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SPRINKLER

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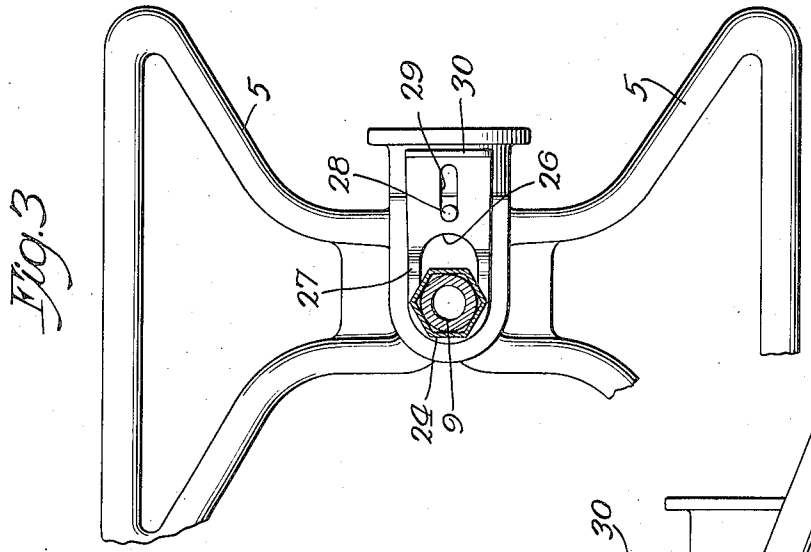

