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G. A. WILLIAMS

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WATER SPRINKLING DEVICE

Filed Aug. 21, 1928

Fig. 1

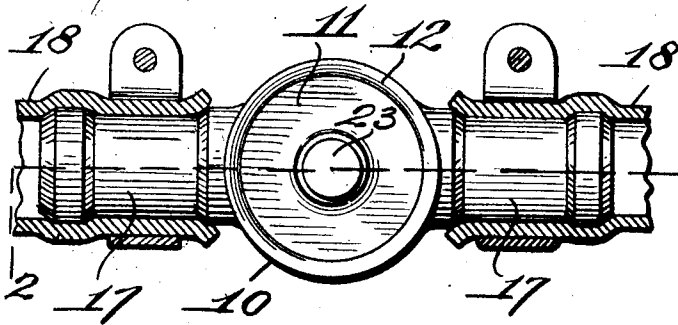


Fig. 3.

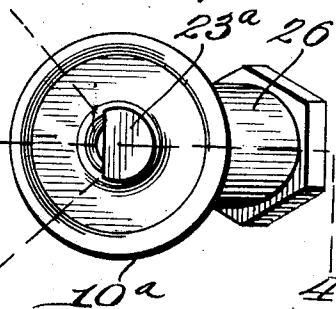


Fig. 2.

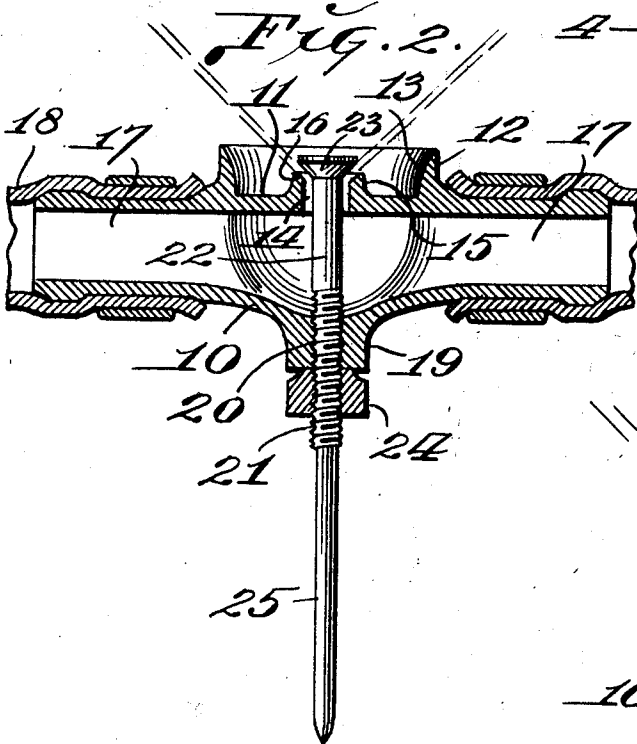
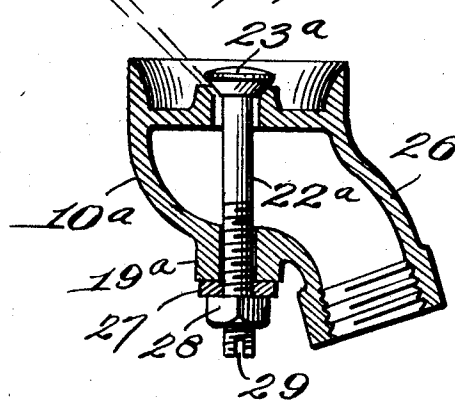


Fig. 4.



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WATER-SPRINKLING DEVICE

Application filed August 21, 1928. Serial No. 301,047.

My invention relates to a water sprinkling device, particularly of the type disclosed in my copending application for U. S. Letters Patent filed December 6, 1927, Sr. No. 238,001, and the principal object of my present invention is to generally improve upon and simplify the construction of the sprinkling device disclosed in my aforesaid patent application, as well as other similar forms of sprinkling devices.

