

(No Model.)

J. RAWLE.
WATER SPRINKLER.

No. 536,738.

Patented Apr. 2, 1895.

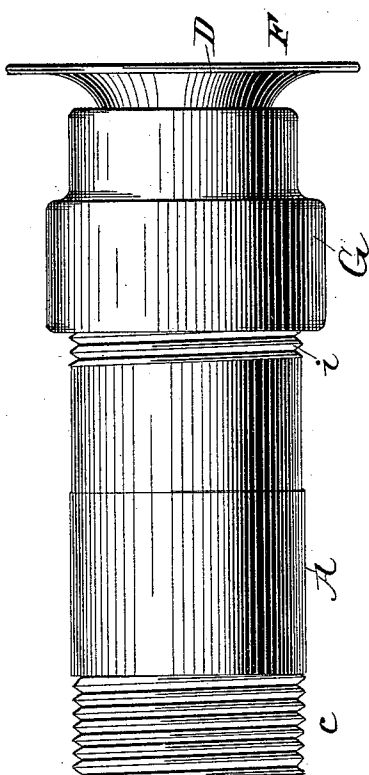


Fig. 1.

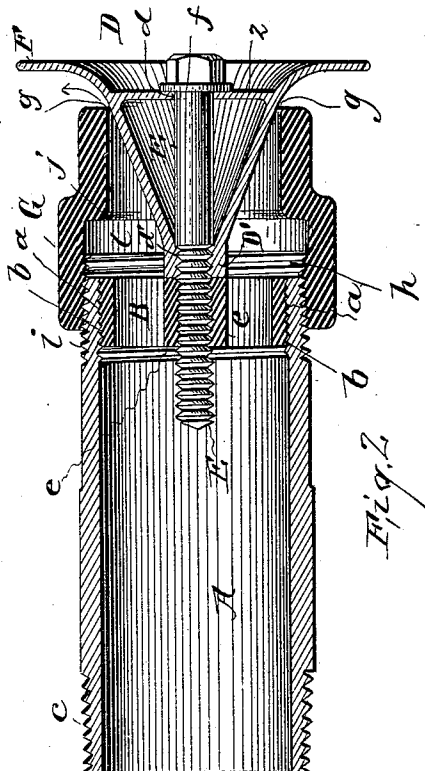


Fig. 2.

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JAMES RAWLE, OF RADNOR, PENNSYLVANIA.

WATER-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 536,738, dated April 2, 1895.

Application filed October 9, 1894. Serial No. 525,366. (No model.)

To all whom it may concern:

Be it known that I, JAMES RAWLE, a citizen of the United States, residing at Radnor township, in the county of Delaware and State of Pennsylvania, have made certain new and useful Improvements in Water-Sprinklers and the Like, of which the following is a specification.

The object of my invention is to provide a water sprinkler which will be simple in construction and effective in use, and wherein the nozzle or water outlet can be readily adjusted to permit the passage of more or less water as desired.

The invention consists in the novel details of construction and the combinations of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part hereof, wherein—

Figure 1 is a side elevation of my improved sprinkler; and Fig. 2 is a central longitudinal section thereof.

In the accompanying drawings, in which similar letters and numerals of reference indicate corresponding parts in the several views, the letter A indicates a tube or pipe of suitable dimensions, at one end of which is fitted an apertured spider B. The spider B may be secured in the tube A, by screw threads *a* on the inner wall of said tube fitting into threads *b*, on the periphery of said spider, by which means said spider is made adjustable longitudinally of said tube; but the spider B may be otherwise connected with the tube A, if desired. The opposite end of the tube A may have screw threads *c* to receive any suitable coupling to connect the tube A with a water supply source.

D is a cone-shaped head or deflector fitting over or in front of the spider B, so that its diverging sides will receive the water from the apertures in the spider B. The cone D is preferably cast hollow, for the sake of lightness, and its small end or apex D' extends toward and abuts against the spider B, so that its large end will cause the passing water to spread out. The cone-head D is shown provided with a crown-web 2 and a longitudinal aperture *d d'* in the web and end D', through which a bolt E passes, and screws into a threaded socket *e* in the spider B.

