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LAWN SPRINKLER

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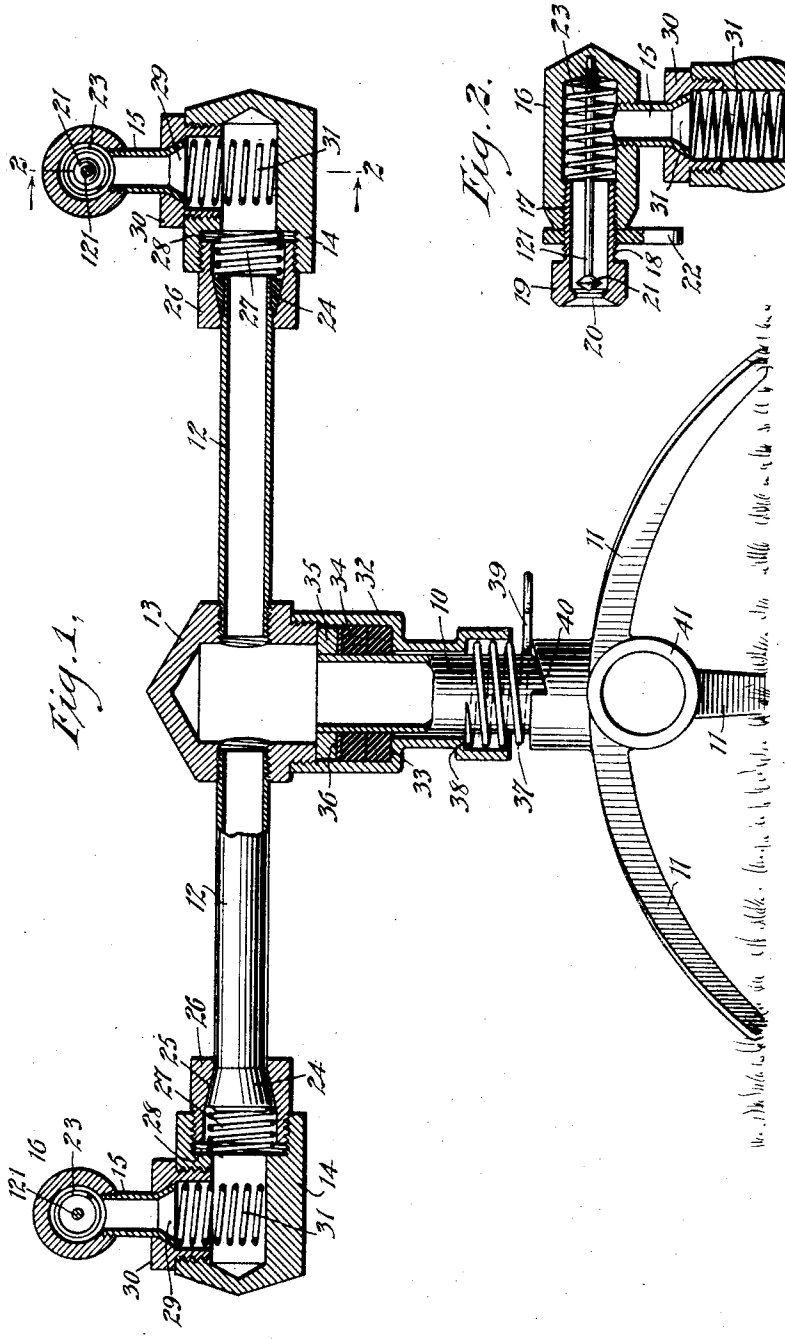


Fig. 1.



Fig. 2.

WITNESSES

Edw. Thorpe

J. Lowenstein

INVENTOR

Fred I. Jaden

BY Munn & Co.

ATTORNEY

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FRED I. JADEN, OF HASTINGS, NEBRASKA.

## LAWN SPRINKLER.

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My invention relates to a lawn sprinkler, and more particularly to a lawn sprinkler operating on the reaction principle due to the arrangement of the horizontally disposed nozzles which are disposed to cause turning movement of the sprinkler parts about a vertical axis due to the reaction of the water escaping to the air.

The general object of my invention is to provide in a sprinkler assemblage a novel and simple means either to hold the revoluble elements against turning movement or to permit turning movement of said elements.

