(No Model.)

R. ADDISON.

PORTABLE CENTRIFUGAL LAWN SPRINKLER.

No. 437,322. Patented Sept. 30, 1890.

Fig. 2.

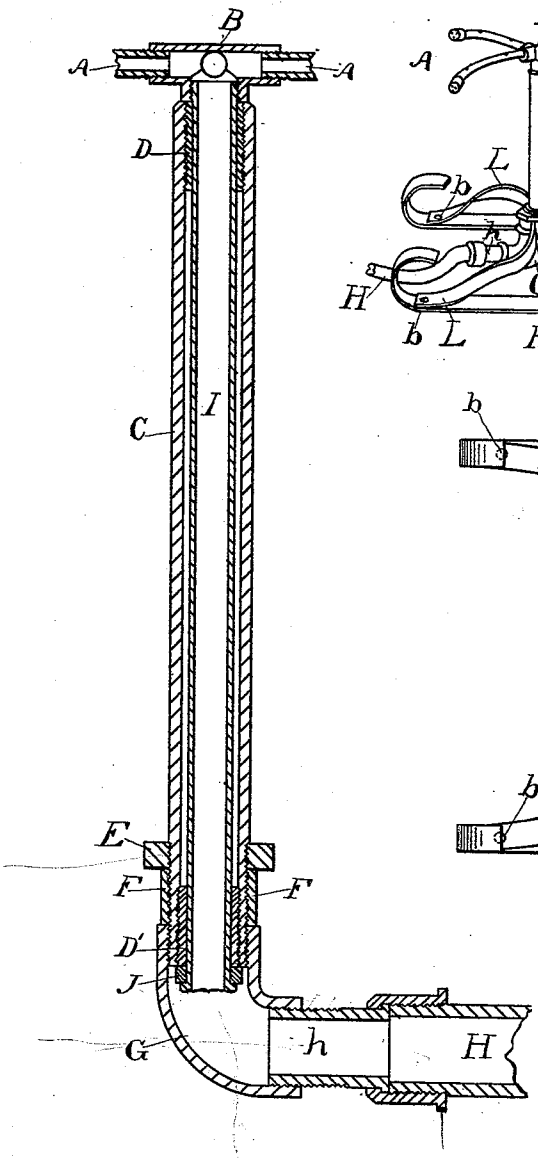


Fig. 1.

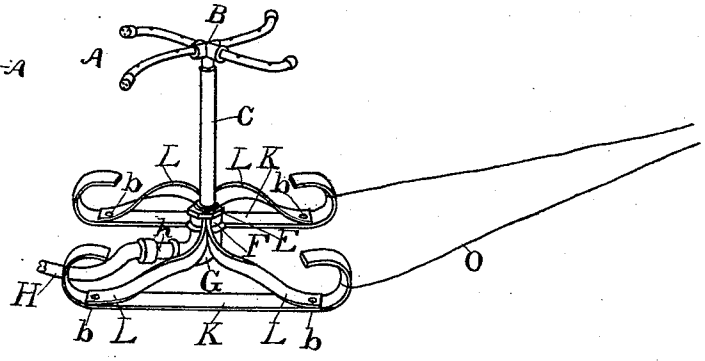
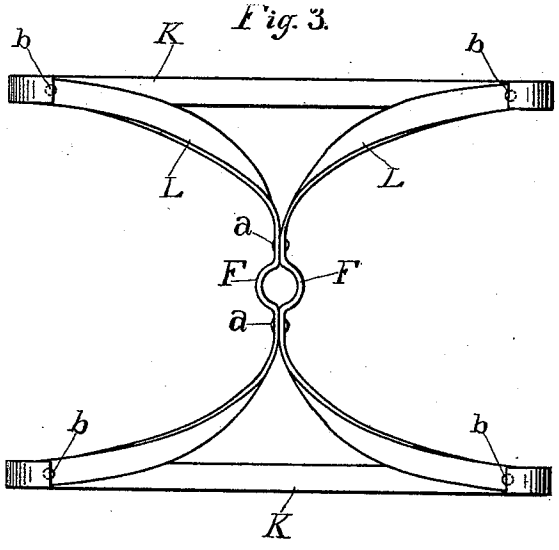


Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT ADDISON, OF PASADENA, CALIFORNIA, ASSIGNOR OF ONE-HALF TO ALECK F. MILLS, OF SAME PLACE.

PORTABLE CENTRIFUGAL LAWN-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 437,322, dated September 30, 1890.

Application filed March 22, 1890. Serial No. 344,867. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ADDISON, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Portable Centrifugal Lawn-Sprinklers, of which the following is a specification.

My invention relates to the revolving mechanism of the sprinkler, and also to the base upon which the sprinkler is mounted, the object being to produce a light, cheap, simple, durable, effective, and conveniently-handled sprinkler which will not leak or rattle.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my improved sprinkler. Fig. 2 is a vertical mid-section illustrating the revolving mechanism. Fig. 3 is a top view of the base.

