Aug. 19, 1952 S. E. LIPPERT 2,607,624

TELESCOPIC SPRINKLER

Filed Aug. 4, 1950

Fig. 1.

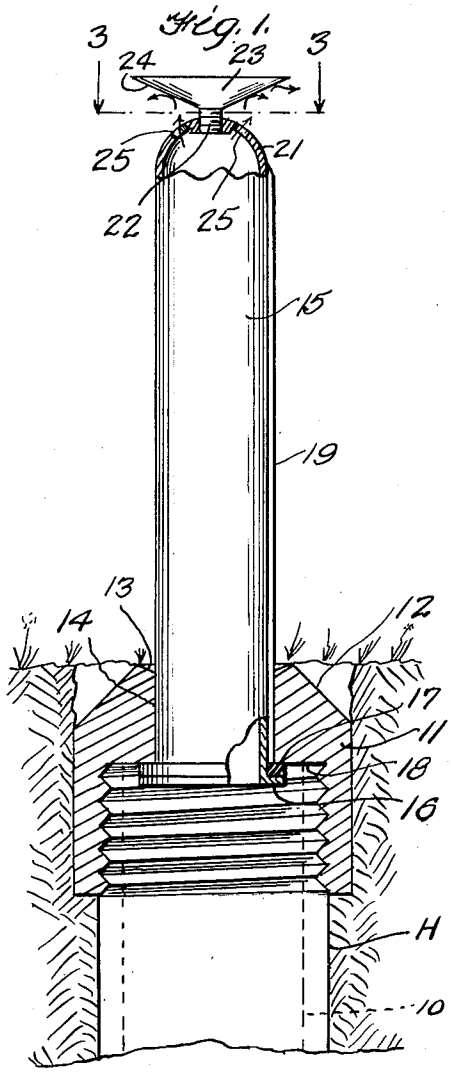


Fig. 2.

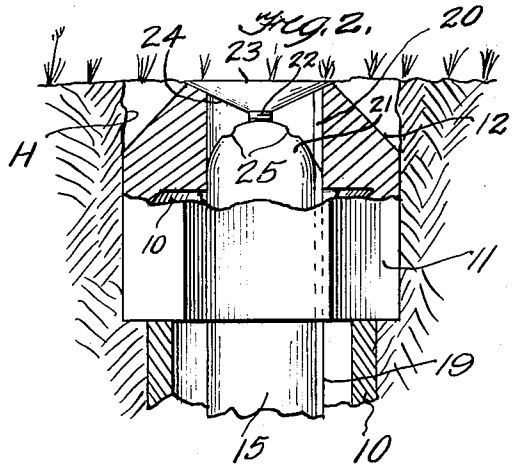
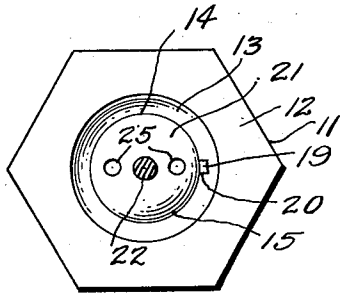


Fig. 3.



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TELESCOPIC SPRINKLER

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Application August 4, 1950, Serial No. 177,692

1 Claim. (Cl. 299—61)

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This invention relates to telescopic sprinklers, and has for one of its objects the production of a simple and efficient means for deflecting a spray of water from the discharge end of a sprinkler, so as to cover a wide area.

A further object of this invention is the production of a simple and efficient telescopic sprinkler, wherein the extension or sprinkler tube is provided with the water discharge opening or openings thereof directly under an outwardly and upwardly flared cap, which cap is adapted to deflect and spread the water laterally over a wide area adjacent the sprinkler.

Other objects and advantages of the present invention will appear throughout the following specification and claim.

In the drawing:

Figure 1 is a side elevational view of the sprinkler in an extended position, certain parts being shown in section;

Figure 2 is a side elevational view of the upper end of the sprinkler shown in a retracted position, certain parts being shown in section;

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1.

By referring to the drawing in detail, it will be seen that 10 designates a feed pipe which leads to a water supply line of a suitable type. This pipe 10 supports a nipple 11 which is threaded upon the upper end of the feed pipe 10. This nipple is provided with a tapered upper end 12 the wall of which recedes radially and the nipple 11 is adapted to be inset below or flush with the surface of the ground, as shown in Figure 2. The outer end 12 of the nipple 11 preferably is provided with a shallow inwardly tapering recess 13 leading to the central bore or aperture 14.

