

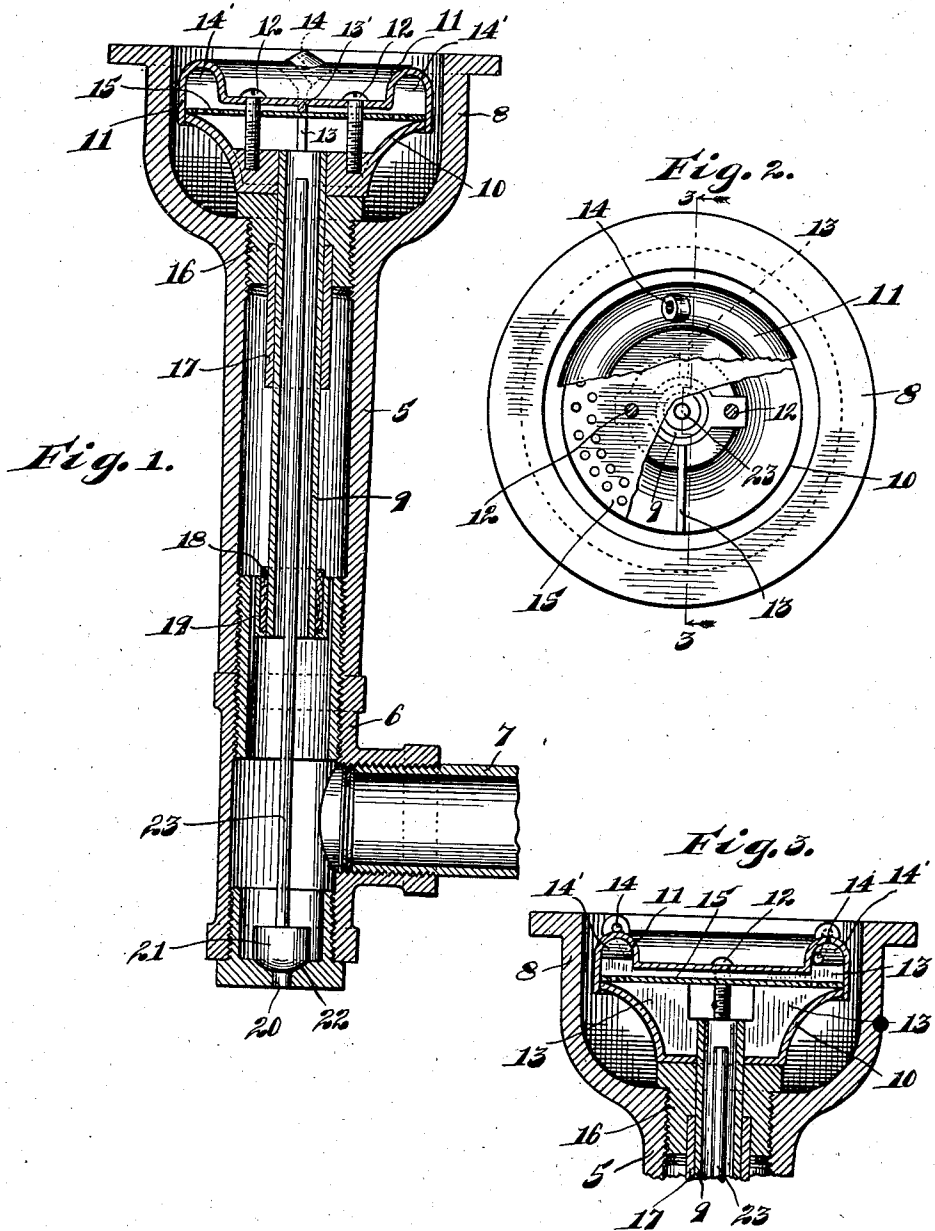
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L. D. BARNEY

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LAWN SPRINKLER

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Witnessed:
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UNITED STATES PATENT OFFICE.

LOUIS D. BARNEY, OF CHICAGO, ILLINOIS.

LAWN SPRINKLER.

Application filed May 28, 1918. Serial No. 236,983.

To all whom it may concern:

Be it known that I, LOUIS D. BARNEY, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Lawn Sprinklers, of which the following is a specification.

My invention relates to improvements in lawn sprinklers, and has for its object the production of a device of this character which will be automatic in operation and which will be highly efficient in use. A further object is the production of a sprinkler, which, during the seasons of non-use, will be adapted to drain itself to prevent corrosion such as otherwise results when water or moisture is permitted to accumulate therein.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a central vertical section of a sprinkler embodying the invention,

Fig. 2 a top plan view, partly in section, of the construction shown in Fig. 1, and

Fig. 3 a section taken on substantially line 3—3 of Fig. 2.

The preferred form of construction as illustrated in the drawings comprises a tubular housing 5 at the lower end of which is provided a T coupling 6, which affords connection with a water supply pipe 7. The upper end of housing 5 is formed into a cup 8, said housing being adapted, when the device is in use, to be buried in the ground so that the upper edge of cup 8 is substantially flush with the surface of the ground.