The water is discharged from the revolving arms A, which are of the ordinary construction.

A great objection arising with sprinklers of this character heretofore made has been leakage and a liability to rattle and creak. By my invention I overcome these difficulties. The means designed for this purpose will be easily understood by reference to Fig. 2.

C is a vertical tubular standard formed of gas-pipe nearly equal in length to the height desired for the sprinkler, provided at each end with a short bush D D′, each bored axially true with the other. The standard is externally screw-threaded on the lower end to receive the set-nut E, the collar F of the cross-ties of the base, and the elbow G, screwed up against the collar, to which elbow the hose H is attached by a suitable coupling *h* of greater diameter than the stem I. The T cross-fitting B, into which the revolving sprinkler-arms A are fixed, is fixed upon a straight brass tubular stem I, which is turned true and is journaled in both bushings D D′ and extends down through the standard C into the elbow G, where it is fitted with a suitable enlargement, such as the brass ring or washer J, secured thereto by suitable means (as, for instance, by stoving the end of the pipe, as shown in Fig. 2) and fitted against the lower end of the standard. The enlargement is designed to fit against the end of the standard to prevent leakage and the upward withdrawal of the stem, and the cross-fitting B is fitted against the top of the standard.

The base of my sprinkler is formed of four pieces of strap-iron secured together by six rivets or by other suitable means. Its construction will be understood by reference to Fig. 3. The runners K K are two sections of strap-iron abruptly curved up at the ends to form suitable runners. The cross-ties L L are two other sections of strap-iron, each upwardly curved at the middle and bent and twisted into a horseshoe form, with the flat plane of the middle of the tie at right angles to the plane of the ends of the tie and provided with an abrupt semicircular curve F in the middle thereof. The two cross-ties L L are secured together with their semicircular curves F in conjunction with each other to form a collar to clasp the standard C, the ties being then secured together with rivets *a a* or other suitable means. The ends of the ties are then placed upon the runner-straps K K and are secured thereto by rivets *b b*. The sprinkler is then put together by first passing the battered-brass stem I through washer J and standard C, passing in at the threaded end of the standard and screwing the T-cross fitting B thereupon until the washer is brought into loose contact with the bushing D′ or lower end of standard C. The set-nut E is screwed upon the threaded end of standard C, and such end is then passed down through the collar formed by the curve F of the ties L, and the elbow G is then securely screwed thereon until it clasps the collar between it and the set-nut. The hose is then coupled to the elbow, and when the water enters the elbow and escapes up into the stem and out through the revolving arms there will be an upward pressure of the water against washer J and the end of stem I, because the capacity of the supply pipe or coupling *h* is greater than that of the stem, and the stem and collar will be pressed up against the bushing D′ or against the end of standard C, as the case may be. This serves a double purpose. It assists in sealing the joint between bushing D′ and the stem to prevent the escape of water, and it also gives a practically frictionless water-bearing to support the stem. The parts

are designed to fit so closely that there is no perceptible vertical movement of the stem when the stem is supported by the pressure of the water, but there is movement sufficient to raise the T-cross fitting B up from the top of the standard, so that the weight of all the revolving parts rests upon and is borne by the water, and the only friction is that between the turned-brass stem I and the bored bushings D D′ and that between the brass washer J and the lower end of the standard and its bushing. Since the stem is journaled in the bushings at its ends, it cannot wabble or rattle, and the whole movement is smooth and noiseless.

The length of the runners between the curvature of their ends is approximately equal to the length of the revolving arms and to the height of the stem, so that the sprinkler will rest firmly upon its base. It can be conveniently moved by means of a cord O, secured thereto for that purpose.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A lawn-sprinkler comprising the combination of the vertical tubular standard externally threaded at the lower end and provided at each end with a short bush, each bored axially true with the other, the set-nut screwed upon the standard, the base provided with the collar, the elbow screwed up against the collar, the tubular stem journaled in the bushings and extending down through the standard into the elbow and provided with a suitable enlargement to fit against the bottom of the standard, the supply-pipe of greater capacity than the stem, and the cross-fitting fixed to the top of the stem fitted, against the upper end of the standard, and provided with the sprinkler-arms.

2. In a lawn-sprinkler, the combination of the vertical tubular standard provided at each end with a short bush, each bored axially true with the other, the tubular stem journaled in the bushing and extending down through the standard and provided with a suitable enlargement to fit against the bottom of the standard, the supply-pipe of greater capacity than the stem, and the cross-fitting fixed to the top of the stem, fitted against the upper end of the standard, and provided with the sprinkler-arms.

3. In a lawn-sprinkler, the base comprising the two runners formed of strap-iron curved up at the ends and the two cross-ties of strap-iron, each upwardly curved at the middle and bent and twisted into a horseshoe form, with the flat plane of the middle of the tie at right angles to the plane of the ends of the tie and provided with an abrupt semicircular curve in the middle thereof, the ties and runners being secured together as set forth.

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