Further objects of my invention are to provide a relatively simple, practical and efficient sprinkling device that may be utilized as a connecting member between two sections of water conduit such as hose or pipe, thereby enabling a plurality of the devices to be located in a water line so that water may be sprinkled simultaneously on a lawn or in a garden or orchard, and further to provide a device having a readily adjustable valve for controlling the discharge of water from the jet orifice and, further, to provide simple and efficient means for locking the valve in differently adjusted positions.

A further object of my invention is to provide a water sprinkling device of the character referred to wherein the central portion of the body of the device through which the valve passes and in which the jet orifice is formed is made sufficiently large to permit the full capacity volume of water to flow through the device and thus eliminate the possibility of cutting down the volume flow of water to the succeeding devices located in a water line, and which action would result in an unequal distribution of the sprinkled water.

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 drawings, in which:

Fig. 1 is a top plan view of a water sprinkling device embodying the principles of my invention.

Fig. 2 is a vertical longitudinal section on the line 2—2 of Fig. 1.

Fig. 3 is a top plan view of a modified form of the sprinkler.

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 3.

Referring by numerals to the accompanying drawings which illustrate a practical embodiment of my invention, 10 designates a substantially bowl-shaped body with which is formed integrally a horizontally disposed top plate 11 and formed integrally with and projecting upwardly from the edge of said top plate is a circular flange 12, having a convex inner face 13.

Formed in the center of plate 10 is a jet orifice 14 and formed integral with the top of the plate around this orifice is a short upwardly projecting circular flange 15. The upper end of the orifice 14 is countersunk as designated by 16 to form an inclined valve seat.

Formed integral with and projecting outwardly from the body of the bowl-shaped member 10 are short tubular extensions 17 to which may be secured in any suitable manner sections 18 of hose or pipe.

Formed integral with and depending from the bottom of the bowl-shaped body 10 is a lug 19 through which is formed a threaded aperture 20 that is in direct alinement with the jet orifice 14.

Screw seated in the threaded aperture 20 is the threaded lower portion 21 of a valve stem 22, which latter extends through the orifice 14 and formed integral with the upper end of said stem is a head 23 that functions as a valve and the under face of which head is inclined or beveled to correspond with the inclination of the countersunk valve seat 16. The diameter of valve stem 22 is slightly less than the diameter of the orifice 14 and thus when the valve 23 is slightly elevated with respect to the seat 16 water is free to flow through the orifice and to discharge upwardly and outwardly through the space between the inclined seat 16 and the correspondingly inclined under face of valve 23.

Located on the threaded portion 21 of the valve stem below the lug 19 is a nut 24 that functions as a packing member and a lock nut.

When this lock nut is tightened against the underside of lug 19 it tends to prevent

leakage of water through the joint between the threaded portion of the stem and the threaded aperture 20 and said nut, when thus tightened, also locks the valve stem in its adjusted position in the device.

Depending from the lower end of the valve stem is a pin or prong 25 which may be inserted in the ground to anchor the sprinkling device while the same is in use.

The height of the flange 12 is such that its upper end occupies a horizontal plane slightly above the top of valve 23 when the latter is in full open position and thus the valve is, to a certain extent, protected against being struck by extraneous objects while in operation and the inner face 13 of the flange being made convex will not interfere with the outward and upward discharge of water from the inclined space between the flange seat 16 and the head 23 of the valve.

In the modified form of the device illustrated in Fig. 3, the bowl-shaped body 10^a is devoid of the tubular extensions 17 and projecting outwardly and downwardly from one side of said body is a tubular extension 26 that is externally threaded in order that it may be screwed onto the upper end of a supply pipe.

This form of device is intended for use on overhead water supply pipes or for supply pipes that lie beneath or on top of the ground along the edges of walks, driveways or immediately adjacent to a fence or building wall.

