E. E. CHINN.

ORCHARD HEATER.

APPLICATION FILED JULY 7, 1913.

1,086,275. Patented Feb. 3, 1914.

Fig. 1.

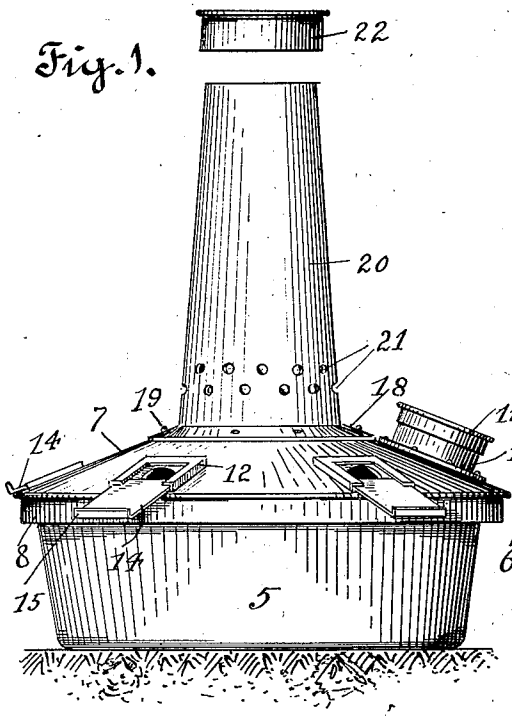


Fig. 2.

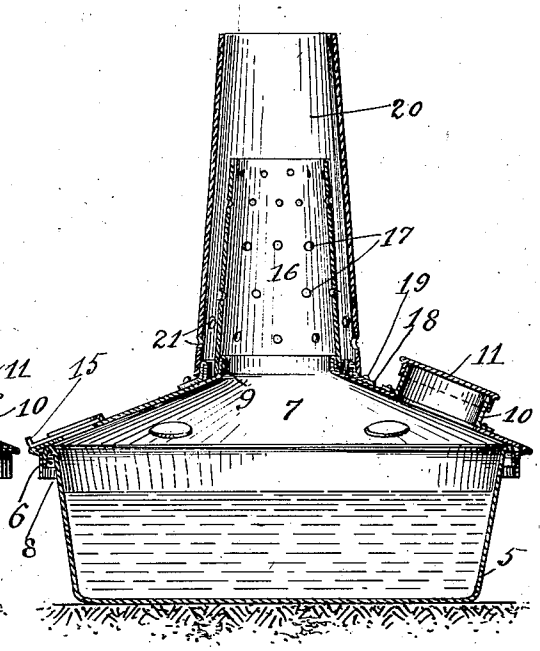
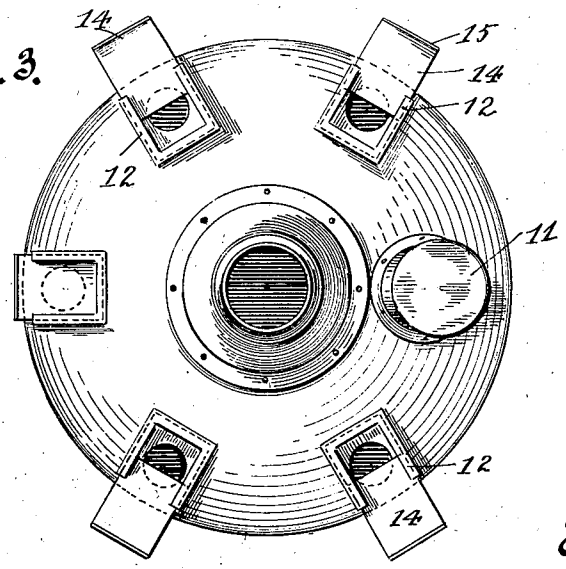


Fig. 3.



Witnesses,

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UNITED STATES PATENT OFFICE.

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ORCHARD-HEATER.

1,086,275. Specification of Letters Patent. Patented Feb. 3, 1914.

Application filed July 7, 1913. Serial No 777,774.

