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SPRAY HEAD FOR LAWN SPRINKLER SYSTEMS

Harvey De Witt Maness, Dearborn, Mich.

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1 Claim. (Cl. 299—18)

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This invention relates to new and useful improvements in spray heads for lawn sprinkler systems and the primary feature of the present invention is to provide a spray head including novel valve means for regulating the discharge from the head.

Another important feature of the present invention is to provide a spray head for the outlet pipes of a sprinkler system including adjustable valve means whereby the fluid discharge from all of said heads can be equalized.

A further feature of the present invention is to provide a device of the character referred to that is quickly and readily attached to the outlet pipes of a lawn sprinkler system to discharge any desired amount of fluid to the lawn.

A still further feature of the present invention is to provide a spray head of the class described that is simple and practical in construction, strong and reliable in use, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective diagrammatic view of the device in use;

Figure 2 is a vertical sectional view taken on line 2—2 of Figure 1;

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 2.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents generally one of the outlet pipes of a usual lawn sprinkler system, said pipe being internally threaded at its terminal portion as is conventional for such pipes.

A substantially cylindrical housing 12 has its outer periphery threaded as at 14 to engage the internally threaded portion of pipe 10. This housing 12 is provided with an integrally formed head 16 of slightly increased diameter which bears tightly against a gasket 18 at the outer end of said pipe for sealing the housing to pipe so that fluid may not pass between the housing and the pipe.

The housing 12 includes a perforated bottom wall 20 having a downwardly projecting central boss 22. The boss 22 is provided with an internally threaded bore 24. The apertures 26 in the bottom wall 20 permit fluid rising in the pipe

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10 to enter a fluid chamber 28 defined by the housing 12.

Bearing on an annular shoulder 30, in the head 16, is a circular support ring or plate 32 having a central opening 34 which terminates in a beveled valve seat 36.

A valve stem 38 having one-half of its portion substantially semi-elliptical in cross section and its other half portion semi-circular in cross-section is adjustable in opening 34 and a beveled valve head 40 at the upper end of said valve stem is adapted for adjustment with the valve seat for movement into and out of the seat 36.

The lower end of the valve stem 38 terminates in an elongated shank 42 of a diameter less than the diameter of the stem 38, and the terminal portion of the shank 42 is externally threaded to receiveably engage the threads of a bore 24.

Embracing the shank 42 and disposed between the valve stem 38 and the bottom wall 20 is a coil spring 44 adapted to maintain a manual adjustment of the valve head in the valve seat.

Suitably secured to the upper face of valve head 40 is a semi-circular plate 46 having a kerf 48 for receiving a screw driver or the like (not shown).

In use of the device, the valve is adjusted in seat 36 by turning plate 46. Fluid in pipe 10 enters chamber 28 through apertures 26 and passes upwardly through opening 34 under pressure. As the valve stem closes approximately one-half of opening 34 a lune shaped clearance is provided in said opening so that the fluid is forced out of the opening 34 in a substantially lune shaped spray.

The outlet pipes in the sprinkler system usually have variable pressure and to regulate the discharge from any selected housing an adjustment for the valve in said housing is made by turning plate 46.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

A spray head for underground lawn sprinkler systems comprising a housing having a perforated

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bottom wall including a central boss, valve means in the housing and including a stem having a reduced end portion threaded in said boss, and a spring embracing the reduced end portion and biased between said stem and said bottom wall for maintaining a manual adjustment of the valve stem, said valve stem including a longitudinal axis, one half of said stem having a convex surface all points of which lie equidistant from the longitudinal axis of said stem, the other half of said stem being smoothly convex and having all points thereon disposed at a distance from the longitudinal axis of the stem less than any point on the first-mentioned convex surface, and a ring mounted in said housing and having a circular opening whose radius is equal to the

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radius of one half of said stem, said stem being received in said opening and blocking all but a lune-shaped portion of said opening.

HARVEY DE WITT MANESS.

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