Jan. 27, 1931. C. U. TYRRELL 1,790,358

LAWN SPRINKLER HEAD

Filed April 26, 1928

Fig. 1.

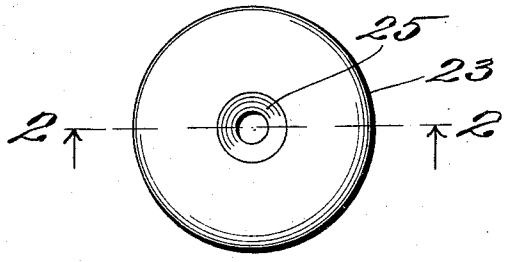


Fig. 2.

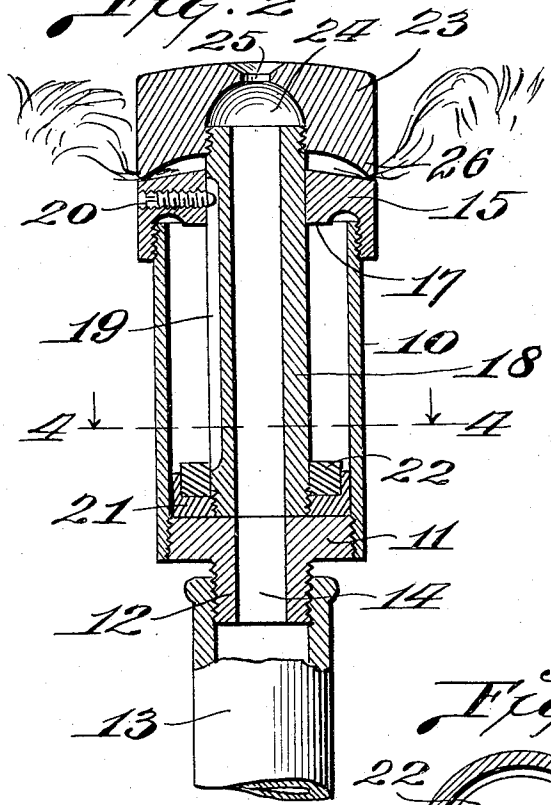


Fig. 3.

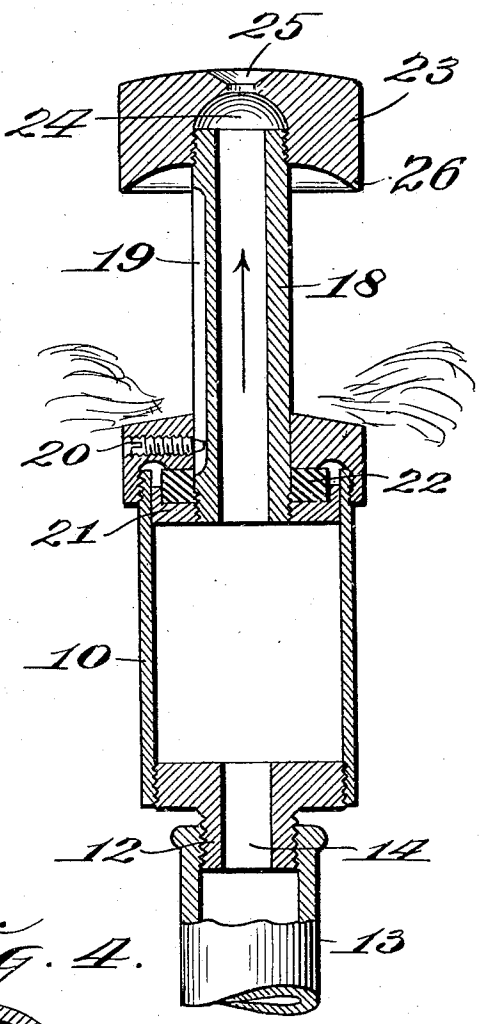
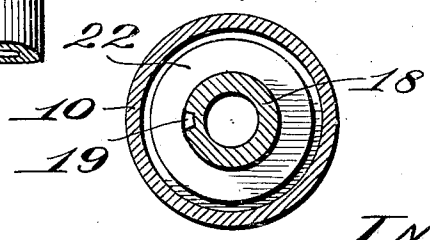


Fig. 4.



