Nov. 11, 1958 A. HALLUM 2,859,604

HEATING DEVICE

Filed June 19, 1957

Fig. 1.

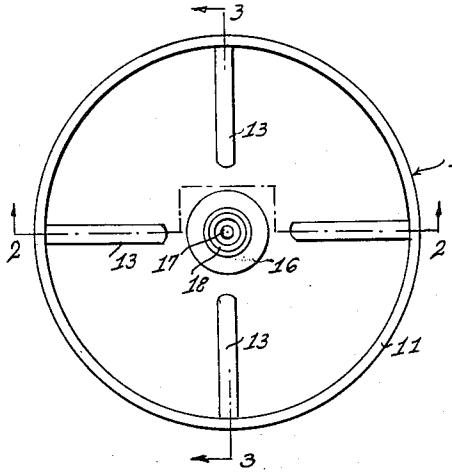


Fig. 1.

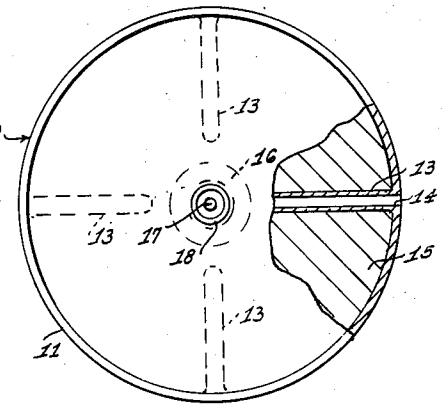


Fig. 3.

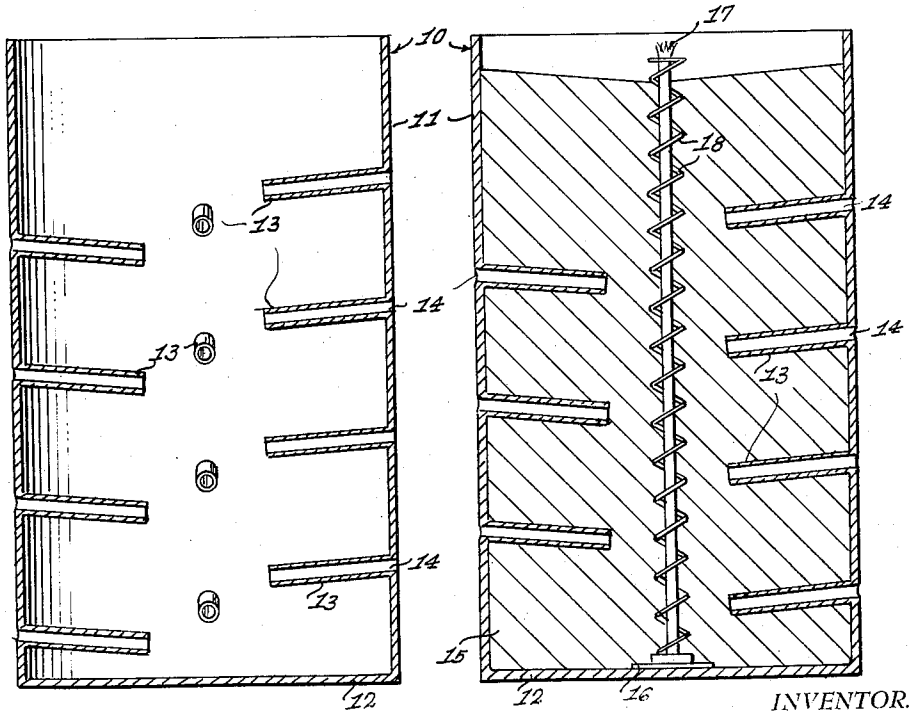


Fig. 2.

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HEATING DEVICE

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3 Claims. (Cl. 67—21)

This invention relates to a heating device, and more particularly to a heater for use with plants, seedlings or the like.

The object of the invention is to provide a heater which is adapted to be used for raising the temperature in the vicinity of plants, seedlings or the like, whereby the growth of the plants will be aided or stimulated.

Another object of the invention is to provide a heating device for use in protecting small plants, seeds and the like from adverse weather conditions such as cold weather, and wherein the heater of the present invention includes a container that is adapted to hold a suitable quantity of fuel such as wax, the container including a plurality of tubes which extend inwardly into the mass or body of fuel in the container.

A further object of the invention is to provide a heater which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same.

Figure 1 is a top plan view of the heater of the present invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1, the views in Figures 1 and 2 showing the container without the fuel therein.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1 and showing the fuel such as the wax in the container.

Figure 4 is a top plan view of the heater, with parts broken away and in section.

Referring in detail to the drawings, the numeral **10** indicates a container which includes a cylindrical side wall **11** that is vertically disposed, and the container **10** further includes a horizontally disposed bottom wall **12** of circular formation. The upper end of the container **10** is open, as for example as shown in Figures 2 and 3.

