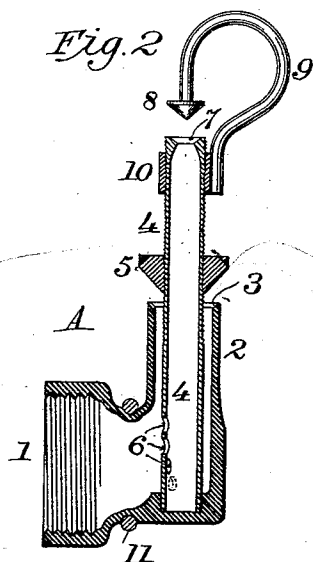
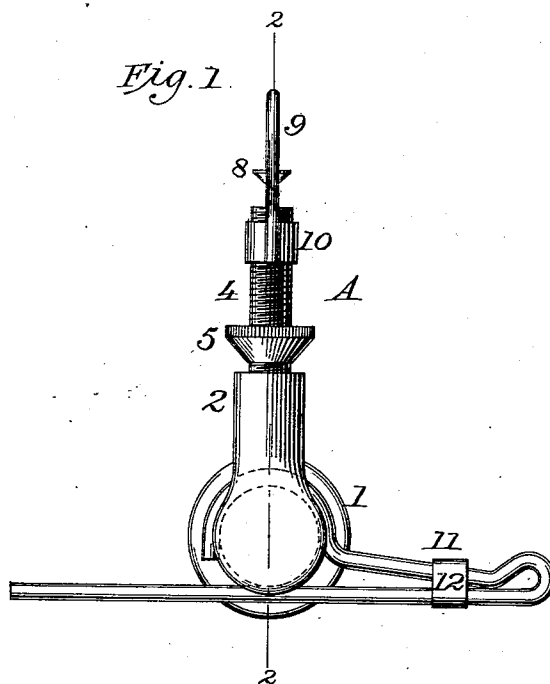


(No Model.)

J. R. CADWELL.
LAWN SPRINKLER.

No. 563,220.

Patented June 30, 1896



Witnesses :

Sidney R. Lewisworth
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Inventor :

Jos. R. Cadwell,
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UNITED STATES PATENT OFFICE.

JASON R. CADWELL, OF CHICAGO, ILLINOIS.

LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 563,220, dated June 30, 1896.

Application filed November 2, 1895. Serial No. 567,708. (No model.)

To all whom it may concern:

Be it known that I, JASON R. CADWELL, a citizen of the United States, residing in the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lawn-Sprinklers or Hose-Pipe Nozzles, of which the following is a specification.

My invention relates to a nozzle to be secured to the end of a hose-pipe, and provided with two concentric outlets, each of which is provided with suitable means for regulating the outflow of water to vary the character of the stream.

One object of the invention is to produce a cheap, simple, and durable lawn-sprinkler, which may be easily and quickly adjusted to throw a single stream of water, or to spray it, without cutting off the flow. I can, while the water is running, also change the position of this sprinkler on a lawn, either by pulling the hose to which it is attached or by raising the sprinkler by hand and placing it wherever desired.

My device may also be used as a hand-sprinkler, if desired, for various purposes, by a simple adjustment of one or both of the nozzles. It may also be employed as a window, porch, walk, or street washer, or to water large shrubbery, for which uses only one nozzle is utilized, the other one being closed. To sprinkle flower-beds or a lawn, one or both nozzles may be quickly set to deliver or spray the water in such quantities or degree of density or division as may be desired.

Another use to which my invention is adaptable is as a fire-hose nozzle. The nozzle being made of a suitable size for the purpose, one outlet may be set to throw a solid stream of water on the fire, while the other outlet is adjusted to throw a spray serving as a screen or shield between the fire and the pipemen.

There are other uses to which my invention may be applied, which will occur to those familiar with water distribution, and which need not be here enumerated, the device being claimed for all the uses to which it is applicable.

Referring to the drawings, Figure 1 represents a front elevation of my invention, and Fig. 2 is a vertical section thereof on the line 2 2.

Similar letters and numerals of reference indicate similar parts in each figure.

