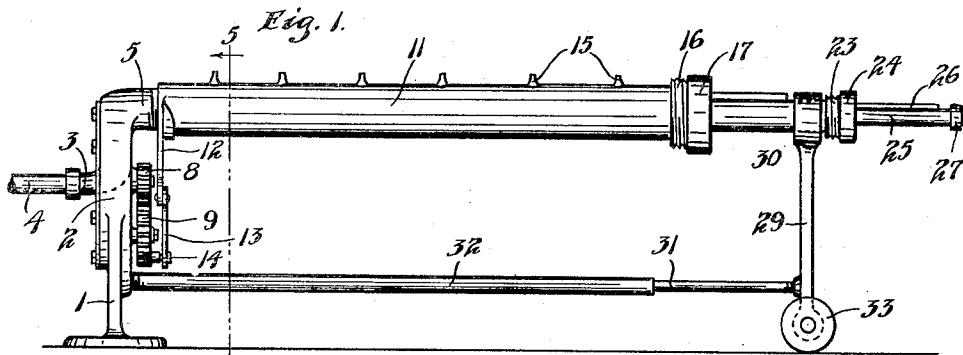
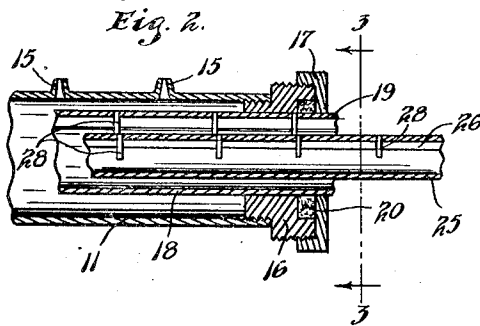
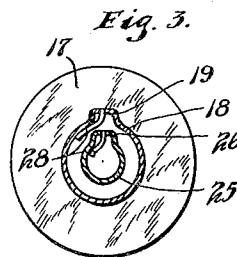
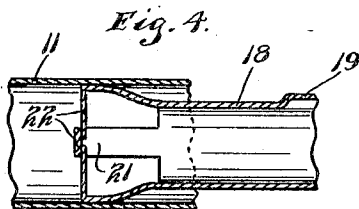
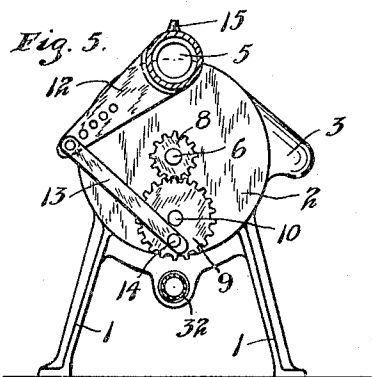
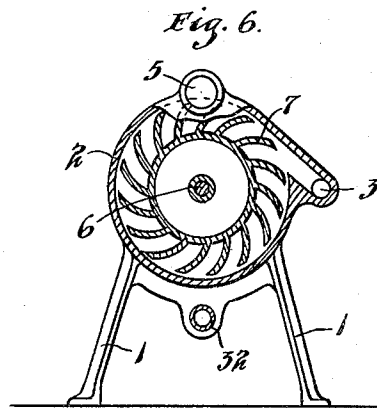


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C. F. BERGQUIST
EXTENSION LAWN SPRINKLER.

Filed March 19, 1923



INVENTOR.
CARL F. BERGQUIST.
BY HIS ATTORNEY

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UNITED STATES PATENT OFFICE.

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EXTENSION LAWN SPRINKLER.

Application filed March 19, 1923. Serial No. 626,009.

To all whom it may concern:

Be it known that I, CARL F. BERGQUIST, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in an Extension Lawn Sprinkler; 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 a sprinkler device and while the same is applicable to any sprinkling structure it is particularly designed for use in sprinkling lawns or gardens. The device, preferably, is constructed to have a rocking motion so that a large area can be sprinkled. It is often desirable with such sprinklers to sprinkle areas or plots of different size and it is quite convenient to have a sprinkler which is adjustable to sprinkle such areas.

It is an object of this invention, therefore, to provide a sprinkling device which is capable of adjustment or extension to sprinkling areas of different size.

It is a further object of the invention to provide such sprinkling device comprising a plurality of relatively movable telescoped tubes, which tubes are provided with liquid discharging means.

It is still another object of the invention to provide such a device adapted to be connected to a water motor through which the water to be sprinkled passes, which motor is adapted to oscillate the sprinkling means.

It is still a further object of the invention to provide a suitable extensible support for the sprinkler.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to the same parts throughout the different views, and in which,

Fig. 1 is a view in side elevation of the device;

Fig. 2 is a partial view in vertical central section thereof;

Fig. 3 is a vertical section taken on the line 3—3 of Fig. 2, as indicated by the arrows;

Fig. 4 is a partial central vertical section of another portion of the device;

Fig. 5 is a vertical section taken on the line

5—5 of Fig. 1, as indicated by the arrows; and

Fig. 6 is an end view partly in vertical section and partly in end elevation, Figs. 2 to 6 being shown on a larger scale than Fig. 1.