There is further provided a plurality of spaced apart tubes **13**, and the ends of the tubes **13** are open. The tubes **13** are arranged in slanting fashion so that the inner ends of the tubes **13** are lower than the outer ends thereof. The outer ends of the tubes **13** register with openings or apertures **14** which are arranged in the wall **11** of the container **10**.

Arranged in the container **10** is a mass or body of fuel **15** which may be wax, and mounted on the bottom wall **12** is a support member **16**. A wick **17** extends upwardly from the support member **16**, and the wick **17** extends through the fuel or wax **15**. A coil spring **18** is circumposed on the wick **17**, and the coil spring **18** extends longitudinally through the container **10** as shown in Fig. 3 for example.

From the foregoing, it is apparent that there has been provided a heating device which is especially suitable for use in aiding or promoting the growth of small plants, seedlings, or the like. The parts can be made of any suitable material and in different shapes or sizes. The heater of the present invention includes the container **10** which has the cylindrical outer wall **11** and the circular bottom wall **12**, and extending inwardly from the wall **11** are a plurality of tubes **13**. The tubes **13** are arranged so that the inner ends thereof are lower than the outer ends thereof, and the tubes **13** serve to supply air to the wax **15** whereby air for supporting combustion is uniformly distributed through the fuel **15**. The wick **17** has its lower end arranged in engagement with the support member **16**, and the coil spring **18** surrounds the wick **17**, as for example as shown in Fig. 3. Thus, by igniting the wick **17**, heat can be provided whereby such heat can be used for any desired purpose such as for protecting small plants, or the like during frost, cold weather or the like, whereby damage to the plants will be prevented.

As previously stated, the heating candle or heating device of the present invention is closed at the bottom and open at the top. The fuel **15** may consist of wax, and the tubes **13** are used for supplying air for supporting combustion after the fuel **15** has burned down below the top of the container. The tubes **13** are slanted downwardly towards the center of the container in order to prevent the melted wax or fuel from running out of the tubes and these tubes will also help to melt the wax and cause it to run to the center since the tubes **13** can be made of a material which is a good conductor of heat. The number of tubes **13** can be varied as desired, and these tubes may be arranged in staggered formation so that there will be a continuous melting of wax and a supply of air from all sides. The heating device is cheap to make and the fire will burn for a long period of time without requiring any attention, so that the device is cheap to operate. It can be used in different localities for different purposes, as for example, it can be used under melon hills to give the seeds or plants an early start, and it can also be used under hot beds and as foot warmers. The coil spring **18** serves to hold the wick **17** on the inside in order to prevent the upper end of the wick from tilting over and causing the fire to become extinguished or else causing too big a fire. The spring **18** is held in upright position by means of the metal support member **16** and the support member **16** also serves to hold down the lower end of the wick **17** as for example while the heating material such as paraffin, tallow or the like are poured into the container.

The heater can be made in small or large sizes so that it can be used for many different purposes such as heating a melon hill, or for preventing frost in an orchard and wherein a clean heat or a heat mixed with smoke and vapor can be produced in order to prevent damage by frost.

While I have shown a preferred form of my invention, I reserve all rights to such modifications as properly fall within the scope of the invention as claimed.

I claim:

1. In a heating device, a hollow container including a vertically disposed cylindrical side wall, and a horizontally disposed circular bottom wall, the upper end of said container being open, a quantity of fuel positioned in said container, and a plurality of spaced apart open ended tubes extending inwardly from said side wall, said fuel being wax, there being openings in said side wall registering with the outer ends of said tubes, said tubes being arranged in slanting fashion so that the inner ends of the tubes are lower than the outer ends thereof.

2. In a heating device, a hollow container including a vertically disposed cylindrical side wall, and a horizontally disposed circular bottom wall, the upper end of said container being open, a quantity of fuel positioned in said container, and a plurality of spaced apart open ended tubes extending inwardly from said side wall, said fuel being wax, there being openings in said side wall register-

ing with the outer ends of said tubes, said tubes being arranged in slanting fashion so that the inner ends of the tubes are lower than the outer ends thereof, a support member mounted on said bottom wall, a wick extending upwardly from said support member, and a vertically disposed coil spring surrounding said wick.

3. A heating device for use with plants, seedlings or the like, comprising a hollow container including a vertically disposed cylindrical side wall, and a horizontally disposed circular bottom wall, the upper end of said container being open, a quantity of fuel positioned in said container, a plurality of spaced apart open ended tubes extending inwardly from said side wall, the tubes being used for supplying air for supporting combustion after the fuel has burned down below the top of the container, said fuel being wax, there being openings in said side wall registering with the outer ends of said tubes, said tubes being arranged in slanting fashion so that the inner ends of the

tubes are lower than the outer ends thereof whereby the wax will be prevented from running out of the tubes and the tubes also helping to melt the wax and causing it to run to the center of the container, a support member mounted on said bottom wall, a wick extending upwardly from said support member, and a vertically disposed coil spring surrounding said wick, said coil spring serving to hold the wick in order to prevent the upper end of the wick from tilting over.

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