June 10, 1947. F. B. WILBER 2,422,059

LAWN SPRINKLER

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Fig. 1.

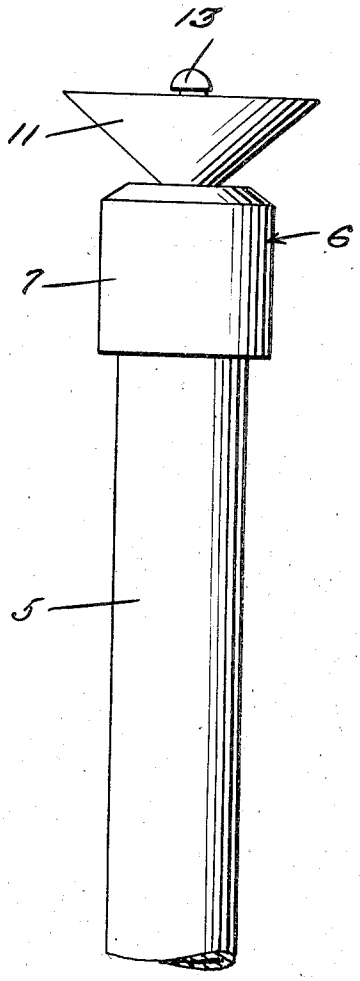


Fig. 3.

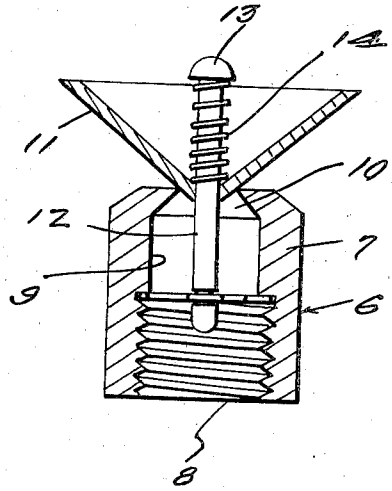
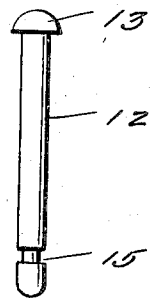


Fig. 6.



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Fig. 2.

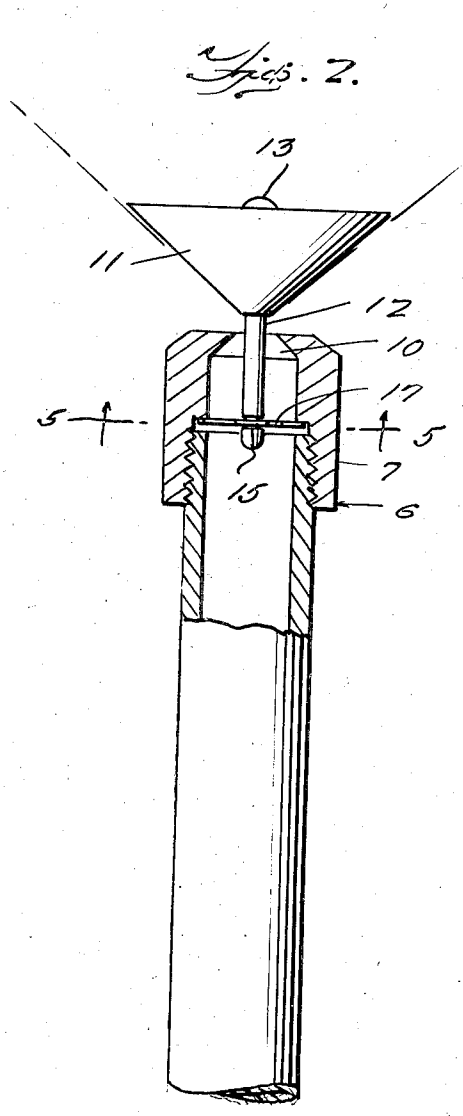


Fig. 4.

