H. RAY.

FERTILIZER DEVICE.

APPLICATION FILED JUNE 26, 1913.

1,133,182. Patented Mar. 23, 1915.

Fig. 1.

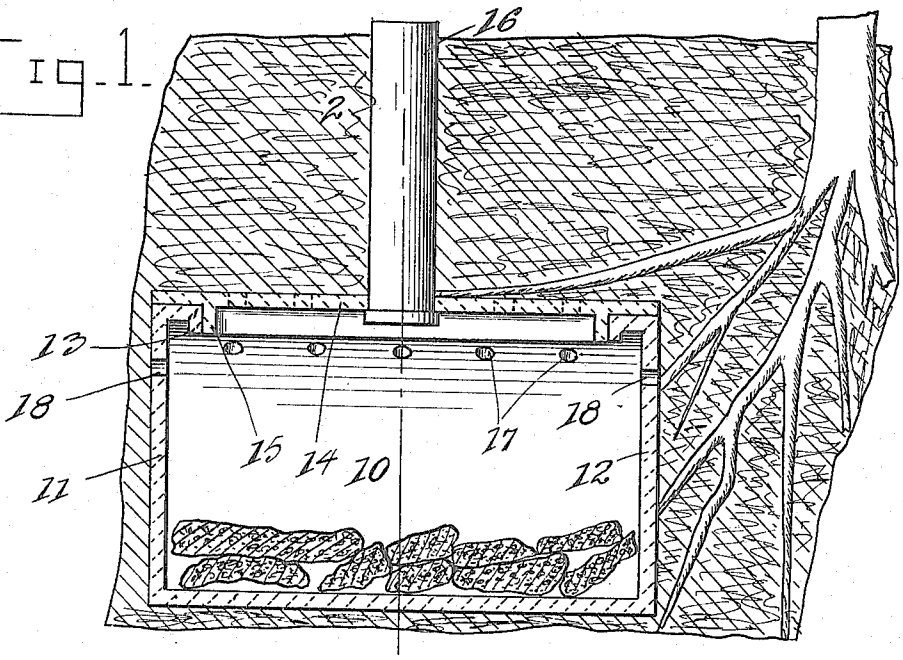


Fig. 2.

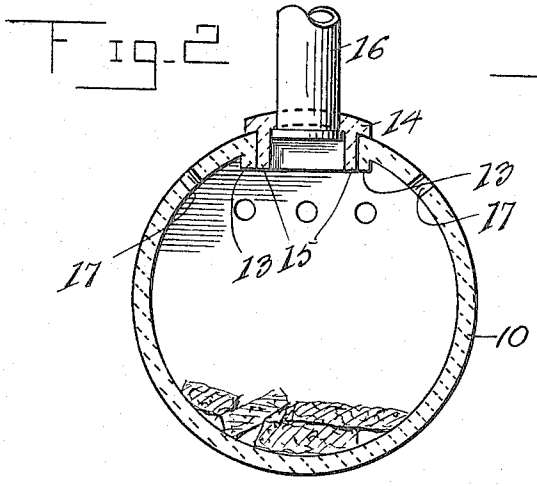
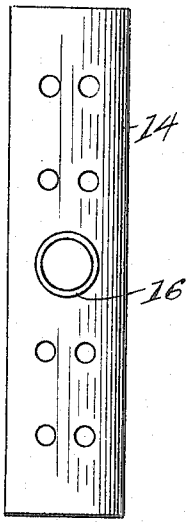


Fig. 3.



Witnesses.

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FERTILIZER DEVICE.

1,133,182. Specification of Letters Patent. Patented Mar. 23, 1915.

Application filed June 26, 1913. Serial No. 775,999.

To all whom it may concern:

Be it known that I, HEZEKIAH RAY, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented certain new and useful Improvements in Fertilizer Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in earth fertilizing and moistening devices, and its particular object contemplates the provision of a device of this character which will operate to give off a vapor saturated with fertilizing elements to moisten and fertilize the earth surrounding the tile.