Arranged in the upper end of said housing for free vertical and rotary movement therein is a tubular stem 9. Fixed to the upper end of stem 9 is a nozzle or spraying device consisting of a flaring or diverging bottom plate 10 and a cap 11 which is secured to the member 10 by means of screws 12. The lower portion of the interior of the body of the nozzle or sprayer thus formed, that is that portion of the interior of the nozzle within the member 10, is di-

vided by a plurality of radial partitions 13. Correspondingly the upper portion of the interior of the body of the nozzle, or that within the cap 11, is divided by a diametrically extending partition 13', the partitions 13 and 13' affording means of spacing the cap 11 above the member 10, as will be readily understood. Within the cap 11 is formed an annular peripheral passage or groove 14' from which lead inclined outwardly opening passages 14 arranged at opposite sides of the nozzle as will be readily understood. Interposed between the partitions 13 and 13' is a perforated plate 15 which constitutes a strainer adapted to prevent the passage of sand, grit or other impurities through the nozzle where the same might clog the minute passages 14. The partitions 13 and 13' serve as backing members adapted to offer resistance for the water in discharging from the nozzle, preventing circulation of the same in the nozzle as will be readily understood.

The stem 9 is rotatably mounted in a bearing member 16, threaded into the upper end of housing 5. Vertical movement of the stem 9 is limited by means of stops 17 and 18; the former of which is carried by the member 16, the latter being mounted in a circular groove 19, provided at the lower end of the stem 9 between said stem and a band surrounding it. The stop 17 is metallic and the stop 18 is formed of wood, and when the same contact with each other, friction will be small, thus permitting the desired freedom of rotation of the stem and nozzle carried thereby.

With the construction set forth, it will be seen that when water is supplied to the device from the pipe 7, the same will rise in the housing 5 and enter stem 9 whence the same will be discharged into the interior of the nozzle carried at the upper end thereof. After passing through the strainer plate 15, the water will enter the annular groove or passage 14', whence the same will be discharged through the discharge openings 14. The force of the water passing upwardly through the stem 9 will cause the latter to be automatically elevated until the stop 18 engages with the stop 17, and the force of the water discharged from the discharge passages will cause rotation of the nozzle thereby effecting spraying of the lawn within a wide radius. When the sup-

ply of water to the sprinkler is shut off, the nozzle will return by gravity to its initial lowered position where it will be concealed and out of the way.

5 Provided in the lower end of the housing 5 is a drain opening 20 which in the summer time, or in season, will be closed by a valve 21 which is adapted to rest loosely over said opening, there being a conical seat 22 surrounding said opening to insure centering of the valve thereover. The valve 21 is provided with a stem 23 which projects upwardly into the stem 9, the stem 23 being of such length that when said stem 9 is removed the stem 23 will be accessible so as to permit of removal of the valve 21. With this arrangement it will be seen that in the winter time, or out of season, when the sprinkler is not in use, the nozzle and stem thereof may be removed through removal of the member 16, whereupon the valve 21 may be removed so as to permit of any water accumulating in the housing 5 draining therefrom. This draining will insure against corrosion, such as is otherwise the result where water is permitted to accumulate therein.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation, and modification without departing from the spirit of the invention. I therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the class described comprising a vertically disposed tubular housing having an inlet opening and a drain valve in the lower portion thereof; a spraying device in the form of a tube revolubly and slidably mounted in said housing and provided with an upwardly opening groove about its lower end portion; and a ring of wood mounted within said groove and supported thereby, adapted, by engagement with a fixed metal portion of the housing, to

limit the upward movement of the tube, substantially as described.

2. A device of the class described comprising a tubular vertically disposed housing, having an inlet opening in the lower portion thereof; a tubular stem mounted in said housing for free rotary and vertical movement; means for limiting vertical movement of said stem; a nozzle provided at the upper end of said stem; a drain opening in the bottom of said housing; and means removably arranged in said housing for closing said opening, substantially as described.

3. A device of the class described comprising a tubular vertically disposed housing, having an inlet opening in the lower portion thereof; a tubular stem mounted in said housing for free rotary and vertical movement; means for limiting vertical movement of said stem; a nozzle provided at the upper end of said stem; a drain opening in said housing; a valve adapted to rest loosely over said opening to close the same; and an upwardly projecting stem on said valve accessible at the upper end of said housing upon the removal of said tubular stem, substantially as described.

4. A device of the class described comprising a tubular vertically disposed housing, having an inlet opening in the lower portion thereof; a tubular stem mounted in said housing for free rotary and vertical movement; means for limiting vertical movement of said stem; a nozzle provided at the upper end of said stem; a drain opening in said housing; a valve adapted to rest loosely over said opening to close the same; a conical seat surrounding said opening adapted to accommodate said valve; and an upwardly projecting stem on said valve accessible at the upper end of said housing upon the removal of said tubular stem, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS D. BARNEY.

Witnesses:

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HELEN F. LILLIS.