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CLAUDE U. TYRRELL, OF PASADENA, CALIFORNIA

LAWN-SPRINKLER HEAD

Application filed April 26, 1928. Serial No. 273,054.

My invention relates generally to a lawn sprinkling system and more particularly to a sprinkler head that is connected to the underground supply pipes and which occupies a position just below the surface of the lawn, and which head in operation sprinkles or distributes water throughout a considerable area of the lawn adjacent to the head.

The principal objects of my invention are to generally improve upon and simplify the construction of the existing forms of lawn sprinkler heads, to provide a head having a portion that includes the jet opening that is moveable vertically within housing of the head in order that when the head is in service, the jet opening thereof occupies a plane a short distance above the surface of the lawn so that grass or other growth immediately adjacent to the head will in no wise interfere with the complete functioning of the device, and further, to provide a device of the character referred to that is relatively simple in construction, inexpensive of manufacture and which will be very effective in performing the functions for which it is intended.

The principal disadvantage of the ordinary forms of sprinkler heads that are fixed to the underground supply pipes at the level of the lawn is, that grass grows over the top of the sprinkler head and materially interferes with the complete functioning thereof, and this is more particularly the case where the heads are set or positioned so that their upper surfaces are positioned slightly below the surface of the lawn in order to permit a lawn mower to be operated directly over the top of the head, and it is the principal object of my invention to provide a springler head that normally occupies a position just below the surface of the lawn, and a portion of which head is telescopically mounted within another portion, so that it will be elevated by the pressure of the water passing thru the head during sprinkling operations, and thus, the spray or jet of water issuing from the head will discharge at a point a few inches above the grass or turf that forms the lawn.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts that will hereinafter be more fully described and claimed and illustrated in the accompanying drawing, in which—

Fig. 1 is a top plan view of a lawn sprinkler head of my improved construction.

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1, and showing the telescoping portion of the head in its normal or lowered position.

Fig. 3 is a vertical section similar to Fig. 2 and showing the telescoping portion of the head in elevated position or the position it assumes while in service.

Fig. 4 is a horizontal section taken on the line 4—4 of Fig. 1.

Referring by numerals to the accompanying drawings which illustrate a practical embodiment of my invention, 10 designates a short, hollow, cylindrical member that forms the body or housing of the head, and the lower end of said body is closed by a disc or plate 11 from which depends a centrally arranged plug 12 that is externally threaded in order that it may be screw seated in the internally threaded upper end of a vertically disposed pipe 13, and which latter forms a part of the underground supply pipes. Formed thru plate 11 and plug 12 is an axially disposed aperture 14.

Screw seated on the upper end of the body 10, is a cap 15 provided with a centrally arranged aperture 16, and formed on the underside of said cap around said aperture, is a flat surface 17 that functions as a seat 17 for a packing ring or gasket that is carried by the movable portion of the head.

Arranged for sliding movement thru aperture 16, is a tubular member 18, and formed in

the periphery thereof, is a longitudinally disposed groove 19, and projecting into said groove, is the point of a pin or screw 20 that is seated in the cap 15, and which arrangement permits the tubular member 18 to move lengthwise and at the same time holds the same against rotary movement in either direction.

Carried by the lower end of tubular member 18, is a ring 21, the outer periphery of which has a working fit with the inner face of the wall of the cylindrical member 10, and arranged on top of said ring 21, is a packing ring or gasket 22, preferably formed of rubber, leather or composition, and the upper surface of which is adapted to fit against the seat 17 when the telescoping portion of the head is elevated to its limit of movement.