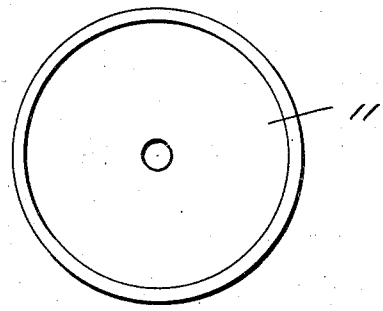
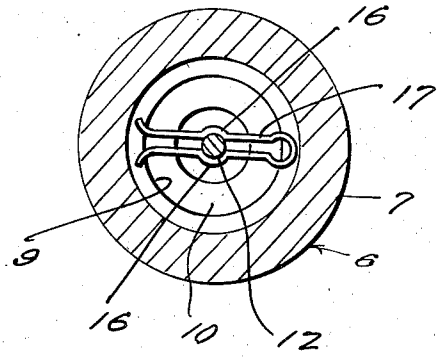


Fig. 5.



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UNITED STATES PATENT OFFICE

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LAWN SPRINKLER

Fred B. Wilber, Kokomo, Ind.

Application December 14, 1943, Serial No. 514,267

2 Claims. (Cl. 299—130)

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This invention relates to new and useful improvements in sprinklers such as are used for sprinkling lawns.

The principal object of the present invention is to provide a lawn sprinkler wherein water is broken into a fine mist regardless of the pressure at which the water is delivered to the sprinkler head.

Another important object of the invention is to provide a sprinkler of the character stated which is of simple construction and of low cost to manufacture.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings—

Figure 1 is a fragmentary side elevational view.

Figure 2 is a fragmentary detailed sectional view showing the spreader in outward position in response to water pressure.

Figure 3 is a vertical sectional view through the head.

Figure 4 is a top plan view of the spreader.

Figure 5 is an enlarged sectional view taken on the line 5—5 of Figure 2.

Figure 6 is a side elevational view of the retaining pin.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 5 denotes a supply pipe threaded at its upper end to accommodate the sprinkler head which is indicated by the numeral 6 in the drawings.

The head 6 consists of a nozzle 7 internally threaded as at 8 to engage the upper end of the pipe 5. The upper interior of the nozzle 7 has a smooth bore 9 which extends from the counterbored and threaded portion 8 to an upwardly tapering outlet 10 into which can engage the apex portion of an inverted hollow conical spreader 11, this spreader 11 having an opening at its apex through which a retaining pin 12 is disposed.

The upper end of the pin 12 has a head 13 between which and the bottom of the spreader 11 a coiled compression spring 14 is interposed, this for the purpose of yieldingly holding the apex portion of the spreader 11 snugly in the outlet 10 of the nozzle 7.

The lower portion of the retaining pin 12 has

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a circumferential groove 15 for receiving the curved intermediate portions 16 of a retaining key 17 which is of spring material and engages at its ends the shoulder defined by the meeting of the counterbored and threaded portion 8 with the bore 9 of the nozzle 7.

Obviously, regardless of the amount of pressure of the water passing through the pipe 5, the water being deflected by the constricted portion 10 and meeting the outwardly flaring surface of the conical spreader 11 will develop into a fine mist which will spread out over an area depending upon the volume of water admitted to the sprinkler head.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

1. A sprinkler head comprising a water supply pipe, a cylindrical nozzle having a cylindrical axial bore in its upper portion and a frusto-conical outlet opening tapering smaller upwardly from said bore to the top of the nozzle, said nozzle further having a threaded counterbore in its lower portion and being screwed upon said water pipe, said counterbore defining an internal annular shoulder at the junction thereof with said bore, an inverted hollow conical spreader disposed above the nozzle and having an opening in its apex, a removable elongated retaining key disposed diametrically across the counterbore with its ends engaged between the upper end of the water supply pipe and said shoulder, a retaining pin detachably connected at its lower end to said key intermediate the ends of the latter and projecting upwardly from said key through the outlet opening of the nozzle and the opening of the spreader, said pin having a head on its upper end, said spreader being slidable on said pin below said head, and a helical compression spring on the pin between the head of the latter and the bottom of the spreader to yieldingly force the spreader downwardly and normally seat the apex portion of the latter in the top of the nozzle, said spreader being adapted to be unseated against the action of said spring

by the pressure of water issuing from said nozzle.

2. The construction defined in claim 1, wherein said pin has a circumferential groove in its lower end portion, said key embodying a centrally return vent springy member having outwardly curved intermediate leg portions seated in said circumferential groove of the pin at opposite sides of the latter to connect said pin to said key.

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