The above and additional objects are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out in the claims which are appended hereto and form a part of this application.

With reference to the drawings, wherein I have illustrated the preferred embodiment of my invention as it is reduced to practice, and throughout the several views of which similar reference numerals designate corresponding parts: Figure 1 is a vertical section taken through the tile, illustrating the invention in buried position. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a detail top plan view of the cover.

Proceeding now to the description of the drawings, the numeral 10 designates as an entirety the body portion of the generator which is in the form of a cylindrical metal casing or shell equipped with circular end closure walls 11 and 12. The generator 10 is formed with a longitudinally extending opening, around the edge of which extends a downwardly projecting flange 13. This opening is normally closed by a cover 14 which is substantially the length of the member 10 and slightly greater in width than the opening. A flange 15 is carried by the under face of the member 14, and is arranged to sealingly engage the flange 13 when mounted in closed position. An inlet pipe 16 is secured to the cover 14 in any desired manner, and is designed to project above the surface of the ground to permit the pouring of water into the generator 10 in dry weather. The pipe 16 also provides means by which a fresh supply of cinders or fertilizing material, or both, may be placed in the generator 10. On each side of the opening formed in the member 10 there has been provided a row of spaced longitudinally extending orifices or apertures 17 through which the water seeps into the generator 10 in wet weather, and out of which the saturated vapor issues in dry weather. At each end of the member 10 and in the end walls 11 and 12 there has been provided a row of spaced orifices 18 which are provided for the purpose of preventing water from rising to the top of the generator 10. In this connection, it is to be noted that this invention contemplates the provision of an air chamber between the surface of the water and the cover 14, so that there may be a generating chamber for the vapor as will be hereinafter described.

In practice the shell 10 is partially filled with cinders and a fertilizing compound such as guano, so that the vapor generated by the heat of the earth will be saturated with the elements of the fertilizing material and will issue through the orifices 17 into the surrounding earth. Thus simultaneously moistening and fertilizing it.

In reduction to practice, I have found that the form of my invention, illustrated in the drawings and referred to in the above description, as the preferred embodiment, is the most efficient and practical; yet realizing that the conditions concurrent with the adoption of my device will necessarily vary, I desire to emphasize the fact that various minor changes in details of construction, proportion and arrangement of parts may be resorted to, when required, without sacrificing any of the advantages of my invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. An earth fertilizing and moistening device comprising a generator casing embedded in the ground and containing a fertilizing compound, said casing being constructed of a non-porous and impervious material and provided at a point adjacent its upper side with perforations through which water seeps into the generator from the ground in wet weather and out of which saturated vapors issue from the generator casing in dry weather.

2. An earth fertilizing and moistening

device comprising a generator casing embedded in the ground and containing a fertilizing compound, said generator being constructed of a non-porous and impervious material and provided at a point adjacent its upper side with perforations through which the water seeps into the generator casing from the ground in wet weather and out of which saturated vapors issue from the casing in dry weather, and a supply pipe communicating at its lower end with the generator casing and having its upper end disposed at a point above the ground.

3. An earth fertilizing and moistening device comprising a generator casing embedded in the ground and containing a fertilizing compound, said generator casing being constructed of non-porous and impervious material and provided at a point adjacent its upper side with perforations through which the water seeps from the ground into the generator casing during wet weather and out of which saturated vapors issue from the generator casing in dry weather, and said generator casing being provided at a point below said first named perforations with an overflow opening.

4. An earth fertilizing and moistening device comprising a generator casing embedded in the ground and containing a fertilizing compound, said generator casing being constructed of non-porous and impervious material and having perforations in its upper side through which water seeps into the generator casing from the ground in wet weather and out of which saturated vapors issue from the generator casing in dry weather and said generator casing being provided at a point below its upper side with an overflow opening.

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

HEZEKIAH RAY.

Witnesses:
LAURA M. CORBIN,
H. H. CORRY.