The length of tubular member 18 is such that when the ring 21 rests on disc 11, a portion of said tubular member projects a short distance above cap 15, and secured on said projecting upper end, is a substantially disc-shaped head 23 within which is formed a centrally arranged chamber 24 that communicates with the upper end of the bore or passage thru the tubular member 18, and leading from the upper end of said chamber 24, to the top surface of head 23, is a centrally arranged jet opening 25.

The underface of head 23 is made concave, thereby producing at the lower, outer edge of said head, a marginal flange 26, which, when the telescoping portion of the device is at its lower limit of movement, rests directly upon top of the marginal portion of the cap 15.

As a result of the construction just described, the rib or flange 26 will, when the head 23 returns to its normal position, bear downwardly upon any blades of grass that might overlie the top of cap 15 while the telescoping portion of the device is elevated, and as the blades of grass grip between the rib or flange 26 and the cap 15, they are cut off from light, air and water, and they will soon wither and die. Thus, the device ordinarily functions to trim the grass that is immediately adjacent to the cap 15 and head 16.

When water is turned on thru the underground pipes of the sprinkling system, said water will flow upwardly thru the opening 14 in disc 11, thence thru tubular member 18, and after passing thru the chamber 24, the water will discharge thru the check opening 25. Inasmuch as this jet opening is somewhat smaller in diameter than the duct thru tubular member 18, a back pressure will be developed in the water pipe thru the head, with the result that water will pass between disc 11 and ring 21 and the pressure of the water acting against said ring will force the same and the tubular member 18 and head 23 carried thereby, upwardly until the packing ring or gasket 22 bears against the seat 17 on the underside of cap 15.

Thus, the head 23 in which the jet opening 25 is formed, will be elevated to a position two or three inches above the surface of the lawn, where the water that discharges from the jet opening will not be interfered with by the grass or other growth on the surface of the lawn.

The packing ring or gasket 23 serves to pack the joint between ring 21 and the underside of the cap 15, thus effectually preventing leakage of water thru said joint and thru the joint between the tubular member 18 and cap 15.

When the flow of water thru underground distributing pipes is cut off, the elevated portion of the head will return to its lowermost position, as illustrated in Fig. 2, and the rib or flange 26 will engage and bear on any blades of grass that may rest on top of the cap 15, thereby killing the trapped blades of grass, as hereinbefore described.

Thus, it will be seen that I have provided a lawn sprinkling head that is relatively simple in construction, inexpensive of manufacture, and which is in service, elevated so that the water is delivered onto the adjacent portion of the lawn from a point a short distance above the surface of said lawn, and consequently, from a point where there is no interference by grass or other lawn growth.

It will be understood that minor changes in the size, form and construction of the various parts of my improved lawn sprinkling head may be made and substituted for those herein shown and described without departing from the spirit of my invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. In a lawn sprinkler head, a hollow member adapted to be connected to a source of water supply, a tubular member arranged to move vertically thru said hollow member, a head carried by the upper end of said tubular member, said head being provided with a jet opening and a rib formed on the underside of said head, which rib engages the top of the hollow member when said tubular member and head are at their lower limit of movement.

2. In a lawn sprinkler head, a hollow member adapted to be connected to a source of water supply, a tubular member arranged for telescopic movement within said hollow member, a head carried by the upper end of said tubular member, said head being provided with a centrally arranged jet opening, and a marginal flange on the underside of said head, which flange engages the top of the hollow member when the telescoping tube is at its lower limit of movement.

3. In a lawn sprinkler head, a hollow member adapted to be connected to a source of water supply, a tubular member arranged

for telescopic movement within said hollow member, a head carried by the upper end of said tubular member, said head being provided with a centrally arranged jet opening, and a marginal flange on the underside of said head, which flange engages the top of the hollow member when the telescoping tube is at its lower limit of movement, a head carried by the lower end of the telescoping tube and a packing ring carried by said last mentioned head.

In testimony whereof I affix my signature.

CLAUDE U. TYRRELL.