

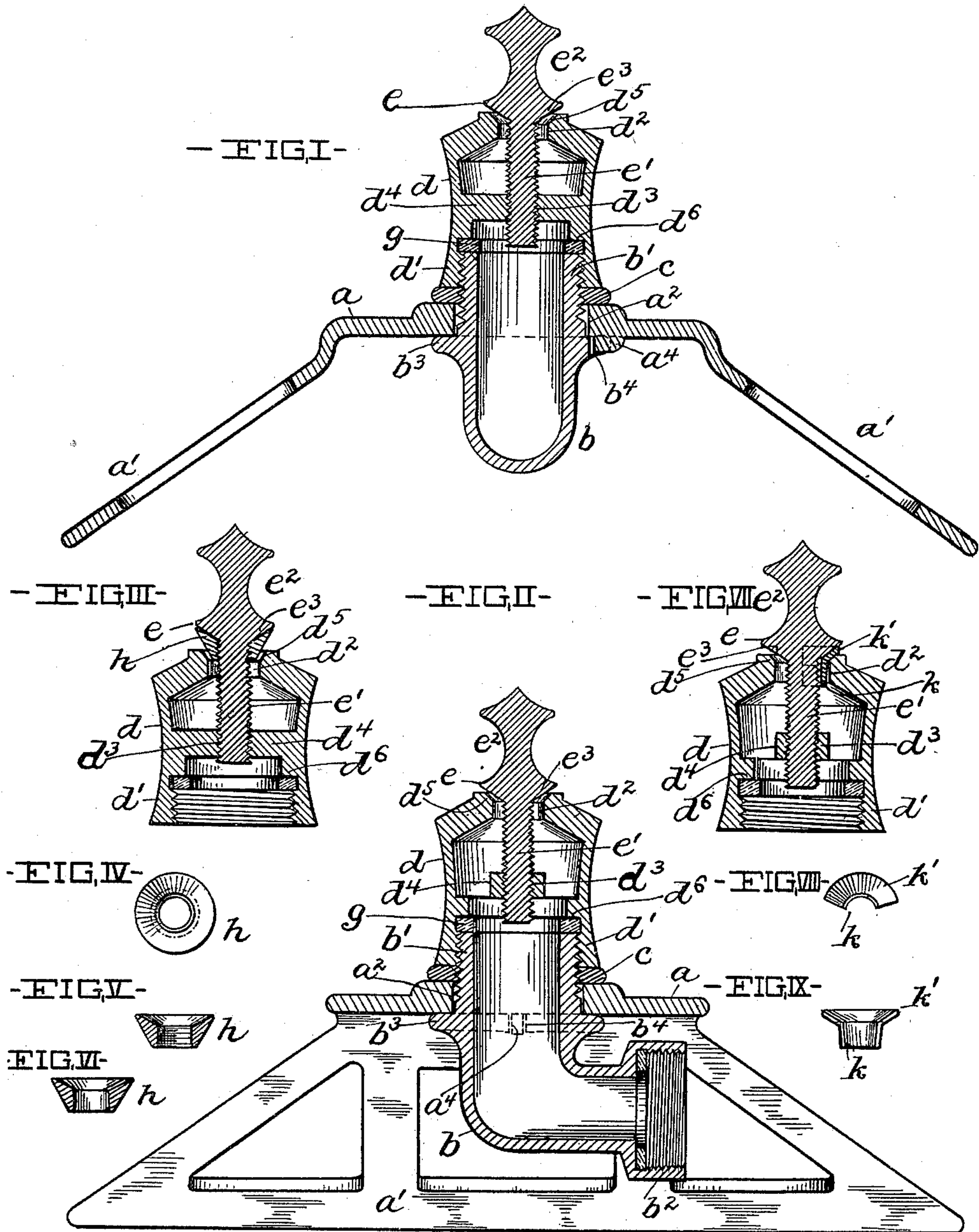
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Patented June 6, 1899.