Referring to the drawings, the device comprises a base or bracket member having legs 1 constructed to rest solidly upon a suitable surface. Said base has mounted thereon a casing 2 of a water motor, said casing being provided with an inlet conduit 3 adapted to be connected in any suitable manner with a motor supply pipe 4. Said casing is also provided with an outlet conduit 5 and has further rotatably mounted therein on a stub shaft 6, a driving wheel or propeller 7. The shaft 6 is mounted in a short central hub projecting from the casing 2 and has secured thereto outside of the casing a gear 8, which gear meshes with and drives a gear 9 rotatably mounted on a short stub shaft 10 also secured in a short hub projecting from the side of the casing 2. A tube or pipe 11 is connected in axial alinement with the outlet conduit 5 in any suitable manner as by the threaded connection illustrated. Said tube 11 is adapted to be oscillated relatively to the conduit 5 for which purpose it is provided with a downwardly and laterally extending arm 12 provided with a plurality of holes adjacent its outer end through any one of which a link 13 is adapted to be connected by a suitable headed and nutted bolt, which link is pivotally connected at its other end to a stud 14 eccentrically secured in the gear 9. The tube 11 is provided throughout its length with a plurality of spaced nozzles or water discharging means 15 and the outer end of the tube has a closing member 16 having an enlarged portion at the end of said tube which is externally threaded to receive a cap member 17. The member 16 and the cap member 17 are provided with central openings extending longitudinally there-through from the upper side of which extends a slot or key-way and a tube 18 is adapted to fit in said apertures and is provided with a key-like rib 19 adapted to fit in and slide in said slot or key-way, said tube 18 thus being kept from rotative movement relative to the members 11, 16 and 17. The member 16 is provided with a recess in its outer face surrounding the tube 18 adapted to receiving packing material 20 which is compressed against said tube by the cap 17

so that a liquid-tight joint is provided. The tube 18, at its other end, is split or notched to provide tongues 21 which are flared outwardly to contact with the inner side of the tube 11, and have cross arms 22 extending therebetween so that the tube 18 is held in concentric relation with the tube 11. The tube 18 is, in turn, provided with a closing member 23 similar to the member 16 which carries a cap 24. These members are, like the members 16 and 17, provided with central apertures and a slot extending therefrom and a tube 25 having a key-like rib 26 formed thereon is adapted to slide and fit in said apertures and slots, the member 23 also being provided with packing to insure a liquid-tight joint. The inner end of the tube 25 is not shown but the same will be constructed in the same manner as the inner end of tube 18 so that the tube 25 will be held in concentric relation to the tube 18, will be longitudinally slidable therein but prevented from rotative movement relative thereto. The outer end of the tube 25 is provided with a closure cap 27 threaded onto the end thereof. The tubes 18 and 25 are provided throughout their longitudinal extent with a plurality of spaced apertures in the top of the rib-like portions 19 and 26, respectively, and small pipes or nozzles 28 extend from these apertures down into said tubes and a short distance along the inner side thereof.

A bracket 29 has a cylindrical portion 30 at its upper end surrounding the tube 18 adjacent its outer end, which bracket is provided with one or more suitable supporting rollers 33 its lower end. A rod or pipe 31 is secured to the inner side of the bracket 29 and adapted to fit and slide in a pipe 32 supported in the supporting base member or casing 2 and, as illustrated, threaded therein.

In operation, the device will be disposed on the tract to be sprinkled and the pipe 4 will be connected to a suitable source of water under pressure. The water enters the casing 2 and rotates the wheel 7 by impinging against the blades thereof, which wheel thus drives the gears 8 and 9. The water discharges through the outlet 5 and into the tube 11. If a small tract is to be sprinkled the tubes 18 and 25 will be telescoped into the tube 11 and the water will be discharged from the nozzles 15 at either side of the tube as the same is oscillated through the link 13 and arm 12. If a larger tract is to be sprinkled the tube 18 can be drawn out of the tube 11 and if a still larger tract is to be sprinkled the tube 25 can be drawn out of the tube 18. A sprinkler of substantially three times the length of the tube 11 is thus

provided and the said tubes can be adjusted to suit the particular tract being sprinkled. Owing to the tight joints at the ends of the tubes 11 and 18, there will be no leakage from the sprinkler and all of the water will be discharged through the nozzles 15 and 28. It is found that a better sprinkling effect is produced by providing the nozzles 28 than by merely having apertures through the portions 19 and 26.

From the above description it is seen that applicant has provided a simple and efficient adjustable or extensible sprinkling device. The same can be quickly and easily adapted to the plot to be sprinkled by merely extending the tubes and the supporting means. The entire device is very compact, light and durable and the same can be readily connected to any available source of water supply.

It will, of course, be understood, that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of applicant's invention, which, generally stated, consists in a device capable of carrying out the above stated objects, and such as shown and described and set forth in the appended claims.

What is claimed is:

1. A device of the class described comprising a revoluble liquid motor having an inlet and an outlet conduit, a tube oscillatingly mounted on and axially aligned with said outlet conduit, a tube slidably mounted in said tube and held from rotative movement therein, an arm extending from said first mentioned tube, means driven by said motor connected to said arm for oscillating said tube, a support for said motor and first mentioned tube, and an extensible support connected to said first mentioned support and movable relatively thereto.

2. An extensible sprinkling device comprising a conduit, a closure member for one end thereof having a longitudinal passage therethrough and a slot extending from said passage, a conduit slidably mounted in said closure member adapted to fit in said passage and slot, said last mentioned conduit being thus slidable in said first mentioned conduit and having an open end adapted to contact the inner walls thereof whereby said conduits are maintained in axial alignment, a plurality of spaced open-ended tubes depending into said last mentioned conduit from the top thereof forming discharge nozzles, and means movable with said last mentioned conduit for supporting the outer end thereof.

In testimony whereof I affix my signature.

CARL F. BERGQUIST.