In this construction the valve stem 22^a passes through a lug 19^a on the bottom of the body 10^a and a segment on one side of the valve 23^a is cut away in order to provide an arcuate opening between said guideway portion and the valve seat when the valve is positioned upon its seat and thus water may discharge through said opening, thereby sprinkling water over the ground on one side only of the device.

The lower portion of the stem 22^a is threaded and this threaded portion passes through the lug 19^a without being threaded therein, and arranged on said threaded portion below the lug is a packing gasket or washer 27 and a nut 28, which latter when tightened draws the valve on the upper end of the stem downwardly onto its seat. The lower end of the stem 22^a is provided with a transverse slot 29 for the reception of a screw driver or like tool, thereby permitting the valve stem to be adjusted from a position beneath the body 10^a so as to locate the arcuate outlet opening in differently adjusted positions.

The valve stems and valves in the two forms of the device herein disclosed may be interchangeably used and if desired an inclined deflector plate of the type disclosed in my aforesaid copending application may

be arranged on the top of the bowl-shaped body so as to deflect the water issuing from the jet orifice in any desired direction.

Thus it will be seen that I have provided a lawn sprinkling device that is relatively simple in construction, inexpensive of manufacture, capable of being readily adjusted so as to suit different conditions and requirements, and the stem of the valve that controls the discharge of water through the jet orifice being provided with simple and efficient means for locking said stem and its valve in differently adjusted positions.

It will be understood that minor changes in the size, form and construction of the various parts of my improved water sprinkling device 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 sprinkling device, a substantially bowl-shaped body, a top plate therefor, a marginal flange projecting upwardly from said top plate, a jet orifice at the center of said plate, said jet orifice having a conical valve seat that occupies a horizontal plane above the plane occupied by the upper surface of the top plate and below the upper edge of the marginal flange, a valve stem having a threaded portion seated in the lower portion of the bowl-shaped body, a valve on the upper end of said valve stem, which valve is adapted to rest on said valve seat, a lock nut mounted on the threaded portion of said valve stem below said bowl-shaped body, and a prong depending from said valve stem.

2. In a sprinkling device, a substantially bowl-shaped body, a top plate therefor, a jet orifice in the center of said plate, the upper end of which orifice terminates in a plane above the upper surface of said top plate, a valve stem passing through said top plate and screw seated in the bottom of the bowl-shaped body, a valve carried by the upper end of said stem and adapted to control the passage of water through the jet orifice, means on said stem below the bowl-shaped body for locking said stem and its valve in differently adjusted positions, a prong depending from the lower end of said valve stem, and which valve stem, valve and prong are formed in a single piece.

3. In a sprinkling device, a substantially bowl-shaped body, tubular members projecting outwardly therefrom, an integral plate closing the top of said bowl-shaped body, a jet orifice in the center of said plate the upper end of which orifice terminates in a plane above the plane occupied by the upper surface of the top plate, a valve stem adjustably seated in the lower portion of the bowl-shaped body, a valve on the upper end

of said stem for controlling the flow of water to said jet orifice, a flange projecting upwardly from the edge of said top plate, the upper end of which flange terminates in a horizontal plane above the top of the valve and its seat, means on said valve stem below the bowl-shaped body for locking said stem and its valve in differently adjusted positions, said valve stem being extended a substantial distance below the locking means to provide a prong, and which valve stem, head and prong are formed in a single piece.

4. In a sprinkling device, a substantially bowl-shaped body, a top plate therefor, a marginal flange projecting upwardly from the edge of said top plate, a jet orifice in said top plate, the upper edge of which orifice terminates in a plane above the upper surface of said top plate and below the upper edge of said marginal flange, a valve stem screw seated in the lower portion of said bowl-shaped body and projecting upwardly through said jet orifice, a head carried by the upper end of said stem for controlling the flow of water through said jet orifice, a portion of the side of said head being cut away to provide an arcuate opening between said head and the jet orifice, and means on said stem below the bowl-shaped body for locking said stem and valve in differently adjusted positions.

In testimony whereof I affix my signature.

GEORGE A. WILLIAMS.