Fig. 3

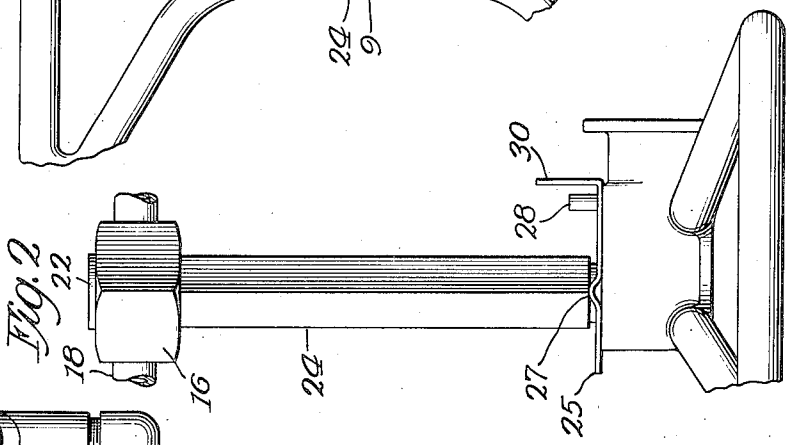

Fig. 2

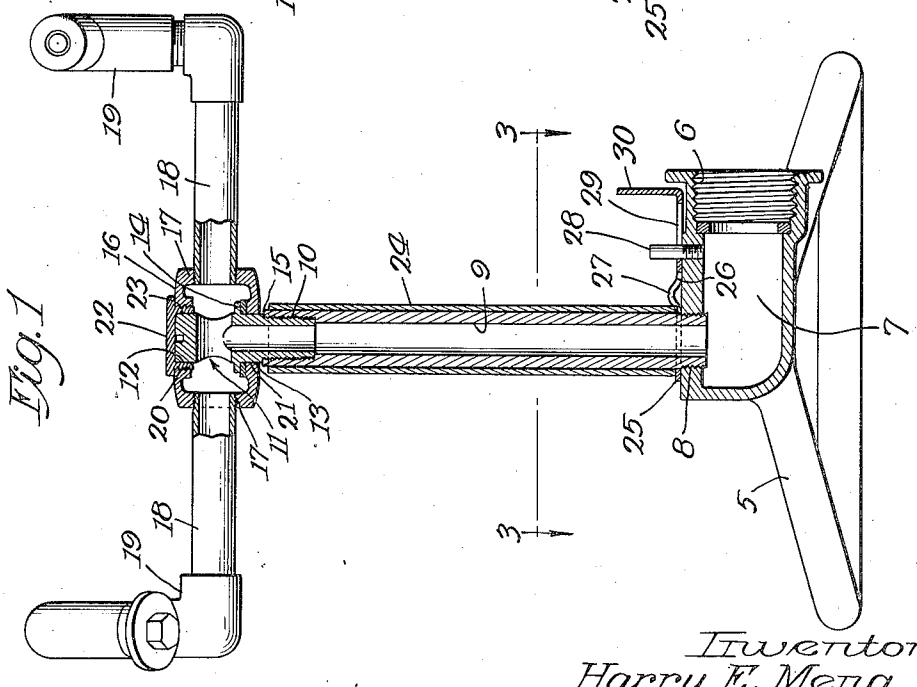

Fig. 1

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SPRINKLER

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4 Claims. (Cl. 299—69)

This invention relates to sprinklers and more particularly to lawn sprinklers of the type having a rotatable spray head.

The main objects of the invention are to provide a simplified and exceptionally free operating rotary sprinkler structure, to provide means whereby the rotary element may be effectively locked against rotation; to provide locking means which will not be apt to get out of order; and in general, it is the object of this invention to provide an improved sprinkler of the type referred to.

Other objects and advantages of the invention will be understood by reference to the following specification and accompanying drawing wherein a lawn sprinkler embodying a selected form of the invention is illustrated.

In the drawing—

Fig. 1 is a vertical section through the center of the sprinkler, certain parts however being shown in elevation;

Fig. 2 is a fragmentary side elevation; and

Fig. 3 is a plan section on the line 3—3 of Fig. 1.

Referring now to the drawing, the improved sprinkler therein disclosed embodies a base 5, which may be of any suitable construction, for example, cast iron The base is preferably of a type often referred to as the "sled" type, which may be conveniently dragged over a lawn without cutting in or otherwise injuring the lawn. The base is provided with an internally threaded hose coupling portion 6, a passageway 7 and an internally threaded outlet 8 into which the lower end of a standpipe 9 is threaded.

The upper end of the standpipe has screw-threaded into it, as indicated at 10, a bearing member 11. The bearing member 11 is provided with upper and lower bearing surfaces 12 and 13 respectively and it is provided with inside and outside downwardly facing shoulders 14 and 15 respectively. As clearly shown in Fig. 1, the member 11 is screw-threaded into the standpipe to such an extent that the shoulder 15 engages the upper end of the standpipe.

The rotatable sprinkler head herein illustrated consists of a central hollow member 16 having oppositely disposed side openings 17, 17 from which tubular arms 18, 18 extend in opposite directions. The outer ends of the arms 18, 18 are provided with any suitable form of spray device 19. Of course, it will be understood that any form of spray device may be secured to the hollow central member 16.

The central hollow member 16 is provided with upper and lower openings 20 and 21 respectively, of which the lower opening is considerably smaller than the upper opening and of such size that it rotatably fits the lower bearing surface 13 of the bearing member 11. The upper opening 20 is of such size that the bearing member 11 may be inserted through the upper opening and positioned relative to the hollow member 16, as illustrated. A cap member is seated—in this instance screw-threaded—into the upper opening 20 in the member 16 and the said cap member is provided with a socket 23 which constitutes a bearing for receiving the upper bearing surface 12 of the bearing member 11. As clearly shown, the bearing member 11 is apertured to provide a passageway for water from the standpipe 9 to the sprinkler arms 18, 18.

It will be observed that the structure thus far described constitutes a complete and operative lawn sprinkler of a very simple construction. Because of the shoulder arrangement 15 for limiting screwing of the bearing member 11 into the standpipe, freedom of rotation of the sprinkler head is assured; in other words, it is impossible to turn the member 11 into the standpipe sufficiently to clamp the hollow member 16 against the end of the standpipe.