To all whom it may concern:

Be it known that I, ELMER E. CHINN, a citizen of the United States, residing at Pomona, in the county of Los Angeles and State of California, have invented new and useful Improvements in Orchard-Heaters, of which the following is a specification.

This invention relates to orchard heaters, and the principal object thereof is to provide an orchard heater in which a more equable distribution of the air required for combustion is obtained.

It is also an object to provide a dish formed container, together with a conical top having a plurality of burner flues secured thereon.

It is a further object to provide an orchard burner adapted to burn liquid fuel, with the component elements readily demountable so that they can be easily packed for shipping.

In the drawings accompanying this specification and forming therewith the application for Letters Patent: Figure 1 is an elevation showing the assembled device and its cap. Fig. 2 is a longitudinal central vertical section through the heater. Fig. 3 is a plan view showing the draft slides open.

More specifically in the drawings, 5 designates a substantially cylindrical container of metal of the ordinary dish form adapted to contain liquid fuel, this container preferably having a rolled rim 6. Resting upon this rim is a truncated conically formed cover 7 having a depending flange 8 which closely embraces the rim 6, the truncated portion of the cover being provided with a flange 9 around the centrally disposed opening therein. A plurality of other openings are disposed in a concentric series in relation to the central opening, one of which is larger and has a flange 10 which is adapted to engage a cap 11, through which opening fuel is preferably introduced. The other openings are provided with rectangularly formed slide-guides 12, which are secured around three sides of the circular opening, the outwardly disposed portion being open to provide for the admission of the slide 14 which is preferably formed of sheet metal and has the upturned outer lip 15.

The flange 9 of the cover 7 is adapted to receive and support the tapering tubular burner 16 which is provided with a plurality of small circular apertures 17 preferably disposed in parallel rows through the metallic material forming the tubular flue and at regular intervals, both ends of the burner being open, the lower end engaging and encircling the flange 9.

Concentrically disposed in relation to the flange 9 is a second annular flange 18, having a substantially vertically disposed portion and secured to the cover 7 by means of the rivets 19 or other suitable fastening means. This second flanged ring is adapted to be engaged by the chimney 20, which is practically of parallel configuration with the tube 16, but of larger size and greater in length so that its upper open end extends some distance above the top of the tube 16, and when assembled an annular passage is formed around the tube 16, access to which is obtained from without through a plurality of openings 21, which are preferably disposed in two rows and in staggered relation to each other close to the lower portion and preferably below the second row of openings in the tube 16.

To provide means for quenching the flame when desired, a cap 22 is provided which closely fits the upper portion and closes over the upper end opening of the chimney 20.

The operation of the heater will be readily understood, fuel being admitted through the opening closed by the cap 11. The fuel container is heated by any suitable means until gas is evolved, and owing to its heated condition rises and escapes through the opening in the tube 16 where it meets with the oxygen from the air entering the annular chamber through openings 21, the amount of air entering through the central opening being controlled by the slides 14 forming a burning mixture which can be equably regulated by the said slides so that a complete blue to clear flame is produced and is formed by the combustion of the volatile elements in the tube 16, and escapes through the upper end of the chimney 20.

What I claim is:

1. An orchard heater, comprising a fuel containing receptacle, a truncated and centrally apertured cover therefor having a concentric series of apertures, a tubular burner member attached to the centrally disposed of said openings, and a plurality of slides adapted to regulate the admission of air through the series of said concentric openings in said cover.

2. An orchard heater, comprising a fuel receptacle, a conical truncated cover having a centrally disposed opening provided with

a flange, a plurality of radially disposed openings adjacent its rim, a perforated tubular burner adapted to engage the flange of said centrally disposed opening and be supported thereon, a second concentric flange adjacent said first mentioned flange, a perforated chimney adapted to be supported on said second flange, and extend above the open top of said burner having its apertures located adjacent the supporting flange, means to control the radially disposed openings in said cover, and a cap adapted to close said chimney.

In witness that I claim the foregoing I have hereunto subscribed my name this 30th day of June, 1913.

ELMER E. CHINN.

Witnesses:
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