J. H. LOOMIS.
SPRINKLING DEVICE.

(Application filed Jan. 9, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

JACKSON H. LOOMIS, OF CLEVELAND, OHIO.

SPRINKLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 626,495, dated June 6, 1899.

Application filed January 9, 1899. Serial No. 701,548. (No model.)

To all whom it may concern:

Be it known that I, JACKSON H. LOOMIS, a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Sprinkling Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in lawn-sprinklers; and it consists more especially in a device of the character indicated whose sprinkler proper or nozzle is removable and can be coupled onto an ordinary garden-hose and used as an ordinary nozzle in sprinkling flowers and other plants.

With this object in view and to the end of realizing other advantages hereinafter appearing my invention consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure I is a central vertical or longitudinal section of a lawn-sprinkler embodying my invention. Fig. II is a central section at right angles to Fig. I. Fig. III is a side elevation, in central section, of the sprinkler proper or nozzle and shows a supplemental water-deflecting collar upon the spray-regulating screw. Fig. IV is an outer end elevation of the said collar. Fig. V is a side elevation, in central section, of the said collar. Fig. VI is a side elevation, in central section, of a water-deflecting collar having a bore whose surrounding wall is plain. Fig. VII is a side elevation, in central section, of the sprinkler proper or nozzle provided with a removable cut-off capable of closing one side of the spraying-aperture. Fig. VIII is an outer end elevation of the said cut-off. Fig. IX is an inner side elevation of the said cut-off.

Referring to the drawings, *a* designates the top of a stand having two downwardly-diverging legs *a'* *a'* arranged at opposite sides, respectively, of the stand. The top *a* is perforated centrally, as at *a*², to accommodate the extension therethrough of the upright externally-threaded end *b'* of an elbow whose other and horizontal end *b*² is screw-threaded inter-

nally for accommodating the attachment thereto of the coupling member of a garden-hose. (Not shown.) Elbow *b* at the under side of the top *a* is provided externally with an annular flange *b*³, arranged to abut the said side of the top, and a nut *c*, mounted upon the threaded end *b'* of the elbow at the upper side of the top *a*, is instrumental in drawing and holding the said flange, and consequently the elbow, against the under side of the top. To prevent turning of the elbow, the flange *b*³ is provided with a recess *b*⁴, that is engaged by a lug *a*⁴, integral with and depending from the top *a*.

d designates the hollow body portion of the sprinkler proper or nozzle that has its lower or inner and coupling end *d'* screw-threaded internally and shown screwed in Figs. I and II upon the correspondingly externally threaded member *b'* of the elbow *b* at the outer end of the nut *c*. The body *d* has a passage-way formed therethrough, which passage-way is open at the inner extremity of the body and terminates at its outer end in the discharge-aperture *d*², formed in the outer end and centrally of the body.

A screw *e*, that is instrumental in the regulation of the spray discharged at the aperture *d*² and that is capable of closing the aperture, extends centrally through the said aperture and has its screw-threaded shank *e'* diametrically smaller than the said aperture and extending inwardly from the said aperture to and through and engaging a correspondingly-threaded perforation *d*³, formed within and centrally of a cross-bar *d*⁴, that is formed internally of and integral with the body *d* and extends transversely of the body, preferably about midway between the ends of the body, and the said cross-bar is sufficiently narrower than the chamber formed within the body to avoid material obstruction of the flow of water through the body. The screw *e* at the outer end of the discharge-aperture is provided with a head *e*², that constitutes the grasping portion of the screw in turning the latter. The screw at the inner end of the said head is provided externally with an annular outwardly-flaring shoulder *e*³, that is wide enough to render it capable of closing the discharge-aperture *d*² at the

latter's outer extremity upon screwing the screw inwardly to the extent required, and the said aperture is at its outer end enlarged diametrically and flares outwardly, as at d^5 ,
 5 opposite the aforesaid shoulder e^3 of the screw.