The sprinkler, as a whole, (indicated by A,) consists of a coupling 1, which can be secured on one end of an ordinary garden-hose. It may be a screw-coupling, or of one of any of the well-known forms of couplings now in use. A nozzle 2 is cast with or projects from the coupling, and preferably has its axis at a right angle thereto, the outer end of the said nozzle being ground within, at an angle, to form a seat, as shown at 3. Firmly fixed within the nozzle, at its base and concentric therewith, is a tube 4, smaller in diameter than the interior diameter of the said nozzle, and projecting a short distance beyond the mouth thereof. The tube 4, which forms a second nozzle, is threaded on its exterior from its outer projecting end to a point a short distance within the nozzle 2, and on this threaded portion is a nut or valve 5. This nut is conical on its inner side, and has the same angle as the seat 3 in the nozzle 2, so that when it is turned in one direction or the other it will either close the outlet of the nozzle 3 or let the water pass through in the form of a cone, more or less in quantity as the nut is turned from or toward the nozzle.

The lower end of the tube 4 has several perforations 6, through which the water enters to pass out at the open outer end, which is slightly reduced in diameter internally. This tube has also a seat 7, ground to fit a small conical plug or valve 8, formed on the end of a wire support 9, which is in turn secured to a nut or threaded ring 10. The plug 8 is in line with the seat in the end of the pipe, so that the outflow and distribution of the water through the tube 4 may be regulated by moving said plug toward or from its seat 7 as the threaded ring 10 is moved. The angles of the conical nut 5 and plug 10 may or may not be the same, as desired.

Instead of threading the outer surface of the tube 4 and employing a nut 10, the tube may be unthreaded and a ring employed instead of the nut, adapted to be slipped thereon as it is desired to regulate the position of the plug 8.

Partially surrounding the neck of the coupling 1 is a support 11, which may be formed of wire, flat metal, or otherwise. As shown,

a wire is used, extending from the coupling, which it partly surrounds with spring-pressure, to one side for a short distance. Then doubling on itself it extends in the opposite direction past the coupling to the other side to about the same distance. A clamp 12 holds the wire together where it is doubled, as shown.

When my device is used as a lawn-sprinkler, the conical nut 5 and plug 8 are adjusted to spray, as desired, and the device placed on the lawn. The support 11 holds the sprinkler in a predetermined position, so that the nozzle will be at an angle with the ground, depending upon the place to which it is desired to throw the water. If the water is to be thrown vertically, the support is not essential. When it is desired to change the adjustment or position of the sprinkler, the hose is grasped at a point beyond the reach of the water and twisted until the nozzle points downward and the water goes to the ground, when it may be approached by any one without danger of getting wet.

In using my device as a window, street, walk, or porch washer, or otherwise, where a solid stream is desired, the conical nut or valve 5 is closed tightly on the seat 3, and the plug-valve 8 removed from the nozzle by unscrewing the threaded ring 10. If the device is to be used as a hand-sprinkler, the conical nut 5 is closed, as before described, and the plug 8 adjusted as required.

From the foregoing description it will be seen that my invention is capable of various uses, whether as a standing lawn-sprinkler, a spraying-nozzle, a hand-sprinkler, as a nozzle for watering large shrubbery, or for washing windows, streets, walks, porches, &c., or as a fire-extinguisher. There are other uses to which it may be applied, which will readily recommend themselves to those familiar with its operation.

Among the advantages of a sprinkler made in accordance with my invention are that it serves the purpose of sprinkling the ground more evenly, and does not deposit the water

in a circle, or mostly at the outer edge of the circle, leaving the inner part of the circle untouched. Various rotary devices have been made to obviate this difficulty, but it is believed that it is effectually and conveniently overcome by my invention.

The adjustable features of this sprinkler enable the user to deposit a great amount of water in a given period of time, and, if desired, in a fine spray.

The invention is applicable to any locality, plat, or patch of ground, level or uneven, or to any degree of water-pressure, high or low.

Having thus described my invention, what I claim is—

1. In a lawn-sprinkler, the combination of a coupling provided with a nozzle, a fixed tube within the nozzle and perforated near its base, a conical nut surrounding the tube and capable of closing said nozzle, and a threaded or movable ring carrying a conical plug adapted to close the outlet of the tube, substantially as shown and described.

2. In a lawn-sprinkler, the combination of a coupling and nozzle, a tube within the nozzle, concentric therewith and opening thereinto, and two independent adjustable water-distributors or valves, each movable on the tube, one being applied to the outlet of the nozzle, and the other to the outlet of the tube, substantially as shown and described.

3. In combination with a lawn-sprinkler, a metallic support 11 surrounding the neck of the coupling 1 and exerting spring-pressure thereon, said support doubling upon itself and having a clamp for tightening it upon the neck of the coupling, substantially as set forth.

In testimony whereof I have hereunto set my hand, at the city of Chicago, in the county of Cook and State of Illinois, this 25th day of October, 1895.

JASON R. CADWELL.

Witnesses:

WM. S. HANNA,
G. L. WALTERS..