C. F. SWELEY.

ORCHARD HEATER.

APPLICATION FILED MAY 3, 1909.

950,414. Patented Feb. 22, 1910.

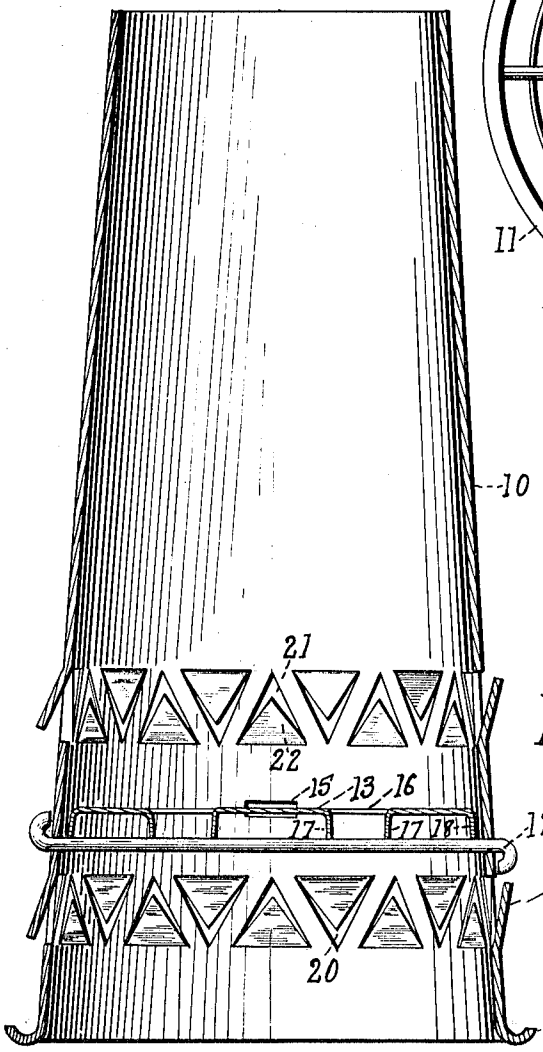

Fig. 1.

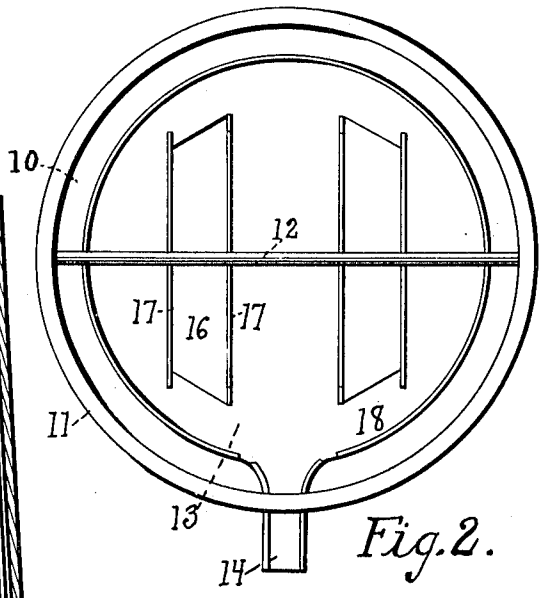

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

CHARLES F. SWELEY, OF FRUITA, COLORADO.

ORCHARD-HEATER.

950,414. Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed May 3, 1909. Serial No. 493,477.

To all whom it may concern:

Be it known that I, CHARLES F. SWELEY, a citizen of the United States, residing at Fruita, in the county of Mesa and State of Colorado, have invented a certain new and useful Orchard-Heater, of which the following is a specification.

The object of my invention is to provide a heater of simple and inexpensive construction, especially designed for use in creating large volumes of smoke for the purpose of protecting an orchard from frost, and further, to provide a device of this kind that may be readily and easily moved from place to place and that is light in weight.

My invention consists in the construction of the heater whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 shows a vertical, central sectional view of a heater embodying my invention, and Fig. 2 shows an inverted plan view of same.

Referring to the accompanying drawings, the body of the heater is formed complete of a single piece of sheet metal 10, tubular in form, open at both ends, and tapered slightly toward its lower end. The lower end is preferably provided with an outwardly and upwardly inclined rim 11 to form a base. For supporting the fuel within the body, I extend a wire or rod 12 through the sides of the body and bend the ends of the rod to positions overlapping the sides to prevent longitudinal movement of the rod. Resting on the said rod 12 is a fuel supporting member comprising a disk-shaped sheet metal plate 13 having a lateral extension 14 thereon projected through a slot 15 in the side of the body. The disk 13 is formed with two openings 16 therein and the metal adjacent to said openings is inclined downwardly at 17 to rest upon the rod 12. The periphery of the disk is also inclined downwardly forming a flange 18 to rest upon the rod 12.

For providing draft openings above and below the fuel support, I form a series of V-shaped cuts in the body portion 10 arranged in a circle around the body portion below the fuel support, the alternate cuts being arranged with their pointed ends extended in opposite directions. Then the material between the sides of each of the V-shaped cuts is bent or inclined outwardly at 19 thus forming the draft openings 20. Above the fuel support is a similar set of openings 21 and V-shaped pieces 22. It is obvious that the size of the draft openings may be adjusted when necessary by bending the parts 19 and 22 either inwardly or outwardly, although ordinarily they may be left in the position in which they are shown in the drawings.

In practical use, the operator places the fuel upon the fuel support and the fuel may be piled on the support to extend above the openings 21 as the parts 22 cover the openings 21 sufficiently to prevent the fuel from falling out. By having the draft openings above and below the fuel support substantially the same in area, it is obvious that the draft will be comparatively slight and that if large quantities of fuel are placed in the heater, the fire will give off large quantities of smoke which, as is well known, will materially assist in preventing frost from injuring trees.

Obviously the complete heater is of very simple and inexpensive construction and yet a durable and efficient heater for the purposes intended is provided.

I claim as my invention.

1. A heater of the class described, comprising a body portion formed of a single piece of sheet metal tapered slightly toward its upper end and open at both ends and having a flange formed at its lower end, said body portion being provided with two series of V-shaped cuts extending around the body portion, the material between the cuts being bent outwardly to form draft openings, and a fuel supporting device within the body portion arranged between the said series of draft openings.

2. A heater of the class described, comprising a body portion formed of a single piece of sheet metal open at both ends, tapered toward its upper end and having a flange at its lower end, said body portion being provided with two series of V-shaped cuts, the alternate ones of each series being extended in opposite directions, and the metal between the cuts being bent outwardly to form draft openings, said body portion also being provided with a slot between the rows of draft openings, a rod extended across the body portion between the rows of

draft openings, a disk-shaped plate having an extension at one side passed through said slot and also having a downwardly projecting flange around its periphery, said disk being provided with a number of longitudinal openings, the material adjacent to the openings being bent downwardly to rest upon said rod, arranged and combined substantially in the manner set forth and for the purposes stated.

Des Moines, Iowa, April 12, 1909.

CHARLES F. SWELEY.

Witnesses:
WILLIAM SNOOK,
SMITH KILBY.