At *f* is a washer between the cone-head D and the head of the bolt E. By this means the cone-shaped head is carried by the tube A without any external obstruction to the flow of the water.

The head D at its outer end is provided with a flange F, which is outwardly curved, and arranged to direct the water in an outward direction. This curve may be altered to get the desired direction of flow, if desired. The flange F on top may be inwardly curved, as shown, to save weight of metal.

G is a cap, or reducing nozzle, that fits on the end of the tube A, the outer end of said cap being adapted to coact with the cone-like part of the head D in producing an annular opening *g* for the exit of water. The cap G is shown fitted on the end of the tube A by screw threads *h, i*, whereby said cap can be adjusted on said tube to increase or diminish the size of the opening *g* to permit more or less water to pass. The cap G, at the part beyond the tube A, is shown reduced in size or narrowed, forming a curved shoulder *j*, against which the water passing from the spider B abuts to break the force of the water and direct it against the cone-head D. Instead of using the shoulder, the cap could be of a gradual taper, if desired.

With the above described arrangement of sprinkler the water issuing from the tube A will enter the space *l* between the head D and cap G, and will follow along the walls of said head out through the annular opening *g*, from whence it will strike the curved flange F, and be directed outwardly in lines following the curve of said flange.

As the device has few parts it is not liable to get out of order, and is simple and cheap to construct.

It will be understood that I do not intend to limit myself to the exact details of construction, as the arrangement of the parts may be varied without departing from the spirit of my invention.

Having described my invention, I claim—

1. The combination of a tube, a spider carried thereby, a cone-like head having a longitudinal aperture, a bolt to pass through said aperture to hold said head on said spider, and an annular cap to fit around said head, substantially as described.

2. The combination of a tube having internal threads *a* and external threads *i*, a spider having threads to mesh with the threads *a*, a cone-like head having a flange *F*, means to
5 hold said head on said spider, and a cap having threads to engage the threads *h* on the tube *A*, all arranged for operation, substantially as set forth.

3. In a sprinkler, the combination of a tube,
10 a deflector and a reducing cap surrounding the deflector, the cap being adjustable independently of the deflector, substantially as described.

4. In a sprinkler, the combination of a tube,
15 a deflector adjustably supported therein, and a reducing cap independently adjustable on said tube, substantially as described.

5. In a sprinkler, the combination of a tube, internally and externally threaded, a spider
20 peripherally and centrally threaded and screwed within said tube, a reducing cap screwed about said tube, and a deflector secured by a screw centrally to said spider, substantially as described.

6. In a sprinkler, the combination, with the tube and a spider secured therein having a hub *e* of a deflector having a cylindrical portion adapted to abut against said hub and form a continuation thereof, and a conical or
25 diverging portion extending from the cylindrical portion, and means for securing the deflector to the spider, and a cap on the tube surrounding the deflector and independently movable in relation thereto, substantially as
35 described.

7. The combination with the tube, of the spider therein, the deflector secured to the spider and projecting therefrom, and a cap encircling the spider and secured to the tube, said cap having an interior shoulder *j* for
40 intercepting the water, substantially as described.

8. In a sprinkler, the combination with the tube, of the spider therein, the deflector secured to the spider, a cap secured to the tube
45 and encircling the deflector, said cap having two diameters, the greater being secured to the tube, the smaller extending over the deflector, and a shoulder *j* defining the two diameters, substantially as described. 50

9. In a sprinkler, the combination with the tube, of the spider therein, the deflector extending from the spider, and a cap on the tube surrounding the deflector and having a space or chamber *l* intermediate of its ends,
55 substantially as described.

10. In a sprinkler, the combination with the tube, of the spider therein, and the hollow conical deflector extending from the spider, having the flaring flange *F* and the crown-
60 web 2, an apertured hub *D'*, and a headed bolt *E* passing through the web and hub into the spider, substantially as described.

Signed at Philadelphia, in the county of Philadelphia and State of Pennsylvania, this
65 31st day of August, 1894.

JAMES RAWLE.

Witnesses:

WM. H. HEULINGS, Jr.,
HENRY C. ESLING.