The body d at any suitable point between the cross-bar d^4 and the body's lower or inner extremity is provided with an internal annular shoulder d^6 , that faces in the direction of the inner extremity of the body d , and a washer g is interposed between the said
 10 shoulder and the upper extremity of member b' of the elbow b , so as to prevent leakage between the said elbow member and the body
 15 of the sprinkler proper or nozzle.

Figs. I and II of the drawings show a screw e in the open position required for spraying the water passing under pressure through the body d outwardly from the discharge-aperture of the body—that is, the outwardly-flaring shoulder e^3 of the screw is separated
 20 from the surrounding wall of the discharge-aperture and causes the water passing through the said aperture in the operation of the device to be deflected laterally and outwardly.

In Fig. III the screw e is shown withdrawn far enough to accommodate the placing of a supplemental water-deflecting collar h upon the screw's shank between the screw's shoulder e^3 and the outer end of the discharge-aperture d^2 , and the said collar has an external outwardly-flaring and annular surface arranged to be impinged by the water passing
 30 through the said aperture, and thereby deflect the water laterally and outwardly. The external surface of the collar h does not flare as much as the shoulder e^3 , and consequently the water passing through the discharge-aperture in the operation of the device when the said collar is in its operative position upon the screw will pass higher into the air than it
 35 would were the shoulder e^3 employed to deflect the water. It will be observed, therefore, that shoulder e^3 is employed in deflecting the water when a low and wide spray is desired and that collar h is used when a higher and narrower spray is desired. The collar h may be screw-threaded internally and engage
 40 corresponding threads upon the screw, and this construction is preferable, perhaps, by a person who would be likely to misplace the collar, because he could place the said collar when the latter is not used upon the lower
 45 end of the screw below cross-bar d^4 ; but the said collar does not necessarily require to be threaded internally, because it could have a plain internal surface, as shown in Fig. VI, and loosely mounted upon the screw and the
 50 pressure of the water passing through the discharge-aperture in the operation of the device would force and retain the collar in close contact with the shoulder e^3 . I would here remark that the hole through the collar h at its
 55 outer end is enlarged diametrically and flares outwardly to correspond with the flaring shoulder e^3 and to enable the said collar to be

moved against and have bearing upon the said shoulder when the collar is employed as a water-deflector.

Fig. VII shows a cut-off or device k for closing the discharge-aperture at one side of the device during the latter's operation. The said cut-off has its inner end portion shaped and arranged as required to render it capable
 70 of being introduced between one side of the shank of the screw and the surrounding wall of the discharge-aperture and has its outer end portion k' projecting upwardly and outwardly from the inner portion and shaped
 75 or arranged as required to accommodate its inner position between the water-deflecting member (e^3 or h , as the case may be) and the surrounding wall of the flaring portion of the discharge-aperture and to render it capable
 80 of closing one side of the discharge-aperture, as aforesaid. The cut-off can be readily removed by withdrawing the screw to the extent required.

Referring again to the means for deflecting the water and the manner of supporting the said means from the body of the device, I would remark that the screw upon which the deflector e^3 is formed may be properly described as a stem that is rigid with and extends
 90 inwardly from the said deflector and is suitably supported from the body, and I would have it understood that my invention embraces, broadly, a sprinkling device of the character indicated having a hollow body
 95 provided with a discharge-aperture, a water-deflector arranged at the outer end of the said aperture and provided with an inwardly-extending stem suitably supported from the body, and another deflector capable of being
 100 removably mounted upon the said stem between the first-mentioned deflector and the surrounding wall of the discharge-aperture.

What I claim is—

1. In a sprinkling device of the character indicated, the combination with a hollow body
 110 provided with a discharge-aperture, and a water-deflector arranged at the outer end of the said aperture and having an inwardly-extending stem or member supported from the aforesaid body; of another water-deflector removably mountable upon the said stem between the deflecting-surface of the first-mentioned
 115 deflector and the surrounding wall of the discharge-aperture, substantially as and for the purpose set forth.