An extension tube 15 is slidably movable in a vertical direction through the bore 14 of the nipple 11. The tube 15 carries an annular laterally extending flange 16 at the lower end thereof, and this flange 16 supports a resilient bumper washer or gasket 17 for contact with the abutment shoulder 18 of the nipple 11, when the extension tube 15 is in an extended position, as shown in Figure 1. The flange 16 and gasket 17 will limit the vertical sliding movement of the tube 15 through the nipple 11. A longitudinally extending key 19 is carried by one side of the extension tube 15, and this key 19 is adapted to slide longitudinally in the key-way 20 which registers with the bore 14 and is formed in the nipple 11. The key 19 and the key-way 20 are adapted to hold the extension tube against rotation and at the same time permit free longitudinal movement of the tube 15 through the nipple 11.

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The tube 15 is provided with a rounded nose 21 at its outer end which carries the narrow neck 22 of the cap 23, centrally thereof. The neck 22 may be threaded into the nose 21 or may be welded or formed integrally therewith, without departing from the spirit of the invention. The cap 23 overhangs the nose 21 in spaced relation to the nose 21 and is provided with an outwardly and upwardly inclined under face 24 which extends from the neck 22 to the outer periphery of the cap 23, as shown in Figures 1 and 2. The cap 23 preferably is of greater diameter than the tube 15 and the outer portion of the cap 23 adjacent the periphery thereof is adapted to rest within the inwardly inclined recess 13 to suspend the tube 15 when it is in a retracted position. Apertures 25 are formed in the nose 21 directly under the cap 23 close to the neck 22 so as to discharge streams of water against the flared face 24 of the cap 23 and spread the water in a sprinkling manner laterally over a wide area adjacent the tube 15.

It should of course be understood that the sprinkler operates in substantially the same manner as set forth in my application Serial Number 143,530, filed February 10, 1950, and relating to a Telescopic Sprinkler. The tube 15 will normally rest in a retracted position within a recess H in the ground in which the sprinkler is positioned. The cap 23 will then be in the position shown in Figure 2. When water pressure is turned on through the feed pipe 10, the pressure will raise the tube 15 to the extended position shown in Figure 1, and the water will be sprayed upwardly through the apertures 25 in an upwardly and outwardly inclined direction against the inclined face 24 of the cap 23 and then laterally of the cap as previously set forth.

Any number of apertures 25 may be used in the nose or swedged portion of the tube without departing from the spirit of the invention, to obtain the desired results. For instance, two holes may be used to sprinkle a half circle, and one hole may be used to sprinkle a quarter of a circle. More holes in the desired number, may be used to sprinkle greater areas. The tube with the desired number of holes is placed in the nipple 11 and the nipple 11 is then threaded upon the feed pipe 10. Of course, it is preferable to mount tubes at selected locations in a given area having apertures or holes in the desired number to direct the sprinkling water in the direction or directions desired. In this way for instance,

sprinklers having only one aperture or hole may be placed near a walkway with the sprinkling aperture facing the lawn so as to prevent sprinkling the walkway or passersby using the walkway. It should be noted that water may flow through the tube **15** in a free and unobstructed path from end to end to obtain full benefit of the water service supply and will then be discharged directly against the flared face **24** of the cap **23**. This will break up the streams of water passing out through the apertures **25** into a spray or a fine mist. Furthermore, the cap **23** extends radially beyond the tube **15** to shield the nipple **11** when the tube **15** is in a retracted position and prevent foreign matter from penetrating below the cap **23**. While water is flowing through the tube **15**, any debris which may fall into the shallow recess **13** will be washed out and down the tapering end **12** and receding walls thereof away from the recess so that the cap may properly seat itself in the recess **13** when the tube **15** is retracted.

It should be understood that certain detail changes may be made in the detail mechanical structure without departing from the spirit of the invention, so long as these changes fall within the scope of the appended claim.

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

A telescopic sprinkler of the class described comprising a water feed pipe, a nipple secured to the upper end of said feed pipe, said nipple having a bore formed therethrough, an abutment shoulder formed at one end of the bore, a vertically slidable extension tube slidable through said bore, a resilient gasket carried by the inner end of said extension tube and adapted to contact said abutment shoulder to limit the outward movement of the tube through the nipple, said extension tube being hollow throughout its length and terminating in an integral rounded nose at its outer end, said rounded nose having apertures formed therein for discharging a stream of water from said tube in an upward direction, said hollow tube facilitating a free and unobstructed flow of water throughout its entire length, a cap carried by said nose and supported in spaced overhanging relation to the nose, said cap having an outwardly and upwardly inclined under face adjacent the nose and projecting radially of said extension tube for deflecting a stream of water discharged through said aperture of the nose in spray-like formation laterally of the tube, said nipple having an inwardly tapering shallow recess in its upper end adjacent the bore for receiving the inclined inner face of said cap to suspend said cap and tube within the nipple when the tube is in a retracted position and to support the cap in said position substantially flush with the cap, and said nipple having a tapered upper end receding radially away from said inwardly tapering recess to direct debris away from said recess and away from said tube as water flows from the outer end of the tube to insure a proper seating of the cap over the upper end of said nipple as the cap contacts the nipple.

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