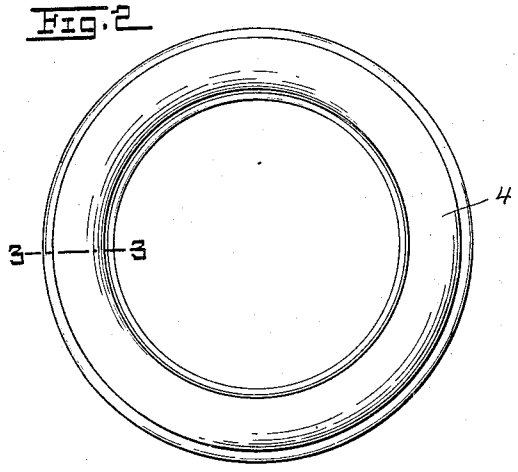



Fig. 4

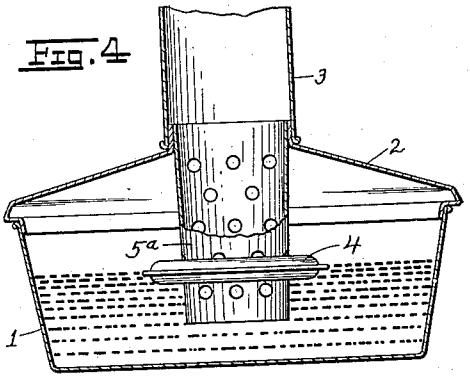
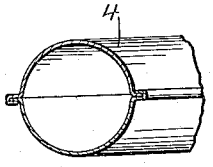



Fig. 3




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# UNITED STATES PATENT OFFICE.

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## PRIMING APPLIANCE FOR ORCHARD-HEATERS.

1,153,178. Specification of Letters Patent. Patented Sept. 7, 1915.

Application filed January 19, 1915. Serial No. 3,045.

*To all whom it may concern:*

Be it known that I, THOMAS SILK, a citizen of the United States of America, and resident of Martins Ferry, county of Belmont, and State of Ohio, have invented certain new and useful Improvements in Priming Appliances for Orchard-Heaters, of which the following is a specification.

This invention relates broadly to orchard heaters, and more particularly to a priming appliance for such heaters.

The primary object of the invention is to provide a device whereby economy in the use of the usual priming fluids employed in orchard heaters may be effected.

Ordinarily, cheap low-grade oils, as heavy crude or asphaltum oils, are used as fuel in orchard heaters. In practice, upon being placed in the container, the lighter, more volatile portion of the oil lies at and near the surface, while the heavier, or less volatile, portion remains at and near the bottom of the container. The surface oil ignites and burns more or less readily, and, if permitted to burn continuously, the heat will act to vaporize the heavier, or bottom, oil, resulting in the entire contents of the container being consumed. If, however, the flame be extinguished before the entire contents have been consumed, and the heater be permitted to cool off, much trouble is experienced in re-igniting the heavy residue of the fuel. A quantity of gasolene or other like volatile and readily inflammable liquid deposited in the container on top of said residue, or heavier oil, and then ignited, affords a method much resorted to for preliminarily heating the fuel to induce vaporization of the latter. However, this method of priming has hitherto been expensive, due to the fact that a considerable quantity of gasolene, or other relatively high-priced fluid, is required to cover the entire surface of the fuel to such a depth as will produce vigorous combustion until vaporization of the fuel has been induced to such an extent that the latter is rendered combustible without assistance.

The present invention has for its object the provision of means whereby the volatile priming fluid introduced may be confined to a relatively small portion of the surface area of the fuel, and whereby combustion of the priming fluid is limited in such a way that a relatively small quantity thereof is required to prime the fuel.

In describing the invention in detail, reference is herein had to the accompanying drawings, forming a part of the specification, in which—

Figure 1 is a view of an orchard heater of a much-used type, partly in section, showing my invention applied thereto; Fig. 2 is a top plan view of the invention, enlarged; Fig. 3 is a section of the same on line 3—3, Fig. 2; and Fig. 4 is a sectional view of another type of heater, showing my invention applied thereto.

Referring to said drawings, in which like designating characters distinguish like parts throughout the several views—1 indicates the oil receptacle or container, 2 the cover, and 3 the stack of an orchard heater. Resting as a float on the surface of the liquid fuel in the container is an endless hollow sheet-metal tube or shell 4, preferably of circular or ring form. In its floating position said tube or ring serves to confine a quantity of gasolene or like volatile fluid poured within its embrace, preventing said fluid from passing thereby and spreading over the surface of the fuel in the container. While said ring may occupy any position within the container, that is to say, may be permitted to float unobstructedly to any part of the container, it is preferred that it be disposed in encircling relation to side-apertured tubes, as the depending draft tubes 5 shown in Fig. 1 or the depending center-draft tube $5^a$ shown in Fig. 4, by which said ring is maintained practically stationary in a position wherein it is adapted to receive within its confines the priming fluid usually introduced through the depending tubes carried by the cover 2. As will be understood, owing to the higher specific gravity of the fuel, the priming fluid will be effectually retained against spreading outside the limits fixed by the ring. The ring is preferably composed of two like or interchangeable sections, semicircular in cross section, which are united or seamed together in any suitable manner, preferably by the pressed clencher-like seams illustrated in the drawings.

In practice, when my device is employed, a gill of gasolene is as efficient for starting vaporization of the fuel in a heater of

medium size as is a quart of gasolene introduced over the entire surface of the fuel of such heater.

What is claimed is—

1. In an orchard heater having a container for liquid fuel, a device for confining a priming fluid to a limited surface area of such fuel, said device comprising a permanently detached tubular sheet-metal float of circular form.

2. In an orchard heater having a container for liquid fuel, a device for confining the priming fluid to a limited surface area of such fuel, said device comprising a permanently detached hollow sheet-metal ring designed to float on said fuel.

3. In an orchard heater having a container for liquid fuel, a circular float disposed within and detached from said container for confining a priming fluid to a limited surface area of such fuel.

4. In an orchard heater, the combination with a fuel container and a cover therefor, said cover having a tube depending therefrom into said container, of a sheet metal float of endless form disposed in encircling relation to said tube.

In testimony whereof, I affix my signature in presence of two subscribing witnesses.

THOMAS SILK.

Witnesses:
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WM. GREEN.

**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."**