2. In a sprinkling device of the character indicated, the combination with a hollow body provided with a discharge-aperture, a water-deflector arranged at the outer end of the said
 120 aperture and shiftable inwardly and outwardly, and a stem or member bearing the said deflector and extending inwardly from the said deflector and supported from the aforesaid body; of another water-deflector
 125 removably mountable upon the said stem between the first-mentioned deflector and the surrounding wall of the discharge-aperture, substantially as and for the purpose set forth.

3. In a sprinkling device of the character indicated, the combination with a hollow body provided with a discharge-aperture, and a water-deflector arranged at the outer end of the aforesaid aperture and having an annular outwardly-flaring shoulder or deflecting-surface and suitably supported from the body; of another water-deflector capable of interposition between the first-mentioned deflector and the aperture's surrounding wall and having its inner end provided with an annular outwardly-flaring shoulder or deflecting-surface having a different flare than the flare of the deflecting-surface of the first-mentioned deflector and having its outer end provided with an outwardly-flaring hole or cavity having the dimensions required to accommodate the movement of the second deflector against the flaring surface of the first-mentioned deflector.

4. In a sprinkling device of the character indicated, the combination with a hollow body provided with a discharge-aperture and a suitably-supported and endwise-shiftable member extending centrally through the said aperture and having a water-deflector formed thereon at the outer end of the aperture; of another water-deflector mountable upon and shiftable endwise of the said endwise-shiftable member between the first-mentioned deflector and the surrounding wall of the discharge-aperture.

5. A sprinkling device of the character indicated, comprising a hollow body provided with a discharge-aperture in its outer end and a passage-way from the said aperture to and open at the body's inner extremity; a member formed within and rigid with the body, and provided with a screw-threaded hole that is arranged in line with the discharge-aperture; a screw engaging the said hole and extending centrally through the aforesaid aperture, and provided with an outwardly-flaring annular shoulder arranged as required to render it capable of deflecting the water discharged from the said aperture during the operation of the device, and a collar removably mountable upon the screw and having an annular outwardly-flaring external surface having a different flare than the flare of the water-deflectable shoulder of the screw.

6. A sprinkling device of the character indicated, comprising a hollow body provided with a discharge-aperture in its outer end, and a passage-way from the said aperture longitudinally of the body to and open at the latter's inner extremity; a member formed within and rigid with the body, and provided with a screw-threaded hole that is arranged in line with the discharge-aperture; a screw engaging the said hole and extending centrally through the discharge-aperture, which screw has an external annular outwardly-flaring shoulder arranged as required to render it capable of deflecting the water discharged from the aforesaid aperture, and a collar mountable upon the screw and having an external outwardly-flaring surface having a flare different from the flare of the aforesaid shoulder, and having the outer end of the hole therethrough enlarged diametrically and flaring outwardly, substantially as and for the purpose set forth.

7. In a sprinkling device of the character indicated, the combination with a hollow body having a passage-way therethrough terminating in a discharge-aperture, and a water-deflector arranged at the outer end of the said aperture and suitably supported from the body; of a cut-off capable of interposition between the deflecting-surface of the deflector and the body and partially closing the aforesaid aperture.

8. In a sprinkling device of the character indicated, the combination with a hollow body provided with a discharge-aperture having its outer end enlarged diametrically and flaring outwardly; a suitably-supported annular and outwardly-flaring deflector arranged to deflect the water discharged from the aforesaid aperture, and shiftable endwise of the aperture, and a cut-off capable of interposition between one side of the water-deflector and the surrounding wall of the flaring portion of the aperture, and thereby partially closing the said aperture.

Signed by me, at Cleveland, Ohio, this 4th day of January, 1899.

JACKSON H. LOOMIS.

Witnesses:

C. H. DORER,
A. H. PARRATT.