The nature of my invention and its distinguishing features and advantages will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a central vertical section of a sprinkler embodying my invention, and

Figure 2 is a transverse vertical section as indicated by the line 2—2 in Figure 1.

In carrying out my invention in accordance with the illustrated example, a tubular vertical pipe element 10 is provided having suitable supporting means, such as a stand 11. Above the pipe 10 are lateral branch pipes 12 which communicate with said pipe element 10 through a hollow cap 13. At the outer end of each lateral branch pipe 12 is a head 14 which communicates with short tubular members 15 each leading to a head 16 having at one end internal threads 17 with which connects the threaded tubular stem 18 of a sprayer nozzle 19 the outer end of which has an opening 20 within which opening there is disposed in the sprayer nozzle 19 a spreader head 21 on a stem 121 which at the end opposite the head is fitted tightly in the end of the head 16 or fastened to said head in any suitable manner. A jamb nut 22 is provided on the threaded tubular stem 18 to bind against the head 16 for holding the nozzle 19 in adjusted relation to said head. The head 16 is disposed in accordance with the reaction principle for turning the lateral branch pipes 12 about the axis of the vertical pipe element 10. About the stem 121 of spreader 21 is coiled a spring 23 which exerts its pressure at one end against the closed end of the head 16 and at the opposite end against the tubular stem 18 of nozzle 19, tending to create friction between the threads of said stem 18 and the threads 17 to lessen the tendency of the nozzle 19 turning in the head 16 while adjusting jamb nut 22.

The end of each branch pipe 12 is flared as at 24, and a correspondingly shaped interior zone 25 is formed in a gland 26 which screws into the adjacent head 14. A spring 27 abuts at one end against the flaring end 24 of the pipe 12, and at its opposite end against an internal shoulder 28 in head 14 so as to effect a tight joint between said flaring end 24 and the correspondingly shaped zone 25. The tubular member 15 is screwed at its upper end into the head 16 and the lower end of said element is flared, as at 29, and bears against a correspondingly shaped zone in a gland or bonnet 30 on head 14. A coil spring 31 exerts its pressure against the flaring end 29 to form a water tight contact with the bonnet 30.

A sleeve 32 is provided at the upper end of tubular element 10 and extends above the same sufficiently to effect a threaded connection thereof with the cap 13 so that said cap and sleeve 32 may turn with the branches 12 about the axis of pipe element 10. The sleeve 32 is formed with an internal upwardly facing shoulder 33 above which are resilient packing rings 34. A collar 35 is provided on the pipe element 10 at the top and beneath the same a washer 36 may be employed, disposed on the uppermost one of the packing rings 34. A downwardly facing shoulder 38 is formed on the sleeve 32 against which bears the upper end of a coil spring 37. On said spring at the lower end is a lateral arm 39 forming a finger hold whereby said spring 37 may be stressed. On the pipe element 10 at the base is a zone of enlarged diameter formed with a notch 40, the lower end of which is inclined to give a cam action. By grasping the arm 39 and turning the same laterally, said arm 39 may be moved out of the notch 40 and into contact with the inclined surface at the bottom of said notch, which thereby will exert a compressive action on the spring, increasing its tension, so that it will bear with greater pressure on the shoulder 38 for the purpose of holding the sleeve 32 against turning, and thereby preventing the turning of the head 14 and branch pipes 12 with the head 16 of the latter.

The numeral 41 indicates an inlet for

water to the pipe element 10, said inlet 41 being in practice suitably connected with a hose (not shown) to supply water to the sprinkler.

The enlarged flaring end 24 of branch 12 may be provided by tapering ring applied to said pipe 12, as is clearly shown at the right of Figure 1.

I would state furthermore that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claim.

I claim:

An assemblage of the class described, including a vertical pipe formed with a notch at the exterior, a sleeve on said pipe, branch pipes in communication with the first mentioned pipe, means on said sleeve carrying said branch pipes, and a coil spring exerting pressure endwise against said sleeve and against said vertical pipe at the notch, said spring having a lateral arm movable into or out of the notch and the bottom of the notch affording an incline to cause increased pressure of the spring when moved up said incline to a level above the lower end of the incline.

FRED I. JADEN.