For some purposes, it is desirable to stop the rotation of the spray head and it has been found that more or less positively engaging stops, such as used in the prior art, are quite apt to become inoperative through springing of various parts or through careless forcing of rotation of the sprinkler head by hand when the locking means is engaged. In this instance, locking means is provided which is effective to hold the sprinkler stationary when desired but which will not be injured in the event that the spray head is manually rotated when the lock is in operative position.

The locking means referred to consists of a sleeve 24 disposed around the standpipe 9, the sleeve being somewhat shorter than the length of the space between the bottom of the central spray head member 16 and the surface on which the sleeve normally rests. A slide member 25 having an elongated slot 26 is seated on the top surface of the base 5, with the standpipe projecting through said slot. The outer end portion of the slide member is flat and permits the sleeve 24 to assume a position in which its outer end is out of engagement with the spray head member 16. A hump or cam formation 27 is pressed in the slide member in such a position that in the event that the slide member is moved laterally, the

hump or cam will engage the lower end of the sleeve **24** and elevate the latter so that its upper end frictionally engages the bottom surface of the spray head part **16**. The extent of movement thus imparted to the sleeve **24** is sufficient to clamp the spray head member **16** against the downwardly facing shoulder **14** to thereby prevent rotation of the spray head. Suitable means is provided for preventing rotation of the slide member **25**, and in this instance, it consists of a pin **28** extending upwardly from the base **5** through an elongated slot **29** in the slide member. An upwardly projecting ear **30** may be provided at the end of the slide member for facilitating its manipulation.

It will be seen that the described locking structure is of a type which might be called a friction lock, in that it has no interlocking engagement with the rotatable part. The spray head may be forcibly turned when the sleeve is adjusted to locking position without injuring the construction.

Changes in the described structure may be made without departing from the spirit of the invention, the scope of which should be determined by reference to the following claims, the same being construed as broadly as possible consistent with the state of the art.

I claim:

1. A device of the class described comprising a base, a standpipe, a rotary member mounted on said standpipe, a sleeve surrounding said standpipe and vertically adjustable thereon into frictional engagement at its upper end with the rotary member, and means shiftable approximately radially transversely of the standpipe for adjusting said sleeve to said rotary member engaging position.

2. A device of the class described comprising a base, a standpipe, a rotary member mounted on said standpipe, means for limiting upward movement of said rotary member relative to the standpipe, a sleeve mounted on said standpipe for adjustment vertically thereof into engagement at its upper end with said rotary member for holding the latter against rotation, a member having an elongated slot and seated on said base, said standpipe extending through said slot whereby said member is movable transversely of the standpipe, and cam means formed on said member for effecting upward adjustment of the sleeve as an incident to transverse movement of said slotted member.

3. A device of the class described comprising a base, a standpipe, a rotary member mounted on said standpipe, means for limiting upward movement of said rotary member relative to the standpipe, a sleeve mounted on said standpipe for adjustment vertically thereof into engagement at its upper end with said rotary member for holding the latter against rotation, a member having an elongated slot and seated on said base, said standpipe extending through said slot whereby said member is movable transversely of the standpipe, cam means formed on said member for effecting upward adjustment of the sleeve as an incident to transverse movement of said slotted member, and guide means for preventing rotation of said slotted member around said standpipe.

4. A sprinkler of the class described comprising a base, a standpipe, a rotary member mounted on said standpipe, a hollow member having vertically aligned openings therein, the upper opening being larger than the lower opening, a bearing member having its upper portion disposed within said hollow member and its lower portion projecting through said lower opening and secured to said standpipe, said bearing being provided with upper and lower bearing surfaces and the lower opening of said hollow member rotatably fitting said lower bearing surface, and a cap member overlying said upper opening and provided with a socket constituting a bearing for rotatably receiving said upper bearing surface of said bearing member.

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